

Teaching  
Guide

**5**

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# WORLD WATCH

SOCIAL STUDIES FOR PRIMARY SCHOOLS

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# Introduction

## An outline of the course

*World Watch* is a Social Studies course for the 21<sup>st</sup> century. It is designed for Pakistani primary schools that want to stimulate curiosity, thinking skills, and a love of learning. The course comprises four components: Pupil's Books, Skills Books, Interactive CDs, and Teaching Guides.

## Core features

- It draws its content and skills from international primary syllabuses while focusing on Pakistan for examples.
- Concepts are covered in a student-friendly way, in simple language with lots of fun and stories.
- At all levels, learning is built on students' experience, the teacher eliciting what they already know and building on this, not simply loading them with facts.
- The language, content, and tasks are progressively graded according to class levels.
- Each level consists of twelve units with approximately five geography-focused units, five history-focused units, and two with focus on civics.
- These three core subject areas are linked to each other where possible.
- At least one geography-based unit per level is focused on environmental issues.
- Values education and ethical thinking are embedded in every unit of the course.
- High priority is given to independent thinking skills and problem-solving activities.
- From the start, students are asked to express individual opinions and it is stressed that some questions have no easy answers.
- Writing frames are provided to help students express their own ideas in open-ended tasks.

## Geography

- Mapping skills are taught in a progressive way—from simple plans and icons in Grade 1 to political, physical, environmental, and historical maps by Grade 5.
- A variety of graphs, tables, diagrams, and timelines are used to vary the presentation of content.
- At each level, students are encouraged to make connections between the geographical environment and the way people live.
- The main focus is on the familiar world of Pakistan, starting with the home and moving on to the town, district, country, and the wider world beyond.
- A key element is responsibility towards other people and towards the environment.

## History

- An understanding of change over time begins in Grade 1 with recent history taught through older people's memories, artefacts, and photographs.
- Timelines and family trees are used to explain the concept of generational links.
- Stories of historical events and characters enliven history at lower levels.
- A sequenced approach begins in Grade 3 with the introduction of dates.
- The main focus is on the history of Pakistan, balanced with an introduction to key events, discoveries, and stories from world history. The series also highlights the legacy of our past: what we can still see as a result of historical events.

- By Grade 5, students are learning to recognize the connections between the histories of different cultures and the way people have learned from each other over time. They also learn about why people acted as they did in the past and how their actions affect the present.

### **Civics**

- At Grades 1 and 2, the idea of society is taught largely through stories. For example, notions of sharing, kindness, and fairness are taught through stories about Rafay and Hiba's adventures. Stories of Quaid-i-Azam's childhood inculcate the importance of following rules and respecting others.
- By Grades 4 and 5, students are expected to express their opinions on key social and ethical questions and to respect the opinions of those who differ from them.
- Students are frequently taught that there is no 'right answer' to complex, ethical problems and that each one has to be considered in context.

### **Pupil's Books**

- The Pupil's Books form the core of the course. They are lavishly illustrated with photographs to bring alive the familiar environment, distant places, and past times.
- Wherever possible, students learn new concepts through student-friendly stories, especially in Grades 1 and 2.
- The 'Contents' page details the learning outcomes for each unit.
- The twelve units of the Pupil's Book consist mainly of reading texts followed by questions and tasks.
- Students are usually expected to write in notebooks.
- At higher grades, units often end with a directed writing task such as a newspaper article, letter to the head teacher, or poster for the school corridor.
- From Grades 3 to 5, there are Key fact boxes with revision questions.

### **Skills Books**

- At each level, there is an accompanying Skills Book in single colour.
- Students are usually expected to write in the Skills Book.
- The tasks are varied and enjoyable, and include maps, wordsearches, crosswords, puzzles, multiple choice questions, fill-in-the-blanks, and matching exercises.
- Skills Book pages should be introduced in class and can be completed either in class or for homework.
- Every unit of the Skills Book includes a page entitled 'Values'.
- In Levels 2–5, there is a brief learning outcome at the top of every page in simple, student-friendly language. For Level 1, the learning objective is given in the teacher's notes at the bottom of the page.

### **Interactive CDs**

An Interactive CD containing reinforcement exercises accompanies each Pupil's Book.

## Teaching Guides

Teaching Guides are an invaluable resource for the teacher, detailing:

- background knowledge
- learning outcomes
- step-by-step lesson plans
- ideas for further activities and pupil research
- answers to closed questions and indications of what to look for in open questions

At the back of each Teaching Guide there are:

- six photocopiable tests (one for every two units) to help the teacher track how well the students are learning and give feedback to parents
- a photocopiable test record sheet for teachers to keep their records

# Contents

Page Nos / Units	Teaching objectives		Learning outcomes	Key words and phrases
	Pupil's Book and Skills Book		Students should be able to:	
Page Unit 1  Karachi	<b>I</b>	<ul style="list-style-type: none"> <li>To give facts about Karachi</li> <li>To explain the importance of exports and imports to the economy of Pakistan</li> <li>To describe life in the Thar desert and compare it with life in Karachi</li> <li>To find information on the map</li> </ul>	<ul style="list-style-type: none"> <li>relate facts about Karachi</li> <li>explain how imports and exports affect Pakistan's economy</li> <li>draw a comparison between life in Thar and in Karachi</li> <li>read the given map</li> </ul>	<i>delta, harbour, beach, arch, stack, tourist, import, export, sewage, manufacturing, drought, population, goods, services, government, factory</i>
Page Unit 2  Balochistan	<b>II</b>	<ul style="list-style-type: none"> <li>To describe the physical features of Balochistan</li> <li>To describe coal mining in Pakistan and China and to discuss the dangers</li> <li>To discuss some problems caused by mining</li> <li>To create awareness about the problems faced by the people of Balochistan</li> </ul>	<ul style="list-style-type: none"> <li>describe the physical features of Balochistan</li> <li>compare and contrast coal mining in Pakistan and China and discuss the dangers</li> <li>discuss how mining can harm the environment</li> <li>discuss some problems faced by the people of Balochistan</li> </ul>	<i>border, plain, juniper, sandstorm, ore, fossil fuel, generate, electricity</i>
Page Unit 3  Settlements	<b>23</b>	<ul style="list-style-type: none"> <li>To describe different types of settlements and explain why a place becomes settled</li> <li>To compare a fishing village in Balochistan with a fishing village in Gambia</li> <li>To discuss the problems caused by too many people migrating to cities</li> <li>To study the map of Africa</li> </ul>	<ul style="list-style-type: none"> <li>discuss why a place becomes settled and describe different types of settlements</li> <li>compare and contrast fishing villages of Pakistan and Gambia</li> <li>explain the impact of migration from villages to cities</li> <li>identify some African countries on the map</li> </ul>	<i>valley, gill net, casting net, drift net, fuel, leisure, defend</i>
Page Unit 4  Climate change	<b>36</b>	<ul style="list-style-type: none"> <li>To explain the difference between weather and climate</li> <li>To discuss climate change and its impact on our life on Earth</li> <li>To discuss ways to help prevent climate change</li> <li>To discuss the floods of 2010 in Pakistan</li> </ul>	<ul style="list-style-type: none"> <li>differentiate between weather and climate</li> <li>explain how climate change is affecting our lives and what can be done to reduce the effect</li> <li>discuss the aftermath of the 2010 floods of Pakistan and encourage students to help those in need</li> </ul>	<i>atmosphere, greenhouse effect, temperature, polar ice cap, glacier, renewable energy resources, solar power, wind power, hydroelectricity, biomass, carbon dioxide, oxygen</i>
Page Unit 5  Our world	<b>44</b>	<ul style="list-style-type: none"> <li>To explain how the world is divided into different time zones and to locate them on the world map</li> <li>To describe the world's biomes</li> <li>To explain maps drawn to scale</li> </ul>	<ul style="list-style-type: none"> <li>explain how the world is divided into time zones and calculate the local time for some countries</li> <li>describe the different types of vegetation found in the world's biomes</li> <li>read maps drawn to scale</li> </ul>	<i>Equator, latitude, longitude, scale, degree, parallel, rotate, rainforest</i>

Page Nos / Units	Teaching objectives		Learning outcomes	Key words and phrases
	Pupil's Book and Skills Book		Students should be able to:	
<b>Page Unit 6</b> <b>57</b> <b>Money and banks</b>	<ul style="list-style-type: none"> <li>To explain why money was invented and how we use it today</li> <li>To explain the purpose of a bank</li> <li>To introduce Roshaneh Zafar and her work</li> <li>To identify different ways of earning money</li> </ul>	<ul style="list-style-type: none"> <li>discuss the significance of money and its role in today's world</li> <li>discuss how a bank operates and how to save and borrow money</li> <li>discuss the work of Roshaneh Zafar</li> <li>discuss the different ways money can be earned</li> </ul>	<i>barter, currency, bank account, cheque, poverty, employ, wage, salary</i>	
<b>Page Unit 7</b> <b>65</b> <b>Colonization of the subcontinent</b>	<ul style="list-style-type: none"> <li>To explain how colonization of the subcontinent began</li> <li>To introduce the freedom fighters, Hyder Ali and Tipu Sultan</li> <li>To discuss how the British gave the subcontinent basic infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>discuss how the British began to gain power in the subcontinent</li> <li>describe how Hyder Ali and Tipu Sultan fought the British</li> <li>discuss the development that took place in the subcontinent under the British</li> </ul>	<i>barracks, discipline, trading posts, East India Company, Marathas, merchant, rocket</i>	
<b>Page Unit 8</b> <b>77</b> <b>The War of Independence</b>	<ul style="list-style-type: none"> <li>To explain why resentment for their British rulers grew among the natives of the subcontinent</li> <li>To give an account of the War of Independence</li> <li>To discuss the fate of the British East India Company</li> </ul>	<ul style="list-style-type: none"> <li>give reasons for the discontent that grew among the Indians against their British rulers</li> <li>give details of the War of Independence</li> <li>explain how the subcontinent came under direct rule of the British queen in 1858</li> </ul>	<i>ammunition, civilian, empress, execute, mutiny, pension, Queen Victoria, regiment, cartridge, British East India Company</i>	
<b>Page Unit 9</b> <b>88</b> <b>The struggle for independence</b>	<ul style="list-style-type: none"> <li>To give an account of the struggle of the Muslims of the subcontinent, under Quaid-i-Azam's leadership</li> <li>To discuss Mahatma Gandhi and his role</li> <li>To identify some prominent figures who contributed to the freedom struggle</li> <li>To explain how Pakistan came into being</li> </ul>	<ul style="list-style-type: none"> <li>explain how Quaid-i-Azam gave a voice to the Muslims of the subcontinent and led the struggle for freedom</li> <li>give an account of Mahatma Gandhi's life</li> <li>name some freedom fighters</li> <li>explain how Pakistan finally gained independence from the British</li> </ul>	<i>All India Muslim League, election, conference, home rule, majority, Indian National Congress, nation, minority, penalty, privilege, protest, Governor General</i>	

Page Nos / Units	Teaching objectives		Learning outcomes	Key words and phrases
	Pupil's Book and Skills Book		Students should be able to:	
Page Unit 10 <b>102</b> Inventions and discoveries	<ul style="list-style-type: none"> <li>To explain how electricity was discovered</li> <li>To explain how the car was invented and how as a result factories became more organized</li> <li>To identify some other major inventions and describe the working of some of these</li> </ul>		<ul style="list-style-type: none"> <li>give an account of Thomas Edison's invention of a light bulb and then a power station</li> <li>explain the change brought about by Henry Ford's production line in his car factory</li> <li>describe some other major inventions</li> </ul>	<i>astronomy, calculations, reflect, electronics, glider, gramophone, lens, navigation, production line, programmed, pupil, radio wave, telephone exchange, watt, megawatt, digital</i>
Page Unit 11 <b>116</b> The role of media	<ul style="list-style-type: none"> <li>To give an account of how the media evolved over the years</li> <li>To discuss the different ways news can be given out</li> <li>To explain the role of advertising in helping us make choices</li> </ul>		<ul style="list-style-type: none"> <li>discuss how media has progressed through hundreds of years, starting before printing was invented</li> <li>discuss how news is given out and communication takes place through different means</li> <li>discuss how advertising helps us in making choices</li> </ul>	<i>advertisement, broadcast, code, corruption, criticize, magnetism, electric telegraph, entertainment, mail system, manufacturer, media, partition, product, public service, signal, signal box, signalmen, technology, telegraph, opinions, telegraph cable</i>
Page Unit 12 <b>126</b> Trade	<ul style="list-style-type: none"> <li>To explain the meaning of exports and why they are important for a country</li> <li>To identify Pakistan's main exports and the country's main trading partners</li> <li>To explain why countries need to import goods</li> </ul>		<ul style="list-style-type: none"> <li>explain how exports benefit our country</li> <li>name Pakistan's main export items and also name the countries it trades with</li> <li>discuss why countries need to import goods</li> </ul>	<i>economy, region, specialize, surplus, synthetic, licence, trading partner</i>
Page 136	Check-up Tests			
Page 148	Answers to Check-up Tests			
Page 151	Record of Assessments			



# Unit 1 Karachi

## Background knowledge for the unit

This unit features the city of Karachi: its climate; its location as a seaport; coastal landforms; the land around the city; local industries; the port, goods and services; and the problems that have to be solved in big, densely-populated cities, including pollution of the air, water, and land.

The unit also helps the students learn how coastal features such as headlands, caves, arches, and stacks are formed.

The focus on the Thar Desert helps students to learn how plants, animals, and people survive in a desert and the climatic effects on their way of life.

The Thar Desert can support a human population better than many deserts because of its varied landscape. There are hillocks and sandy or gravel plains between the stretches of sand. By planting crops in June and July growers can make the most of the rains from July to September.

## Expected learning outcomes for the unit

When they have completed this unit in the Pupil's Book and Skills Book most students should be able to:

- describe Karachi's location, main industries, transport systems, and function as a seaport
- define the climate of Karachi and its immediate surroundings
- identify the physical features of the land and coast near Karachi
- explain the characteristics of deserts

They will learn how to:

- use diagrams, photographs, and objects to acquire information about geographical features
- ask questions and draw conclusions about the effects of the land and climate on people's lives

They will begin to understand:

- how sea stacks are formed
- how plants, animals, and humans survive in a desert
- the importance of looking after our water supply

## Lesson 1: Location; The coast of Karachi

### Learning outcomes

Students should be able to:

- locate Karachi on a map
- recognize and name coastal features
- describe and explain how sea stacks are formed
- use a key to interpret a map

## Resources

- Pupil's Book pages 2–4
- Skills Book page 2 Karachi map

## Pupil's Book steps

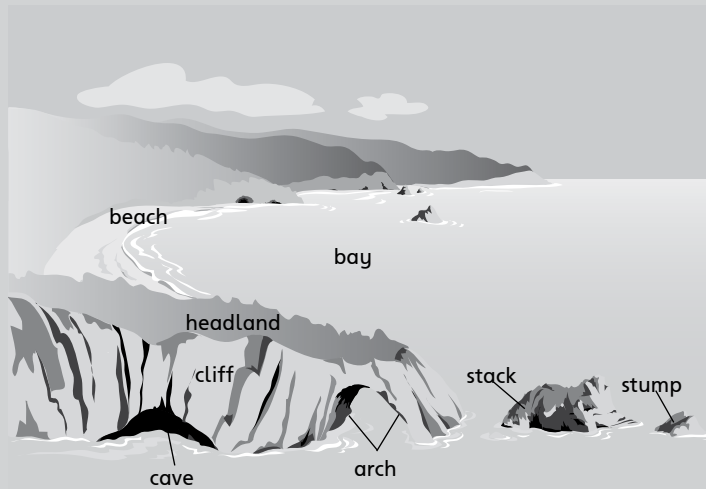
1. Ask the class what they know about Karachi. They might recall that it is the biggest city in Pakistan and was once its capital. They have learned in Book 4 that it is the capital city of the province of Sindh and is an important centre for banking and financial services.  
Ask:
  - Is Karachi on the coast or inland? (on the coast—it is a seaport on the west coast)
  - Is it in the north or south of Pakistan? (south)
2. Ask the students to read the introduction and the paragraph titled 'Location' on page 3. Then ask:
  - What facts have you learned about Karachi? (Refer to the list on page 2.)
  - Which sea is near Karachi? (the Arabian Sea)
  - What makes its location good for a harbour? (It is in a sheltered bay.)
3. Ask the students to study the map and locate the harbour. They should be able to find the sheltered inlet. If they are unable to do so, help them.
4. Read the second paragraph on page 3 with the class. Let them look at the large photograph of the coast spread across pages 2 and 3. Discuss the coastal features in the diagram on page 3 and ask them to read the labels.
5. Tell the class that they are going to learn about how the sea shapes the cliffs to form the coastal features shown in the diagram. Ask:
  - What do you think happens to the cliffs when the waves crash into them? (wear away)Tell them that some parts are worn away more quickly than others, perhaps because the rock is softer or there are gaps or cracks in it, or maybe at these places the waves hit the cliffs more strongly. Ask:
  - What do we call a large hole in a cliff? (a cave)Enquire whether any of them have seen or been inside any caves. Let them describe what they have seen/experienced.
6. Explain the following words that appear on page 4:  
**erode**—wear away; **inlet**—an indented part of a coast—show the students this on the map on page 2; **landform**—a feature of the land: for example, a mountain, cliff, cave, or headland
7. Read page 4 with the class, then ask:
  - What is a headland? (land that juts out into the sea)
  - What is an arch? (It is a hole that is made when caves on both sides of a headland meet to form a passage right through the headland.)
  - How is a stack formed? (The top of an arch collapses, leaving only land on each side.)
  - Where is there a stack at Karachi? (Paradise Point)
8. The students can now complete the exercise on page 4 in their notebooks.

## Skills Book steps

1. Let the students study the map on this page then discuss the difference between it and the one on page 2 of the Pupil's Book. (This is a street map—a map of a much smaller area.)
2. Discuss the map and its key with the class. Talk about the roads and buildings. Then ask:
  - Have you seen any of these buildings?
  - Are you familiar with any roads given on this map?
  - What do you call the squares on the map? (a grid)
3. Let the students work with a partner to solve the given exercise.

## Answers to Pupil's Book page 4

1. & 2.



## Answers to Skills Book page 2

- |                          |  |
|--------------------------|--|
| 1. I. I. Chundrigar Road | 2. Karachi Port Trust                                  |
| 3. Habib Bank Plaza      | 4. M. A. Jinnah Road                                   |
| 5. Civil Hospital        | 6. Mauripur Road, Pichar Road, Nawab Road, Napier Road |

### Further activities

1. Find out about other coastal regions of Pakistan having the features that the students have learned about in this unit: cliffs, caves, arches, stacks.
2. They could make a display or scrapbook showing pictures of these features with captions for them that state which coast they are on, which province, and the nearest town or city.
3. The students could also research other ports to find out if, like Karachi, they developed around sheltered inlets and bays: for example, Gwadar. Ports in India, such as Mumbai and Mangalore could also be studied.

## Lesson 2: Climate

### Learning outcomes

Students should be able to:

- describe the climate of Karachi
- find information about climate from a temperature and rainfall chart

### Resources

- Pupil's Book page 5
- Skills Book page 3 Karachi crossword

### Pupil's Book steps

1. Tell the class that they will learn about the climate of Karachi. Ask:
  - What does climate mean? (the usual weather patterns of a place)

2. Read the paragraphs about climate on page 5 and ask them to answer the following questions:
  - Does Karachi have high or low rainfall each year? (quite low, about 220 mm)
  - When does most of the rain fall? (during the monsoon season: July and August)
  - When do most tourists visit Karachi? (in the winter)
  - Why? (Karachi weather is usually mild and dry in the winter. In summer, it can be very hot and humid, and the temperature is around 30–44°C.)
3. Discuss the chart of the average low temperature (first line), average high temperature (second line), and the amount of rainfall, on page 5.
4. Let the students complete the exercise on this page.

### Skills Book steps

1. Review the procedure of completing a crossword puzzle:
  - point out the clues for the words that go across and down the puzzle
  - one letter in one box
  - clues don't always follow the 1, 2, 3 sequence
  - numbers that don't have clues 'across' or 'down' are not mentioned
2. Ask the students to read the clues and write the answers in the crossword puzzle. Encourage them to use the Pupil's Book (pages 2–4) to help them find the answers and spell the words correctly. The glossary of the Pupil's Book will also help.

#### Answers to Pupil's Book page 5

2. January      3. May, June      4. July      5. The average rainfall is 18.5 mm.

#### Answers to Skills Book page 3

##### Across

4. Arabian  
6. Paradise Point  
7. pollute  
9. Karachi  
11. export

##### Down

1. headland  
2. Sandspit Beach  
3. monsoon  
5. bay  
8. Malir  
10. imports

### Further activities

1. The students could find out about the average monthly temperatures and rainfall for other cities and compare them with Karachi.
2. The students can make an 'Average monthly temperatures and rainfall' chart for a city of any country of their choice.

## Lesson 3: The Port of Karachi; What are services? What are goods?; Goods and services in Karachi

### Learning outcomes

Students should be able to:

- identify and describe the Port of Karachi
- identify the imports and exports that pass through the Port of Karachi
- investigate a place through aerial and conventional photographs

## Resources

- Pupil's Book pages 6–9
- Skills Book page 4 Export countries

## Pupil's Book steps

1. Begin by talking about the city, Karachi. Ask:
  - What kind of a city is Karachi? (a seaport)
  - How is Karachi important for Pakistan's imports and exports? (It is the country's main seaport.)
2. Ask the students to read page 6 and look at the pictures. Then discuss what they can find out about Karachi from this page.
3. Ask them to read page 7 so as to answer the following questions:
  - Which countries are important for Pakistan's export?
  - Which countries are important for Pakistan's import?
  - What are goods?
  - What are services?
4. The students can then give examples of goods and of services. Then read page 8 with them to find out about goods and services in Karachi, especially manufactured goods. Ask:
  - What are 'manufactured' goods? The goods made in large quantities, using machinery are 'manufactured'. (They could then name some goods manufactured in Karachi, namely textiles, chemicals, medicines, electronic goods, steel, and cars.)
  - Which food goods are important for Karachi? (fish and fish products)
  - Which car factories are in Karachi? (Toyota and Suzuki)
  - Which truck and bus factories are in Karachi? (Daihatsu and HinoPak buses; Millat Tractors)
  - How does this affect the city? (It has a lot of factories, which adds to the city's pollution.)
  - Which services are important for Karachi? (banking, insurance, ICT and call centres, television broadcasting, and transport)
  - How does this affect the building structure of Karachi? (This results in a large number of office buildings being built in this city.)
5. Ask the students to think about the natural resources around Karachi and to decide what would be a good factory to open: for example, a food factory to make ready fishmeal; a fashion designing business with a factory to produce its clothing, making use of local textiles; a carpet factory; a factory for engines or parts for boats.
6. They can then complete the exercise on page 9 to create an advertisement for their factory.

## Skills Book steps

1. Read the instructions on this page with the students.
2. Use an atlas—the *Oxford School Atlas for Pakistan*—and ask them to locate Pakistan and then identify the countries mentioned in the key. Offer assistance if necessary.
3. Once this is done, let them work on page 4.

### Answers to Pupil's Book page 9

Answers will vary.

### Further activities

1. Find out more about flights to and from Jinnah International Airport (the goods imported and exported by air; the reasons why passengers come and go: tourism, visits to and from families overseas, business).
2. The students could write to the airport for information and make their own booklets about the airport.

## Lesson 4: Big city problems

### Learning outcomes

Students should be able to:

- identify and describe the problems (particularly pollution) of big cities such as Karachi
- derive possible solutions for these problems
- investigate a place through photographs

### Resources

- Pupil's Book pages 9–10
- Skills Book page 6 Values

### Pupil's Book steps

1. Read 'Big city problems' on page 9 with the class and ask them to look at the photograph and read its caption. Ask:
  - In what ways do the manufacturing and service industries cause problems for the city? (They add to the city's traffic congestion and air pollution.)
  - What problems are caused when many people live in a small area? (overcrowding; traffic jams; not enough houses, electricity, or water; disposal of waste)
2. Ask the students to look at the pictures on pages 2–4 and also page 6, then ask:
  - What do these make you think of Karachi?
3. Read page 10 with the students and ask them to look at these pictures and read their captions. Ask:
  - What do these make you think about Karachi? (Compare these with the pictures on pages 2, 3, 4, and 6.)
  - How is the city's pollution harming the coast? (Oil waste and sewage are polluting the sea.)
  - Does this affect the people? (Yes, it can make people ill or even kill them.)
4. Read 'It's a Fact' with them and discuss what can be done to help and protect people: for example, repairing leaking pipes to reduce water shortages; finding ways to stop factories from polluting water supplies; making it illegal to have water pipes near sewage outlets.
5. The students can then complete the exercise on page 10.

### Skills Book steps

1. Let the students look at the photograph at the bottom of page 10 of the Pupil's Book. Ask:
  - What is the boy doing?
  - Is this a good water supply?
  - Why do you think so?

2. Tell them that many people in Karachi cannot get clean water and that they are going to find out more about this. Ask:
  - Why do many people in Karachi not have clean water? (The city needs about six hundred million gallons of water per day but only gets about four hundred and thirty-five million gallons from the River Indus. Also, many of the pipes leak, so a lot of water is wasted.)
  - Does everyone in Karachi have to get water from public taps like the one in the photograph? (No. Most houses and other buildings have piped water, but not in all parts of the city. Some people buy their water from tankers.)
  - How does the water from the public taps and tankers get polluted? (Pollution from factories gets into the river where the water comes from.)
  - What will happen in the future? (If the city continues to grow at this rate, there will be even greater water shortages.)
3. The students can now complete the exercise.

### **Answers to Pupil's Book page 10**

1. Answers will vary. (May include traffic jams, air pollution, water pollution, overcrowding, water shortages, housing shortages, waste disposal, sewage)
- 2–4. Answers will vary.

### **Answers to Skills Book page 6**

Answers will vary. Following are examples of correct answers:

1. Polluted water makes people ill and can cause death. People have a right to clean water. It is not fair that some do not have it.
2. We could:
  - turn off taps and showers properly after using them.
  - not overfill baths, bowls, and cooking pots.
  - not leave the tap running while brushing our teeth.
  - collect rainwater to water plants.
  - store water in tanks or reservoirs (as they do with ponds in the Thar Desert).
3. They could:
  - find ways of removing pollutants.
  - not let polluted water into the river—find ways of treating it.
4. People would become ill and die; people, clothes, homes, and streets would become very dirty; disease would spread; people might fight over scarce water; they would have to leave the city if there is no water; animals and plants would die too.

### **Further activities**

1. Find out about the Karachi Strategic Development Plan 2010 and how it is trying to solve the problems of the city.
2. Split the class into groups—each group to research a different problem and the solutions that are being tried.
3. If known, find out how well they are working or the effects they have had.

## Lesson 5: Life outside Karachi; Living in the Thar Desert

### Learning outcomes

Students should be able to:

- identify small towns and villages in the Sindh province
- describe the land and climate of the Thar Desert
- investigate a place through photographs and maps

### Resources

- Pupil's Book pages 11–12
- Skills Book page 5 Camels of the Thar Desert
- A photograph of a camel. (There is a camel in the beach photograph on page 3 but a larger colour photograph would be better.)

### Pupil's Book steps

1. Discuss the map on page 11 and ask the students to locate cities, the Thar Desert, lakes, and the Indus River's course through the province of Sindh on the map.
2. Call on a volunteer to describe the land to the east of the Sindh province (desert). Ask:
  - What is desert land like? (dry and dusty, with very few plants)
  - What is the climate like? (Dry—with very little rain in any season. Many deserts have a hot climate but there are some cold deserts too.) Explain that in deserts the temperature can be very hot some of the time but very cold at others: for example, at night and in the winter. Ask:
    - What is the name of the desert in the east of Sindh? (Thar)
3. The class can now read page 11, look at the photograph, and read the caption. Ask:
  - Which other country does the Thar Desert extend into? (India)
  - When does the Thar Desert get some rain? (July to September)
  - Can the people there rely on having rain during those months? (No. There are droughts sometimes. Remind the students of the meaning of drought.)
  - How hot does it get in the desert? (up to 50°C)
  - Does it ever reach freezing? (Yes.)
  - What temperature is that? (0°C)
  - How do the people living in the Thar Desert get water? (They have found ways of storing it in a *johar*—a type of pond that they build.)
  - Do these solve their water problems? (No. These *johars* (ponds) sometimes dry up.)
  - What do the people do when that happens? (They move on to live somewhere else. Many are nomads—people who keep moving to find fresh grazing for animals and water for themselves and their animals.)
  - Are all the people of the desert nomads? (No. In some places there is underground water that they can reach by digging wells.)
4. Ask the students what they have learned about the lives and work of the people who live in the Thar Desert. (They are mainly farmers.) Ask:
  - What animals do they keep? (buffaloes, sheep, goats, camels, and oxen)
  - Do they grow any crops? (Yes, they grow *bajra*, chillies, pulses, *jowar*, maize, sesame, and groundnuts.)
5. Read the top section of page 12 with the class and ask them to look at the photographs and read their captions. Help the students to describe the house in each picture, using



words such as cement, bricks, tiles, wood, windows, garage, garden, shutters, gutters, storey, path, straw, mud, and sticks. Ask:

- What is the difference between the houses built in Karachi and those built in the Thar Desert?
6. Discuss why they are different. Many people in the desert build their own houses using whatever materials they can find. Straw and mud are good materials for a dry place because the mud will not wash away. Also, these materials help to keep the inside of the house cool. Houses in Karachi are like those in most other cities around the world that are made from materials brought to the city or even imported. They usually have two levels for more space, and many have a garage because most people in cities have cars. In the desert there is plenty of space but people do not have large houses, partly because they don't need them, as they spend most of their time working, and partly because they build their own houses and have little choice of materials, thus keep them simple. People living in deserts walk or travel on donkeys and camels. Point out that there are fences and pens around the desert houses—most probably for domestic animals. Discuss the rooms in modern city houses as compared to houses in the desert that usually have just one or two small rooms.
  7. Help the students describe the roads in Karachi and the Thar Desert, using words such as tarmac, dual carriageway, single track, road markings, road signs, pavements, and traffic. Ask:
    - How do you think the roads in Thar are different from those in Karachi? (They are narrower, not dual carriageways, more like tracks, have little traffic because people who live in the desert walk or travel on donkeys and camels, and very few people travel across the desert.)
  8. Ask the students to read 'It's a Fact', which they will probably find surprising. Ask why they think the Thar Desert is more densely populated than others. This desert has hillocks with sandy and gravel plains in between stretches of sand which gives it a richer habitat than most deserts. This also means that different types of vegetation can grow here. Thus the desert can support more wildlife than many other deserts, which enables more people to live a relatively comfortable life here than in other deserts. Though farming is not easy they survive by managing their crops and animals. Crops are planted mainly in June and July for a summer harvest and animals are grazed on common land in the villages.
  9. The students can now complete the exercise on page 12. They could first work with a partner to list the facts they now know about the Thar Desert and make a note of anything they still need to find out. Help them to find the answers to their questions using other books, such as the *Oxford School Atlas for Pakistan*, also other informational books and leaflets—and if possible, websites about the Thar Desert.

### Skills Book steps

1. Show the class the photograph of a camel and invite volunteers to make a sentence about it. They could describe its body shape, its size, legs, feet, head, skin and skin covering, and features such as the mouth, eyes, nose, and ears. Ask:
  - What makes camels suitable for desert life? (The students might recall that camels do not need to drink often because their bodies convert fat stored in their humps to water when they need it.)
  - What do you think it is like being outdoors in dry, dusty conditions and sandstorms? (You breathe in dust and get sand and dust in your eyes, ears, nose, and mouth.)
  - How does a camel cope with this? (It has long eyelashes that help to keep sand out of its eyes. It can also close its nostrils to keep out sand and dust.)

2. Remind the class that very little grows in deserts, and many plants have tough, prickly leaves. Ask if they know what camels eat. Tell them that they eat desert plants and that their thick lips are not easily harmed by these prickly plants.
3. The students can then complete the Skills Book exercise.

### **Answers to Pupil's Book page 12**

1. Answers will vary.

### **Answers to Skills Book page 5**

The camel has wide feet which prevent it from sinking into the sand.

The camel has thick lips so it can eat prickly plants.

The camel has nostrils that can close up tight to prevent sand from getting in.

The camel has eyelashes that are very long to keep sand out of its eyes.

The camel has a hump that is used to store fat.

### **Further activities**

1. Find out how other desert animals, plants, or insects survive.
2. Choose one desert animal to make a chart with. Have pictures and interesting facts about it.

### **Answers to Pupil's Book page 13**

- A.
1. Karachi is the main centre of trade in Pakistan.
  2. A bay is a coastal inlet with land on three sides.
  3. A stack is formed when an arch collapses.
  4. The Karachi coast has become polluted from factory waste.
  5. Goods are things that you can see and touch.
  6. Services are things provided for you by other people.
  7. Imports are goods that are bought from other countries.
  8. Exports are goods that are sold to other countries.
  9. Some of the goods made in Karachi are textiles, chemicals, and cars.
- B. Answers will vary but should include comparisons of school lessons and timetables, leisure activities, transport, home life, and food.

# Unit 2 Balochistan

## Background knowledge for the unit

This unit features the largest province of Pakistan: its climate; its location in a mountainous region that also has a desert, volcanoes, forests; local industries.

The unit helps the students to learn how mud volcanoes are formed and about desert landforms, climate, and weather events. They also learn about conservation work on the juniper forests.

The students learn how the climate and landscape affect the people's way of life, the crops they can grow, and the crafts and industries that characterize the region.

They learn about the province's main industry—coal mining—and compare coal mining in Pakistan with China.

## Expected learning outcomes for the unit

When they have completed this unit in the Pupil's Book and Skills Book most students should be able to:

- identify and describe the location and climate of Balochistan
- describe the physical features of the different types of land—mountains and desert—and what grows and lives there
- identify the characteristics of mud volcanoes
- identify the mining industry

They will learn how to:

- use sources such as maps and photographs to learn about geographical features
- ask questions and draw conclusions about how the people's way of life is affected by the land and climate
- compare coal mining in Pakistan with that in China

They will begin to understand:

- how mud volcanoes are formed
- how plants, animals, and humans survive in a desert and in high mountains
- the importance of conservation of forests
- what makes coal mining dangerous and how it affects the environment

## Lesson 1: Location; Landscape

### Learning outcomes

Students should be able to:

- describe and identify the location of Balochistan
- interpret the different physical features of the land in the province: desert, mountains, plateaus, rivers, and forests
- use grid squares and a key to locate and describe features on a map
- use a compass rose to describe directions

## Resources

- Pupil's Book pages 14–15
- Skills Book page 7 Travelling in Balochistan; page 8 Quetta

## Pupil's Book steps

1. Ask the class what they know about Balochistan. (They might know that it is the largest province in Pakistan.)
2. Let the students study the map on page 14. Ask:
  - Does Balochistan have a coast? (Yes—on the Arabian Sea.)
  - Which other provinces of Pakistan does it have borders with? (Khyber Pakhtunkhwa to the north; Punjab and Sindh to the east)
  - Does it have borders with other countries? (Yes—with Iran to the west and Afghanistan to the north)
  - What is the name of the capital city of Balochistan? (Quetta. The students should be able to locate it on the map.)
  - Which grid square is Quetta in? (C4)
3. Ask them to read the introduction and paragraph on 'Location' from page 14 to check the information they found from the map. They should then read 'It's a Fact'. Ask:
  - What fraction of Pakistan does Balochistan cover? (almost half)
4. Tell the class that they are going to find out about the land in Balochistan. Discuss the fact that because it is such a large area, it has different types of landscapes: deserts, mountains, river-valleys, and forests. They should then read 'Landscape'. Ask different students to name a mountain range in Balochistan and give its location using the compass rose. [Sulaiman Range (north-east), Kirthar Range (south-east), Toba Kakar Range (north), Balochistan Plateau (south)].
5. Repeat the pattern of '4' for the Kharan Desert, the plains, and the rivers (Dasht, Hingol, Zhob, and Hub). Ask:
  - From which mountain does each river rise? (Dasht, Hingol, and Hub: Balochistan Plateau; Zhob in the Toba Kakar Range)
6. Remind the students how to locate places on a map using grid references, with the letters along the bottom of the map and the numbers along the side. They can now complete the exercise on page 15.

## Skills Book steps (Page 7 Travelling in Balochistan)

1. Allow the class to study the map. Then ask:
  - How is this different from the map on page 15 of the Pupil's Book? (This is a road map. It only shows the main roads and the towns and cities they link. It doesn't show the physical features such as rivers or mountains.) Point out that towns are shown as black dots and roads as black lines.
2. Help them to complete B1 by asking:
  - Can you find the Arabian Sea and the southern coast of Balochistan? (When they have done so, ask them to look along the coast and read the names of the towns. Ask them to look at the roads that link the towns. Explain that all main roads are numbered.)
  - Why do you think the roads are numbered? (To identify them when giving directions or information.)  
Explain that many roads, or parts of long roads, will have a name too. For our address we give the name, rather than the number of the road. Ask the students to read the numbers on the roads that link the south coast towns.
3. The students can then complete the remainder of the page.

### Skills Book steps (Page 8 Quetta)

1. Begin by asking the students to locate Quetta on the maps in the Pupil's Book and the road map on page 7 of the Skills Book. Ask:
  - Which roads lead to Quetta? (N40, N25, N65)Tell them that Quetta also has a railway station and an airport, so it is not difficult to get to.
2. Let them read the 'Fact file' on this page. Then ask:
  - What is the landscape around Quetta like? (mountainous)
  - Do you think the land is bare or are crops grown? (Fruit crops are grown here so Quetta is known as 'the Fruit garden of Pakistan'.)
  - Do you think there is plenty to do there? (Yes, because it is the capital and the largest city of Balochistan.)
3. The students can then read on to find out what there is to see and do in Quetta. Ask:
  - What would you choose to do on a day out in Quetta?
4. Let them read about the climate in Quetta. Then ask:
  - What are the winters like? (cold)
  - What are the summers like? (hot)
  - When is the best time to visit? (May to September, when it is not too cold.)
5. Ask the students to use the blank Fact file section at the bottom of the page to plan a guide about their hometown, village, or city.

#### Answers to Pupil's Book page 15

1. b. D3                      c. A2                      d. D2
2. a. 200 km                b. 100 km                c. 100 km

#### Answers to Skills Book page 7

- B. 1. a. Gwadar, Pasni, Ormara                      b. N10
2. a. N25    b. Kalat, Surab, Khuzdar, Bela, Liari, Uthal
3. N10, M8, N85, N30 Turbat; or N10, M8, N25 Turbat, Bela (or Pasni, Ormara, Lian, Uthal, Bela)
4. True
5. Dalbandin
6. Hingol National Park

#### Answers to Skills Book page 8

Answers will vary.

### Further activities

1. Look at a road map of your province (if you are not in Balochistan).
2. Find the numbers of the roads that lead to your nearest town or city.
3. Find out which towns or cities they go to.
4. The students could write their own questions about the road map for others to answer.
5. Find out more about Quetta: for example, more details about the climate. Does it have a monsoon season? Are winters or summers wet or dry? What is the average temperature and rainfall for each month?

## Lesson 2: Mud volcanoes; Juniper forests

### Learning outcomes

Students should be able to:

- describe and define the mud volcanoes of Balochistan—the types of places where they are found, how they form, what they are like when they erupt, and how people interact with them
- identify and describe the juniper forests of Balochistan and their use as a natural resource
- relate how the forests are endangered and conservation work taking place

### Resources

- Pupil's Book pages 16–17
- Skills Book page 9 Quetta earthquake

### Pupil's Book steps

1. Tell the class that they will be learning about some interesting natural features of Balochistan, beginning with mud volcanoes. Ask them if they know what 'mud volcanoes' are.
2. Explain that mud volcanoes are different from ordinary volcanoes, and let the students read the first two paragraphs of page 16. Ask:
  - How does a mud volcano form? (Water, gases, and mud from deep under the ground escape to the surface of the Earth to form mud volcanoes.)
  - What happens when the mud reaches the surface? (Different things could happen. It could spread out or form mounds or cones, explode high into the air, or just ooze out slowly.)
  - What kinds of places are most likely to have mud volcanoes? (areas with oil and natural gas)
3. Write the following questions on the board and ask the students to look for the answers on page 16.
  - About how many mud volcanoes are there in Balochistan? (more than 80)
  - In which parts of the province are they? (west, in the Gwadar district; north-east of Ormara)
  - Which is the most famous mud volcano? (Chandrakup)
  - Why do Hindus stop there on their pilgrimage to Hinglaj? (They believe it is holy.)
  - What do they do there? (They stay up all night to make *rotis* to offer the volcano.)
4. Let the students read the first paragraph about juniper forests on page 17, including 'It's a Fact'. Ask:
  - How old are the juniper forests? (at least 5000 years old)
  - How are the forests useful as a natural resource? (Berries are used for flavouring food. Oil from the trees is used in medicines. Tourists come to see them.)
5. Ask them to read the rest of the section on juniper forests then ask the following questions:
  - What is endangering the forests? (A disease is killing the trees, also people cut them down for firewood.)
  - Why are these particularly bad problems for juniper trees? (They grow very slowly.)
  - What is being done to protect them? (World Wildlife Fund Pakistan has developed a plan to protect them.)

- What message would you give people to encourage them to safeguard the juniper forests?
6. Ask them to plan how they could give this message using pictures and words. They can then complete the exercise on page 17.

### Skills Book steps

1. Tell the class that there was an earthquake in the area around Quetta in 1935 and that they are going to read about it from the point of view of someone who was there.
2. Help the students read Salwa's diary: you could invite them to take turns to read aloud a sentence each. Ask:
  - What was the date of the earthquake? (31<sup>st</sup> May, 1935)
  - Was it a powerful earthquake and how can you tell? (Yes. The ground was shaking so much that Salwa could not stand up, and the only building still standing afterwards was the Government House.)
  - How many people died on the first day of the earthquake? (more than 30,000)

### Answers to Pupil's Book page 17

The students design a poster.

### Answers to Skills Book page 9

- B. 1. Answers will vary, depending on the date when the exercise is undertaken. (In 2013 it is 78 years.)
2. In bed. She was awoken by the earthquake.
  3. A couple of minutes
  4. She took cover under the table.
  5. She was scared because everything was shaking.
  6. All the shops, the railway station, and every building except the Government House was reduced to rubble.
  7. The Government House
  8. It must have been stronger than the others and well built, perhaps because it was a government building.

### Further activities

1. The students could find out about other parts of the world that have mud volcanoes and compare these areas with Balochistan, noting, for example, whether they have gas and oil:
  - a) There are few mud volcanoes in most of Europe, apart from Italy, Sicily, Romania, and in Russia, whereas there are many on the Taman Peninsula, and also in Ukraine.
  - b) In Italy they are common in the northern part of the Apennine Mountains and in Sicily.
  - c) In Asia they can be found in Indonesia, Azerbaijan, Iran, the Andaman Islands off the coast of India, the Philippines, Xinjiang province of China, Burma, Taiwan, and Malaysia.
  - d) In North America they can be found in California, Alaska; British Columbia in Canada; and Yellowstone National Park in the USA.
  - e) In South and Central America there are mud volcanoes in Venezuela and Trinidad and Tobago.

## Lesson 3: Climate; The Kharan Desert; The people

### Learning outcomes

Students should be able to:

- define and describe the climate of different parts of Balochistan
- identify the characteristics of a desert landscape and the people who live there
- ask questions and find answers about how land and climate affect the people's way of life

### Resources

- Pupil's Book pages 17–19

### Pupil's Book steps

1. Tell the class that they will now find out about the climate of Balochistan, the Kharan Desert, and the people who live there. Ask:
  - What do you know about the climate of Quetta? (It has hot summers and cold winters.)
2. After the students read about the climate of the province of Balochistan on page 17, ask:
  - Which parts of Balochistan are the coldest in winter? (the north and the mountains)
  - Where is the climate milder? (on the coast and the plains)
  - Which are the hottest, driest, parts of the province? (Chaghai and Kharan in the west)
  - Does Balochistan have a monsoon season? (No.)
3. Explain any words the students might not know in the section on the Kharan Desert.  
**sand dunes:** hills of sand formed by wind or water flow  
**drought:** a time when there is no rain, or hardly any
4. Ask the students to read the first paragraph about the Kharan Desert on page 18 and discuss what information it provides about the climate. (It can be very windy, causing shifting sand dunes up to 30 feet high and fierce sandstorms.)
5. The students can then read the next paragraph from 'The Kharan Desert' (page 18) and 'It's a Fact' from page 19 to find out in what ways the weather in the Kharan Desert is 'extreme' (having extremes of rainfall; low or high, extremes of temperature; low or high, and extremely strong winds). Some of these extremes can be seen in the photographs. Ask:
  - What interesting feature does the Kharan Desert have because of a lack of rain? (dry lakes that are now salty marshes with moving sand dunes)
6. Ask the students to read 'The people' (of Balochistan) from page 18, then ask:
  - Where do most of the people of Balochistan live? (Quetta in the north, and the port of Gwadar in the south)
  - How do many people who live in the mountains make a living? (They raise animals and sell their produce at bazaars in the towns.)
  - Which animals do some of them raise? (camels)
  - How do many people on the plains make a living? (They grow fruit such as grapes, apples, cherries, peaches, pomegranates, dates, apricots, and almonds.)
  - What other crops do they grow? (wheat)
  - How do many people who live on the coast make a living? (fishing)
  - Which traditional craft do people earn a living from? (rug-making)
7. The students can now complete the exercise on page 19.



### Answers to Pupil's Book page 19

1. No answer required.
2. Answers will vary. Useful words include arid, cracked, dusty, dry, flat, parched, windswept, bare, vast.
3. Answers will vary, but examples may be: The Kharan Desert is dry and dusty. Sand blows to form dunes in the desert. The desert is bare and flat. The earth is parched and cracked.

### Further activities

1. The students could find out more about the daily lives of children in the Kharan Desert: education; what the schools are like; what they do for entertainment and leisure; any work they do, etc.
2. Find photographs of the Kharan Desert.

## Lesson 4: Mining in Balochistan

### Learning outcomes

Students should be able to:

- identify and describe the minerals mined in Balochistan
- use a key on a map to find out where the different minerals are mined

### Resources

- Pupil's Book pages 19–21
- If possible, some samples of minerals mined in Pakistan: for example, copper, limestone, marble, and perhaps fluorite, might not be difficult to find. Avoid sulphur, unless in a sealed jar (and check your school's health and safety policy regarding substances). Avoid antimony as it is poisonous.

### Pupil's Book steps

1. Begin by asking the students if they know what minerals are. Elaborate that they are materials found in the ground: some are metals but others are not, e.g. coal, gemstones, marble, and sulphur. Ask:
  - Can you name any metallic minerals? (gold, silver, copper, iron)
2. Explain that most minerals, when first mined, do not look like the materials we know, for example, metal ores that are dug from the ground do not look like the finished metals. They have to be cleaned and shaped. Show the students some examples of minerals and ask for a description of each: their colour and whether they have crystals (regularly-shaped pieces; these can easily be seen in fluorite and in many everyday materials, such as sugar and salt).
3. Let the students read 'Mining in Balochistan' from page 19 and look at the pictures and read their captions. Ask:
  - Which two minerals are being mined in the photographs? (copper and chromite)
  - What is copper used for? (electrical wires, household pots, jugs and pans, roofing, pipes for water or gas)

4. Explain that copper is easily pulled into thin lengths to make wires; it can easily be hammered into sheets or shaped into pipes; and it doesn't rust. Chromite is the source of the metal chromium. Ask:
  - Can you name anything made from chromium (sometimes called chrome)? (It is used in making dyes and colour pigments for paints, and in treating leather. It can be used for plating other metals to stop them from rusting and to make them look attractive because it is easy to polish.)
  - Do you have anything at home made from chrome or coated with chrome? (examples: water taps, metal trims on some cars around lights, metal parts of windscreen wipers, some parts of bicycles, door handles) Ask:
  - Does mining look like an easy job? Explain why. (Draw attention to the places where miners work and the types of equipment and machinery they use: underground tunnels, pits with heavy machinery working around them, dust, etc.)
  - How is an open-pit mine different from an underground mine? (It has pits on the surface of the ground instead of tunnels underground.)
  - Where in Pakistan is copper mined? (Saindak and Reko Diq)
  - Which other metal is found alongside copper? (gold)
  - Where is chromite mined? (Muslim Bagh)
  - To which country is most of Pakistan's copper and chromite exported? (China)
5. Ask the class to look at the pictures of minerals found in Pakistan on page 21. Read the captions with them. Ask:
  - What is limestone used for? (making cement, glass, soap, paper, and paint)
  - Which other minerals are used in making cement? (magnesite, gypsum)
6. They can then complete the exercise on page 21.
7. Let the students study the map on page 20. Ask:
  - What does this map show? (the minerals mined in Balochistan and the places where they are mined)
  - What mineral does a red circle on the map show? (sulphur)
  - What symbol on the map shows where marble is mined? (a yellow rectangle)
  - What does a green triangle tell you? (Gold is mined in this place.)
8. Now that they know more about the minerals, the students can understand the key to the map. Ask them to use the key to help them answer the questions on this page.

### Answers to Pupil's Book page 20

- |                          |                  |           |
|--------------------------|------------------|-----------|
| 1. Gunga, Kudni, Bankhri | 2. Sulphur       | 3. Chagai |
| 4. Chamalong, Spintangi  | 5. Qila Abdullah |           |

### Answers to Pupil's Book page 21

- A.
1. It is used to make steel for bridges, cars, ships, buildings, machinery, and tools.
  2. Baryte (Chromite is also used for making colour pigments.)
  3. Electrical wires, jewellery, cooking pans, making brass, making bronze
  4. Antimony
  5. Marble
- B. Answers will vary.

## Further activities

1. Make a display about some of the everyday things made from minerals from Balochistan.
2. Include information about the minerals.
3. The students could look up the minerals to find out why they are good for these purposes, e.g. chromite changes the colours of some other minerals; iron is very strong and hard; copper does not rust.

## Lesson 5: Coal mining in Pakistan; Mining problems

### Learning outcomes

Students should be able to:

- describe how coal forms and where it is mined in Pakistan
- determine how coal is used
- identify and describe the dangers faced by miners

### Resources

- Pupil's Book pages 22–23
- If possible, a piece of coal

### Pupil's Book steps

1. Show the class a piece of coal and ask:
  - What is this?
  - Where does it come from?
  - What is it made of?
2. Explain that coal is a mineral and not a metal, so it is called 'non-metallic'. Explain that it is formed when plants and animals that have died and are eventually buried in the ground are pressed together for millions of years. Plants and animals contain a great deal of carbon which is the main material that coal is made of.
3. When the students have read 'Coal mining in Pakistan' from page 22 and studied the map, ask:
  - Which provinces of Pakistan have coal? (Punjab, Balochistan, and Sindh)
  - What do we use coal for? (It is used as a fuel—something to burn to get heat. It is useful in furnaces that heat boilers to make steam for driving generators that produce electricity.)
4. Ask them to read 'Mining problems', including 'It's a Fact' to find the answers to the following questions:
  - What dangers do miners face at work?
  - How should mine owners try to protect their workers?
  - What damage can coal mining do to the environment?
  - What do you think mining companies should do to avoid this as far as possible?
5. Ask the students to read 'It's a Fact' on page 22. Ask:
  - Can we continue mining coal forever? Explain why. (No, because fossil fuels take millions of years to form. We are using them up much faster than they form. If they are used up at this pace, there will soon be none left.)
6. The students can now complete the exercise on page 23.

### Answers to Pupil's Book page 23

1. They are fuels formed from plants and animals and are used for burning as fuel to heat water in boilers to produce steam to generate electricity.
2. Any three from Makarwal, Dandot, Pidh, Mach, Lakhra, Sondah.
3. Open-pit mines are on the surface of the ground. In an underground mine, the mine tunnels are under the ground.
4. Tunnels can collapse. They can become flooded. Gases can cause explosions. Miners can develop lung diseases because of the dust.
5. Answers will vary.

### Further activities

1. The students could find out more about coal mining and then list all the advantages and disadvantages they can find.
2. They could discuss these in groups of four and decide whether or not the advantages outweigh the disadvantages.

## Lesson 6: Coal mining in China; Comparing coal mining in China and Pakistan

### Learning outcomes

Students should be able to:

- describe coal mining in China
- compare and contrast coal mining in China with Pakistan

### Resources

- Pupil's Book pages 23–24
- Skills Book page 10 Coal mining accident—China; page 11 Values

### Pupil's Book steps

1. Tell the class that one of our neighbouring countries is one of the largest producers of coal in the world. Ask if they can guess which country this is. (China)
2. Let the students read 'Coal mining in China, from page 23 and study the map. Ask:
  - Which parts of China have coal? (the east and north)
3. Discuss why China imports as well as exports coal. The coal is mined far from the industrial areas of the south of China, that use the most coal. It is difficult to transport the coal by road and the north-south railways cannot cope with it. This means that coal has to be taken to ports, loaded onto ships, and taken round the coast to southern ports, from where it is transported by rail and road to the places where it is needed. Also, importing coal rather than mining it helps to keep China's air, water, and land pollution down. In addition to this China has become more and more industrialized. The main fuel has long been coal, so industry has come to depend largely on it. However it is not producing enough coal to support its fast developing industries. Until 2008 China's exports of coal were larger than its imports. They became equal in 2008, and presently imports are greater than exports and presently increasing each year.
4. Tell the class that China has some open-pit mines but most are underground. Its largest open-pit mine is at Haerwusu in the north of inner Mongolia.

5. Ask the students to read 'Mining problems' and 'It's a Fact' to get the answers to the following questions:
  - What dangers do miners face at work?
  - How should mine owners try to protect their workers?
  - What damage can coal mining do to the environment?
  - What do you think mining companies should do to avoid this as far as they can?
6. Read page 24 'Comparing coal mining in China with Pakistan' with the class. Ask a different student to read each bullet point aloud. Then ask:
  - Which country produces more coal, Pakistan or China? (China)
  - Which country uses more coal? (China. Point out that this is not very surprising because it is bigger than Pakistan and has a much larger population.)
  - Which fuels does Pakistan use to produce most of its electricity? (oil and gas)
  - Which fuel does China mostly use? (coal)
  - What surprising fact have you learned about Pakistan's coal deposits? (It has one of the world's largest coal deposits in the Thar Desert which have not been mined.)
  - What have you learned about pollution caused by coal mining? (Both Pakistan and China have pollution problems from coal mining but China has one of the most polluted cities in the world.)
  - Does Pakistan have mining accidents? (Yes. Coal mining accidents can happen anywhere because it is a hazardous industry. People work underground where there are many dangers: collapsing tunnels, flooding, gas leaks, dust, etc. See page 23).

### Skills Book steps (Page 10 Coal mining accident—China)

1. Tell the class that they are going to read some facts about a coal mining accident in China and will then write a newspaper report about it.
2. Begin by reading the facts about the accident with the students. Ask them to make notes about each fact under headings What, Who, Where, When, Why, and Other interesting facts. They could make a chart as shown:

What	How	Who	Where	When	Why
explosion	gas leak	20 miners died. Hundreds of rescue workers worked on the rescue for 40 hours.	Shizong mine, Yunnan Province, south-west China	early morning, Thursday, 10 <sup>th</sup> November, 2011	Gas escaped into mine.

#### Other interesting facts

Mining accidents are common in China—only a week after there was another accident (also a gas leak); last year more than 2400 people died in mining accidents.

3. The students could use their notes to help them complete the newspaper report on the lower half of the page. You could cover the initial portion so they can make notes. This will help them later on when they are able to write a news report without the help of a template. It will help the students to write in their own words rather than copy from books.

- When they have written their report the students should read through it and then think up an interesting headline that sums it up, telling the readers what the report is about, e.g. Pit disaster at Shizong kills 20; Shizong gas leak kills 20; Another gas leak kills miners. Remind the students to write the date of publishing of that newspaper.

### Skills Book steps (Page 11 Values)

- Explain that this page is about problems that people face in Balochistan. They have learned that many people's lives there are difficult because of extreme weather and dangerous landscapes, but there are other problems caused by the actions of people. Ask:
  - What problems do you know of that are faced by the people in Balochistan? (List the answers on the board. Then read the first column of the chart: Issue/problem.)
- Make groups of four and allocate a problem to each group. Ask them to read about the problem and then the possible solutions. They should think about the two possible solutions given and decide which is better and why. In their groups the students should give each member a turn to voice his or her opinion. They can then vote to choose a group solution.
- After about 10 minutes invite feedback from each group. A member of the group should say what problem they have been discussing, what the two possible solutions are, which one they choose, and why.

#### Answers to Pupil's Book page 24

Answers will vary.

#### Answers to Skills Book page 10

Answers will vary.

**Example:** Yesterday at the Shizong mine in Yunnan province there was a bad coal mining accident. The accident occurred in the early hours of the morning and was caused by an explosion, trapping the miners. It took hundreds of firemen, doctors, and rescuers 40 hours to rescue miners but unfortunately 20 miners died. Coal mining accidents are common in China. This accident happened less than one week after another mine in another part of China also suffered a gas leak. Last year more than 2400 people died in coal mining accidents in China.

#### Answers to Skills Book page 11

Answers will vary.

### Further activities

- The students could write to coal mining companies in Pakistan to ask about their protection measures for the safety of the mine workers.
- They could also ask about the different causes of coal mine accidents and how the mining companies try to keep their employees safe from these dangers.

#### Answers to Pupil's Book page 25

- A. 1. underground                      2. open-pit                      3. fossil fuel  
4. dangerous                      5. tunnels
- B. Answers will vary.

# Unit 3 Settlements

## Background knowledge for the unit

This unit is about different types of settlements: cities, towns, villages, and farms. It helps the students to distinguish between the different types of settlements and provides comparisons. They learn how and why settlements develop in certain places and the ways in which the areas cater to the people's basic needs.

There is information and photographs of different types of settlements in Pakistan and also of some in Gambia, Africa, to provide opportunities for comparison and explanation.

## Expected learning outcomes for the unit

When they have completed this unit in the Pupil's Book and Skills Book most students should be able to:

- identify the main reasons why a settlement grows in any particular place
- determine and describe the differences between cities, towns, villages, and farms

They will learn how to:

- use sources such as maps and photographs to learn about settlements
- ask questions and draw conclusions as to why people have settled in certain places
- compare settlements of different types
- compare settlements in Pakistan with those in Gambia

They will begin to understand:

- how settlements develop
- why people move from one type of settlement to another

## Lesson 1: What is a settlement? What types of settlements are there?

### My village

#### Learning outcomes

Students should be able to:

- describe different types of settlements
- identify and describe the characteristics of a village
- identify important characteristics of their own settlement

#### Resources

- Pupil's Book pages 26–27
- Skills Book page 12 Where I live

#### Pupil's Book steps

1. Find out if the students know what a settlement is. Ask:
  - Can you give an example of a settlement? (List the names of the settlements given by them, they will probably be mainly cities or towns. Suggest a few villages or farms they might have heard of but refrain from mentioning the types of settlements.)
2. Make groups with four students in each group and ask them to copy the list. They should work as a group to sort the list into sets of settlements that are similar. If they are not sure how to group them suggest that they think about the sizes of the settlements. After about 5 to 10 minutes, invite feedback. Ask:
  - In what order did you put the listed settlements?

3. Explain that we can think of settlements in terms of size. Ask:
  - What is a very big settlement called? (It is called a city. If the students are not sure, give an example—Karachi. Ask for other examples.)
  - What do you call a big settlement that is not as big as a city? (A town. Give the example of Malir and ask for other examples.)
  - What is a settlement that is smaller than a town called? (A village. Ask the students to give examples. Many go to their villages for the summer or winter vacations.)
4. Discuss the pictures on page 26 and ask the class to read about the different types of settlements. Ask:
  - What is a settlement?
  - What type of settlement does the large picture show? (a city)
  - Do you know which city it is? (Karachi)
  - What type of settlement does the next picture show? (It shows a town. Tell them that it is Chitral in Khyber Pakhtunkhwa.)
  - What type of settlement does the next picture show? (It shows a village. Tell them that it is Hadda in Punjab.)
  - What type of settlement does the next picture show? (It is a farm.)
5. Tell the students that they will learn about a village. Then ask them to read page 27, including 'It's a Fact'. Ask:
  - Where does Raja live? (Hadda, Punjab)
  - What type of settlement is this? (a village)
  - How many people live in this village? (about 4000)
  - How does the village get its water supply? (through a canal that runs from the River Jhelum)
  - What are the main buildings in the village? (a primary school and two mosques)
  - What does Raja like to see in and around the village? (birds: there are herons, plovers, kingfishers, and cranes)
  - How many villages are there in Pakistan? (more than 50,000)
  - Are there as many cities and towns? (No, there are a little more than 500 cities and towns.)
6. Hold a discussion about the settlements the students live in. Ask:
  - What type of settlement is it?
  - What is the land around it like?
  - Where does the water supply come from?
  - Which are the main buildings?
  - What can you see around you in your settlement?
7. The students can then complete the exercise on page 27.

### Skills Book steps

1. Tell the class that they are going to think about the good and bad points of the places where they live and what there is to do there. Ask them to name three good things about where they live. They should listen to one another's answers, and different students who live in the same settlement could add their comments.
2. Ask them what there is to do in the area where they live. Again, the others should listen and then add their comments.
3. Ask the students about the bad things in the area where they live. Again, the others should listen and add their comments. Hold a discussion on what they would like to do to change the areas where they live so as to improve them. Ask:
  - What would you like to have in your area?



- How would this change the place?
  - Who else would it help?
4. They can then complete the exercise.

### **Answers to Pupil's Book page 27**

Answers will vary.

### **Answers to Skills Book page 12**

Answers will vary.

### **Further activities**

1. Divide the class into groups of four.
2. Ask each group to choose a settlement to find out about: let the groups find out about a city, town, village, and farm. Pick one settlement.
3. Set this as a homework task. They could use books, leaflets, newspapers, or the Internet to get information, or they could ask members of their family to help them. (Perhaps they grew up somewhere different or they have relatives who live in different types of settlement.)

## **Lesson 2: The main settlements in Pakistan**

### **Learning outcomes**

Students should be able to:

- identify and describe some of the main settlements in Pakistan
- locate places on a map using compass directions

### **Resources**

- Pupil's Book page 28
- If possible, a direction compass

### **Pupil's Book steps**

1. Recap the different types of settlement with the class: city, town, village, and farm. Tell them that they are going to look at a map of Pakistan that has some of the main settlements marked on it.
2. Remind the students how to use a compass. Show them one and demonstrate how to let the pointer settle. It will point north. Turn the compass until N is lined up with the pointer; then ask the students to point to different directions: south, west, east, south-east, and so on.
3. On page 28 they can study the map. Tell them that they will need to use compass directions to locate the places on the map, and point out the compass rose. Ask them to point to the cardinal compass points on the map: north, south, east, and west. Then ask them to point to the intermediate directions: north-east, south-east, south-west, and north-west. You could place a compass on the page, just below the map and turn the book to align north on the map with the actual north direction.
4. Play a game using the map and compass. Ask the students to find Quetta, near the border with Afghanistan, and then to stand up and use a compass to help them turn to face

Quetta. Repeat this in the exercise to find other places: for example, Sargodha in the north-east, Karachi in the south, Lahore in the east, and Dir in the north.

5. The students can then complete the exercise.

### Answers to Pupil's Book page 28

1. Dir and Chaman
2. Narowal, Lahore, and Okara
3. any four from Gilgit, Dera Ismail Khan, Jacobabad, Sukkur, Shikarpur, Larkana, Nawabshah, Hyderabad, and Tando Muhammad Khan
4. Hyderabad
5. Lahore
6. Iran
7. Lahore
8. Islamabad
9. Gwadar, Pasni, Karachi
10. Mastuj and Jalkot

### Further activities

1. The students could play 'I-spy' using the map, e.g. 'I spy a place just north of Hyderabad'; 'I spy a place east of Lahore'; 'I spy a place north-east of Mirpur Khas'; 'I spy a place you would go through if you travelled from Sibi to Chaman.'

## Lesson 3: Why does a place become settled?

### Learning outcomes

The students will be able to:

- establish why a place becomes settled
- ask questions and explain how some settlements in Pakistan developed

### Resources

- Pupil's Book pages 28–30
- Skills Book page 13 Planning a new settlement

### Pupil's Book steps

1. Ask the class to think about the settlement where they live. Ask:
  - Why do you think people settled here? (If it is a new, planned settlement, such as Islamabad, this is different from older settlements that have developed because the area supplied the things people needed, or they were on a trade route. They will have learned about Islamabad in Book 3.) List the students' ideas about why their settlements developed.
2. Read points 1 to 8 on pages 28–30 with the class to discover the reasons why a place became settled in the past. Ask:
  - Which of these reasons most match our settlement?
  - How can you tell? (Point out features such as an old water supply, farmland, the position, for example, high ground, so people could see any enemy approaching; forests or the remains of old forests; trade routes; mines including closed mines; flat

land that could be built on; a good climate; for newer settlements, it could also be places that would attract tourists.)

3. Let the students look at the photographs of settlements on page 29 and read their captions. Ask:
  - How did the settlement of Gwadar develop? (It was a good site on the coast suitable for a seaport. Also industries such as mining increased in Balochistan, so there were minerals to ship out.)
  - How did the settlement of Mehrgarh develop? (It began as a farming town because there was good, flat land for farming and people mined local copper since ancient times.)
  - How do you think Ranikot Fort developed? (No one seems to know, but it is in a high place, which facilitates protection.)

**Note:** Ranikot Fort is not a typical settlement as it is not clear how people who lived there got the things they needed but it is large enough for people to have lived in. It is the largest fort in the world, with a circumference of about 16 miles (26 km).

  - How did the settlement of Lahore develop? (It was on an important trade route that has been used for more than 2000 years, linking the eastern and western regions of the subcontinent. The route runs from Chittagong in Bangladesh, to Howrah in West Bengal, India, across northern India into Peshawar, and on to Kabul in Afghanistan.)
4. Ask the students to look for an interesting fact on page 30. They might be surprised to learn that Pakistan had settlers almost 2 million years ago, in the Soan River Valley in the Potwar Plateau.
5. Read the exercise on page 30 with the class. The students should be able to complete section A using the information from these pages. Before attempting section B it will help if they first complete page 13 of the Skills Book, as it focuses on how to choose a site for a settlement.

### Skills Book steps

1. Ask the class to imagine that they are the governor of the island shown in the map on this page. They are going to build a new settlement on the island. Ask:
  - What landscape features does the island have? (a coast with a deep harbour in a sheltered bay, rivers with floodplains, forests, mountains)
  - How could these be useful to a settlement? (The harbour would be good for transporting goods to and from a settlement; the rivers provide water; the floodplains will have good soil for farming; the forests would provide wood for building, heating homes, and cooking; the mountains will provide shelter and might contain minerals to mine.)
2. Read section A with the students and let them answer the questions. Tell them to think about these questions and answers when they choose a site for their settlement.
3. They can then complete the exercise.

### Answers to Pupil's Book page 30

- A.
1. True
  2. True
  3. False. Water can be piped to a settlement.
  4. False. Settlements grow near natural resources.
  5. True

B. Answers will vary.

The students should explain their answers, e.g. Site a. would be good for farmland but homes could get flooded. However, in some places people build homes on floodplains but make them safe by raising them on platforms or building flood defences. Site b. would be safer for homes but the land would be poor for farming. However, the people could travel to the farmland on the floodplains.

### Answers to Skills Book page 13

Answers will vary but should show that the students have thought about the natural resources near the site.

### Further activities

1. The students could work in groups to make a model of the settlement they planned.
2. Use papier mache on a thick cardboard or wooden base to build up the landscape with mountains and river valleys. Then, when it has dried, paint it.
3. They could use scrap materials such as twigs and paper to make forests.
4. Homes could be made from thin card or paper.

## Lesson 4: Landscape and settlements

### Learning outcomes

Students should be able to:

- identify and describe the locations of the main physical features of the land in Pakistan: mountains, plains, and deserts
- define the characteristics of mountains, plains, and deserts and explain why some of these attract more, and larger, settlements than others

### Resources

- Pupil's Book pages 31–32
- Skills Book page 14 Pakistan—physical map

### Pupil's Book steps

1. Tell the class that they are going to learn about the main landscape features of Pakistan and that these are the 'natural, physical features'. Ask the students to look at the map on page 31. Explain that this is a physical map which only shows the physical features and not the human or political features—those that people have created, such as settlements. However, to help the students to locate places, the international and provincial borders are shown.
2. Tell them that Pakistan has three main types of landscapes. Ask:
  - Can you name any of the different types of landscapes in Pakistan? (deserts, mountains, plateaux or plateaus, and plains—Let them look at the map on page 31 and read the key.) Then ask:
  - In which parts of the country are most of the mountains? (in the north, east, and centre)
  - Where are most of the plains? (in the west and south-west)

- Can you name the four main deserts? (Thal, Cholistan, Thar, and Kharan)
  - What is a plateau? (an area of high, flat land)
  - Can you name a plateau in Pakistan? (Potwar Plateau or Balochistan Plateau)
3. Explain that the plural for plateau is plateaux or plateaus. Plateaux is a French word, but in English it is usually pronounced the same as if it ended with an 's'.
  4. Discuss the climates of deserts, mountains, and plains. Ask:
    - Which of these types of land is the easiest to live on? (plains; it gets very cold in the mountains in winter and at night, the land is difficult to farm; it is very hot and dry in deserts and very little can grow here)
  5. Ask the students to look at the map again and to say which parts of Pakistan they think have the most people (the plains around the rivers).
  6. The students should now read page 31.
  7. Ask them to look at the map on page 32 and compare it with the one on page 31. This will be easier if they work in groups with two copies of the Pupil's Book to refer to both maps at the same time, rather than turning back and forth between the two pages. Read the key of the map on page 32 with them and let them point out the places with the highest populations. Ask:
    - Which towns and cities are in these areas? (Peshawar, Mardan, Sialkot, Gujranwala, Multan, Hyderabad, and Karachi)
    - What do you notice about the land in these places? (They are mainly plains.)
    - Which areas have the fewest people per square kilometre (the lowest populations)? (deserts and mountains)
  8. The students should now be able to complete the exercise.

### Skills Book steps

1. Ask the class to compare the map on this page to the ones on pages 31 and 32 of the Pupil's Book. Using the provincial borders, coasts, mountains, and rivers as guides, they should be able to name the rivers, deserts, mountain ranges, and plateaus on this map. Point out any mountain range on the map and ask them to name it. Repeat this for a river, a desert, and a plateau.
2. Point out the key and ask the students to choose colours for each land type. It will be easier to use the colours shown on the map in the Pupil's Book, if they have them.
3. Explain how they should complete the chart by filling in the first example of each land type with them e.g. Toba Kakar will be in the column marked 'mountain range'; Potwar Plateau under 'plateau'; Thar Desert under the heading 'desert'; Indus River in the 'rivers' column, etc.
4. They can then complete the exercise.

### Answers to Pupil's Book page 32

1. The desert and mountain areas have fewer than 250 people per square kilometre. Balochistan has a small population because it is mainly desert and mountains.
2. The plains have the highest population per square kilometre. Punjab is more densely populated than the other provinces because it has large plains.
3. Answers will vary but should state that most people live on plains because the main cities are mostly on plains; it is difficult to make a living in mountainous or desert areas and conditions are harsh (mountains are cold in winter and at night, deserts are hot and dry; both have poor soil, and hardly anything grows there; also travel is difficult in those places).

## Answers to Skills Book page 14

<b>C.</b>	<b>mountain ranges</b> <ol style="list-style-type: none"><li>1. Hindu Kush</li><li>2. Karakoram</li><li>3. Himalayas</li><li>4. Toba Kakar</li><li>5. Sulaiman</li><li>6. Kirthar</li><li>7. Safed Koh</li></ol>	<b>plateaus</b> <ol style="list-style-type: none"><li>1. Potwar</li><li>2. Balochistan</li></ol> <b>deserts</b> <ol style="list-style-type: none"><li>1. Thal</li><li>2. Thar</li><li>3. Kharan</li><li>4. Cholistan</li></ol>	<b>rivers</b> <ol style="list-style-type: none"><li>1. Indus</li><li>2. Kabul</li><li>3. Jhelum</li><li>4. Chenab</li><li>5. Ravi</li><li>6. Sutlej</li></ol>
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### Further activities

1. Making groups of four, allocate one landform to each group: mountains, plains, or deserts.
2. Ask them to find out about all the landforms of that type in Pakistan (they could share this task among the group with different students researching a different example of the landform.)
3. They could then collate all their work into a group scrapbook or folder.
4. Encourage the students to make this look attractive so that it can be kept in the class or school library.

## Lesson 5: A fishing settlement in Pakistan

### Learning outcomes

Students should be able to:

- identify and locate fishing settlements
- define and describe life in a fishing settlement

### Resources

- Pupil's Book pages 32–33

### Pupil's Book steps

1. Tell the class that they will learn about a fishing settlement near Karachi named Abdul Rehman Goth. Ask:
  - In which province is Karachi? (Sindh)
  - In which part of Sindh do you think a fishing port would be? (on the coast)
  - On which sea would the fishing port be? (the Arabian Sea)
2. After the students read page 32 ask:
  - How do the fishermen help one another? (They help to drag one another's boats into the sea.)
  - How do they catch fish that swim near the surface of the sea? (with lines tied to the backs of their boats)
  - How do they catch fish from the beach? (with small casting-nets)
  - How do they catch fish near the seabed? (with gill nets that they drag along the seabed)

- What fish do they catch? (barramundi, pomfret, sua, mullet, red snapper, and mackerel)
3. Ask them to look at the pictures of the fish and fisherman and to say what they can find out from the pictures and their captions. Ask:
    - Where do the fishermen sell their fish? (in local markets)
  4. Ask the students what they have found out about a day in the life of a fisherman from early morning to night. This should include dragging the boats down the beach, preparing the nets for use (or getting ready to fish from the beach); fishing, the weather, the state of the sea, whether they have a good catch, what they can see from their boats, bringing in the fish, storing the fish in ice, taking the fish to market, putting the boats away, going home to eat, and mending their nets.
  5. The students can then use what they have learned from this page to help them to write a diary entry for a fisherman in Abdul Rehman Goth.

### Answers to Pupil's Book page 33

Answers will vary.

### Further activities

1. Ask the class to find out where the fish they eat at home comes from.
2. They can ask their parents where it was caught and how it got to the market, shop, or supermarket.
3. They should make a note of these details for each type of fish they have had over the course of a few weeks.
4. This can then be put onto a class chart about fish and fishing villages or ports.
5. The chart could also include imported fish. The students should find out which country the fish comes from and how it gets to their local market, shop, or supermarket.

## Lesson 6: A fishing settlement in Gambia, Africa

### Learning outcomes

Students should be able to:

- identify and describe a fishing village in Gambia, Africa, and compare it with a similar village in Pakistan
- identify and mark the names and locations of some countries in Africa

### Resources

- Pupil's Book pages 34–35
- Skills Book page 15 Africa

**Begin this lesson with the Skills Book and not the Pupil's Book.**

### Skills Book steps

Use page 15 of the Skills Book to introduce the map of Africa and to show the students the location of Gambia and the fishing village they are going to learn about from the Pupil's Book.

1. Tell the class that they will learn about the countries of Africa. Ask them to look at the map on this page and discuss what the map shows (the continent of Africa with the countries marked on it). Ask:
  - Which country is in the far north-west of Africa? (Morocco)
  - Which countries have borders with Morocco, and in which directions? (Algeria to the east; Western Sahara to the south)
  - What is to the west of Morocco? (the Atlantic Ocean)
2. Ask the students to continue reading the names of the countries moving southwards down the west coast of Africa until they reach Gambia.
3. The students could play 'I-spy' game with a partner to locate countries in Africa, e.g. 'I spy with my little eye a country in the east beginning with M.' (Mozambique, Malawi, or Madagascar)
4. To help the students become familiar with the map of Africa, ask:
  - Which letters of the alphabet do no countries in Africa begin with? (F, H, I, J, P, Q, V, X, Y)
5. They can then complete the exercise.

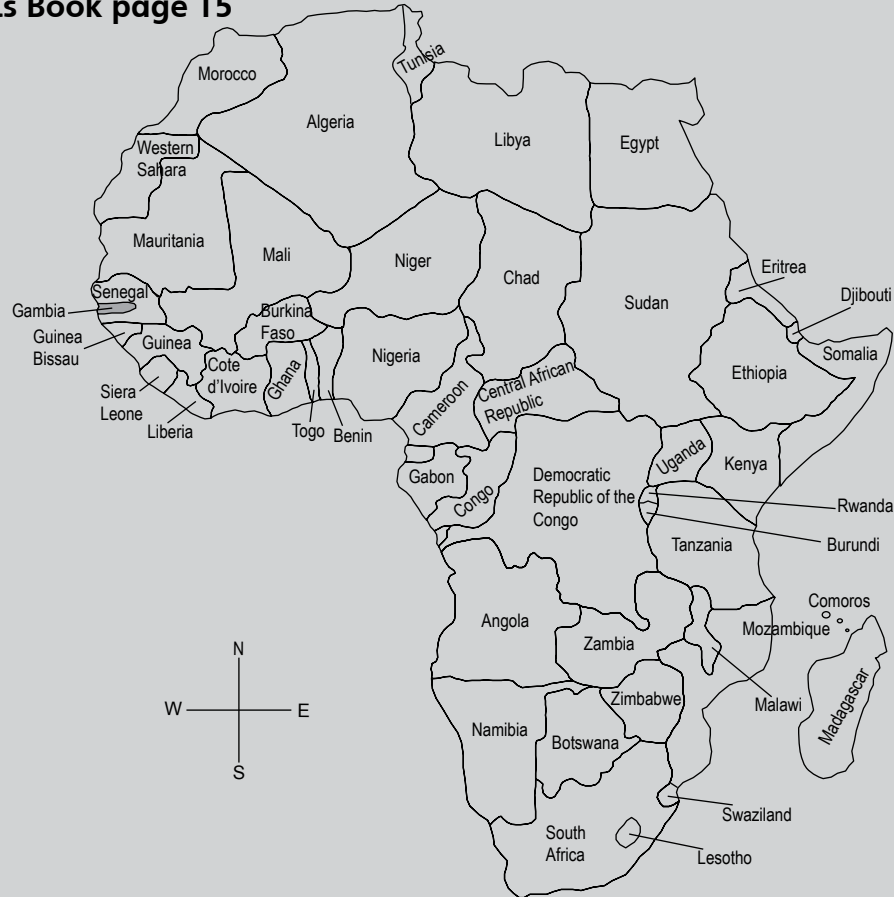
### **Pupil's Book steps**

1. Review what they learned about Gambia in their work from the Skills Book. (It is a country in Africa, located on the west coast, on the Atlantic Ocean.) Ask:
  - What type of work do you think people might do in the villages on the coast of Gambia? (Examples include fishing and tourism.)
  - Which village that you have learned about in Pakistan might be like the villages in Gambia? (Abdul Rehman Goth)
2. Tell them that they will learn about a fishing settlement in Gambia named Tanji. Ask them to locate Tanji on the west coast of Africa.
3. The students should now read page 34 to find out about Tanji. Ask:
  - Is Tanji bigger or smaller than Abdul Rehman Goth, or about the same size? (It is bigger. Abdul Rehman Goth has a fuel station, an ice-house, a school, and a mosque but Tanji has all these plus a fisheries centre, shops, a museum, and a market.)
  - Are the houses in Tanji like those in Abdul Rehman Goth? (No, they are bigger and are built to house 20 to 40 people. They are similar in some ways though; both villages have houses made of mud bricks, but Tanji also has houses made of cement blocks with corrugated iron roofs.)
4. Ask the class to read about the work of the fishermen from the first paragraph on page 35. Then put forward the following questions:
  - How are these like the fishermen of Abdul Rehman Goth? (They too have fishing boats with motors, their work is the same, and they use some of the same types of nets and lines.)
  - Do they catch the same types of fish? (No, because their main catch is bonga and they also catch barracuda, catfish, jack, and sole fish. They also catch lobsters.)
  - Do they keep fish fresh in the same way? (No. The Gambian fishermen smoke and dry most of the fish, whereas the fishermen of Abdul Rehman Goth store the fish in ice.)
5. Ask them to complete the exercise on page 35.



## Answers to Skills Book page 15

A.



B. Senegal and Mauritania

C. Guinea Bissau and Guinea

D. Mali, Niger, Chad, Sudan, Ethiopia, Somalia

E. Algeria, Angola; Zambia, Zimbabwe

F. north: Libya, south: Central African Republic, east: Sudan, west: Niger, Nigeria, Cameroon

## Answers to Pupil's Book page 35

Same	Different
Both villages are near the sea.	Abdul Rehman Goth is in Pakistan; Tanji is in Gambia.
Abdul Rehman Goth is on the Arabian Sea.	Tanji is on the Atlantic Ocean.
Both are fishing villages.	Tanji is bigger.
Both villages have a fuel station, a mosque, and a school.	Tanji has a museum, fisheries centre, a market, and shop.
There are houses made of mud bricks.	The houses in Tanji are bigger—for a large family of brothers and their wives and children.

### Further activities

The students could find out about a fishing village in another continent, e.g. in Scotland, UK, in Europe. Some fishing villages in Scotland are Pittenweem and Crail in Fife, on the east coast.

## Lesson 7: Moving to the city—the reasons; Living in cities—the problems

### Learning outcomes

Students should be able to:

- establish and relate why people are moving from the countryside to cities
- consider what makes a settlement a good place to live in
- identify and relate the problems faced in city life

### Resources

- Pupil's Book pages 35–36
- Skills Book page 16 Values

### Pupil's Book steps

1. If the students live in a city, ask them if they like living in one or if they would rather move to a village in the countryside or to a small town. Discuss why they would or would not. If they live in the countryside or a small town, ask if they would like to move to a city. Discuss why they would or would not do so.
2. Tell the class that, although most people in Pakistan live on farms or in villages or small towns, more and more are moving to cities. Discuss why they think this is happening.
3. Let the students read 'Moving to the city—the reasons' from page 35. Ask:
  - Why are many people moving to cities? (for work that pays more, for education, because there is more to do, for medical treatment, and for new houses)
  - What problems do people face when they live in cities? (The students might remember some problems that they have learned about in lessons about Karachi and Lahore in Book 4: traffic, air, water and land pollution, shortage of jobs, etc.)
4. They can then read 'Living in cities—the problems' from page 36 to find out about the problems faced by some people when they move from the countryside to cities. They might know some people who have found success by moving from the countryside to a city (perhaps someone in their family has done so) and they could tell the class about this.

### Skills Book steps

1. Tell the students that they are going to think about what makes a settlement a good place to live. Before reading the Skills Book exercise they could give their own ideas.
2. Ask them to read the checklist and discuss it with a friend before ticking the things they think are important for a settlement today. Ask them to use a pencil so that they can easily erase any ticks if they change their minds afterwards.
3. After they have completed the checklist they could discuss their answers with another pair of students and decide whether they still think the same. If desired, they could make changes to their list.

- To choose the five most important things on the list the students could cancel the items they have ticked and take turns to place one at the top of the list. If they place one above another they must justify this. After they have placed all the items they ticked on the checklist they could continue swapping the places of the top five until they agree.

### Answers to Pupil's Book page 36

Answers will vary, for example:

Advantages	Disadvantages
More jobs	Some people cannot get the jobs they want.
Better hospitals	Water pollution
More choice of schools	Air pollution
Shops	Land pollution
New houses	Slums
More to do	You need more money.

### Answers to Skills Book page 16

Answers will vary.

### Further activities

- Get in touch with a school in a different type of settlement in Pakistan (e.g. if you are in a city, get in touch with a school in a village or vice versa).
- The students could write to one another or become pen/e-pals and exchange information about their daily life.
- They could discuss whether they would like to live in a different type of settlement and why, and discuss their ideas one another also what might happen if they moved.

### Answers to Pupil's Book page 37

- A. Answers will vary.
- B.
- Abdul Rehman Goth is a fishing village near Karachi.
  - Gambia is the smallest country in Africa.
  - The main fish caught by the fishermen in Tanji is bonga.
  - In Tanji, the fishermen use hooks and lines to catch sole and lobster.
  - Gill nets are fishing nets that are dragged along the seabed to catch fish.
- C. Answers will vary.

# Unit 4 Climate change

## Background knowledge for the unit

This unit explains climate change and the 'greenhouse effect'. It also deals with how climatic changes affect the weather, land, sea, waterways, plants, animals, and also the lives of many communities.

There is information about how human activity, especially the growth of industry around the world, is affecting the climate across the Earth.

The students are encouraged to consider how some of the choices we make can contribute to the greenhouse effect and what we can do to minimize this.

The mean surface temperature of the Earth has increased by about 0.8°C since the beginning of the 20<sup>th</sup> century. Studies by NASA (National Aeronautics and Space Administration), USA show that the areas that have the greatest increase in temperature are around the Poles. This affects the rest of the Earth because when polar ice melts the overall sea level rises.

Most of the temperature increases have occurred since 1980. Many scientists are convinced that greenhouse gases are produced by human activities such as burning fossil fuels and destroying forests. Countries have joined together to form the *Intergovernmental Panel on Climate Change*, where scientists record temperatures and all aspects of the weather, and their effects. They have found that climate change affects different parts of the world in different ways. There has been a rise in sea levels and the amount and pattern of rain, sleet, hail, and snow have changed. Some subtropical deserts have spread.

As most people around the world will have noticed, there has been an increase in severe or unusual weather such as drought and heavy rains that are causing floods.

Scientists have predicted that if global warming continues at this rate, many species of plants and animals could be lost and there will be severe threats to food crops and livestock. Some places will probably become uninhabitable due to flooding, drought, expansion of deserts, etc.

Many countries support the *Intergovernmental Panel on Climate Change*, which not only studies and records climatic changes and their effects, but also works on ways of slowing these down through reduction in greenhouse gas emissions. They are also working on ways of adapting to climate change.

## Expected learning outcomes for the unit

When they have completed this unit in the Pupil's Book and Skills Book most students should be able to:

- comprehend the meaning of climate, climatic change, and the greenhouse effect
- establish how humans are contributing to the greenhouse effect

They will learn how to:

- use diagrams, charts, photographs, and maps for information on climate change and its effects
- ask questions and draw conclusions about the causes and effects of climatic change
- interpret a key on a map showing floods

They will begin to understand:

- how humans are contributing to climate changes
- what can be done to help reduce the greenhouse effect and slow down climatic changes

## Lesson 1: What is climate? What is weather? What is climate change? What is causing climate change?

### Learning outcomes

Students should be able to:

- define and describe climate change and the greenhouse effect
- use a diagram to understand and explain the greenhouse effect

### Resources

- Pupil's Book pages 38–39
- A wall thermometer

### Pupil's Book steps

1. After reviewing the meaning of weather with the class, ask:
  - What day-to-day changes are measured when studying the weather? (temperature; rainfall; any other precipitation, such as hail, sleet, or snow; cloud cover; wind strength; wind direction)
  - What does climate mean? (the usual weather conditions of a place over a long period of time)
  - What is the weather like today?
  - What was it like last week?
2. Discuss the difference between 'weather' and 'climate' with the students. Let them know that even if it has rained all week, it doesn't mean that the place has a wet climate—the full year's weather is considered. This was probably just a particularly wet week or it might be the monsoon season. If it is the monsoon season that is part of the climate, as it happens each year.
3. Talk about today's temperature. Whether they think it is hot, warm, cool, or cold. They could predict the outdoor temperature of shaded areas in degrees Celsius (°C). Take the students outdoors to record the air temperature. The thermometer should be placed in the shade and left for a few minutes so as to get a correct reading. They could make a note of this, and record the temperature at the same time each day for a few weeks. Tell them that they are measuring and recording the weather which changes from day to day and even during the same day. Discuss how this is connected with climate.
4. Ask the class to read page 38, then invite volunteers to say what they have learned from it about weather, climate, and climate change. The students should complete the exercise on page 39.

### Answers to Pupil's Book page 39

- A.
1. weather: day-to-day changes in temperature, rainfall, cloud, and wind
  2. climate: the usual weather in a place during the year
  3. global warming: an increase in the Earth's temperature
  4. climate change: a change in the world's climate
  5. atmosphere: the 'blanket' of gases that surrounds the Earth
- B. Answers will vary, for example:
1. The weather today has been very windy and hot.
  2. The climate in Sindh has hot summers and cool winters.
  3. Scientists think humans are causing global warming.
  4. The world's climate changes naturally over thousands of years.
  5. The Earth's atmosphere consists of many different gases.

### Further activities

1. Collect news reports on climate change and read them with the students.
2. Hold a class debate about whether we can do anything about climate change or whether we should accept it and plan on how to adapt to it.

## Lesson 2: The greenhouse effect; What are humans doing to make the greenhouse effect stronger? What might happen if the Earth gets warmer?

### Learning outcomes

Students should be able to:

- interpret the meaning of the greenhouse effect
- derive information and explanations from diagrams

### Resources

- Pupil's Book pages 39–40
- Skills Book page 17 Climate change quiz
- A map of Pakistan—or maps of the provinces—showing the height of land above sea level for **Further activities**.

### Pupil's Book steps

1. Begin by asking the students the following questions:
  - Does anyone know what a greenhouse is? (also called a glasshouse—a shed-like building in which plants are grown)
  - What is a greenhouse used for? (to protect plants from cold weather)

If they have never been inside a greenhouse it is useful to demonstrate the effect of sunlight on glass. The students can feel this by standing for a little while next to a window, inside the classroom that gets direct sunlight.

  - What did you feel? (They should realize that the Sun's rays feel hot through the glass.)
  - Do we need greenhouses in most parts of Pakistan? (No, because most places here are not very cold—in fact, a greenhouse would make the plants too hot, but in places where temperatures drop to freezing point at night a greenhouse is useful for protecting plants.)
2. Read page 39 with the class. Then ask them to look at the diagram of the greenhouse and invite a volunteer to use it to explain how a greenhouse works. Tell them that the gases in the Earth's atmosphere act in a similar way to the glass of a greenhouse. Ask them to look at the diagram of the greenhouse effect on the same page and let another volunteer explain the greenhouse effect using the diagram.
3. Tell the students that most scientists think that human activity is adding to greenhouse gases in the Earth's atmosphere. Ask them to read page 40 to find out how this is happening. Then ask:
  - What are humans doing that adds to the greenhouse effect? (causing too much carbon dioxide to be released into the air)
  - How? (by burning fossil fuels)
  - Can you name some fossil fuels? (coal, gas, and oil)
  - Can anyone give two more examples of how carbon dioxide is being released into the air? (smoke from factories, cutting down and burning trees for cooking and heating)

- What is likely to happen if the Earth gets warmer? (Polar ice will melt.)
- Why would this be a problem? (The sea levels will rise and some coastal and lowland settlements will be flooded.)
- What was the rise in sea levels in the 20<sup>th</sup> century? (between 0.1 and 0.2 metres)
- Which coastal city in Pakistan would be in danger of flooding? (Karachi)
- What other effect will global warming have? (Some places will become deserts.)
- How will the increase in desert lands affect humans? (There will be less land for settlements and farming.)

4. The students can then complete the exercise.

### Skills Book steps

1. Ask the students to read the text from pages 38 to 40 again to find the answers to the 'Climate change quiz'.
2. Ask them to tick the correct answers to questions 1–6 of Exercise A, and write the answers to B on the lines provided.
3. After completing the quiz they could read out their questions for B for the rest of the class to answer.

#### Answers to Pupil's Book page 40

- |                                |  |
|--------------------------------|--|
| 1. True                        | 4. False; there will be more flooding. |
| 2. False; it helps to heat it. | 5. True                                |
| 3. True                        |  |

#### Answers to Skills Book page 17

- |                       |      |      |      |      |      |
|-----------------------|------|------|------|------|------|
| A. 1. a               | 2. c | 3. a | 4. a | 5. b | 6. c |
| B. Answers will vary. |      |      |      |      |      |

### Further activities

1. Divide the class into groups of four and allocate a different province of Pakistan to each group.
2. Ask them to look at maps to identify the lowest land in Pakistan (in metres above or below sea level).
3. They should list the names of settlements on low land in order beginning with the lowest.
4. Ask the students to find out which of these places have been flooded and which are in danger of flooding if the sea level rises or rivers flood.
5. Help the students find out what is being done to help people living in these places protect their homes, businesses, or farmland, or to help them move to a safer place.

## Lesson 3: Climate change and Pakistan

### Learning outcomes

Students should be able to:

- determine how climate change will affect Pakistan
- describe how glaciers form and what happens when they melt
- ask questions and explain how droughts and floods occur and their effect on communities

## Resources

- Pupil's Book pages 41–42
- Skills Book page 18 Climate change and Pakistan
- Skills Book page 20 The Pakistan floods of 2010

## Pupil's Book steps

1. When the students have read page 41, ask the following questions:
  - What is a glacier? (a river of frozen water)
  - Do the glaciers melt every summer? (No, only a little ice melts.)
  - How does this help? (It keeps the rivers flowing and provides the water needed.)
  - What has happened during the past few years? (More and more ice from the mountain glaciers has melted and caused floods.)
  - What has made the floods even worse? (heavy rain)
2. Discuss the photographs and captions on page 41. Then ask:
  - What must life for the people in these places be like? (Ask the students to think about how everything they do would change if their homes were flooded.)
3. Read page 42 with the students and also discuss the picture. Ask:
  - What opposite effect of global warming occurred in 2011? (There was a drought.)
  - How did this affect the people in Sindh? (There was a shortage of water for homes and farms. Farmers faced many problems in growing their crops.)
  - What change did this bring about in the Thar Desert? (Instead of a drought occurring every three years there now is a continuous drought that lasts for most of three years.)
4. Read the exercise on page 42 with the class and ask them to imagine being a farmer whose crops are withering and animals are dying due to a lack of water and grazing grounds. Then let them write their answers in their notebooks.

## Skills Book steps (Page 18 Climate change and Pakistan)

1. Read the information about the regions on the map with the class and discuss how global warming could affect the region they live in.
2. Ask the students to read the incomplete passage with a partner and to use the information on this page and in the Pupil's Book to help them fill in the missing words.
3. They can then complete the exercise.

## Skills Book steps (Page 20 The Pakistan floods of 2010)

1. The interview could be read with one student asking the questions as the interviewer, and another answering the questions as Jan Muhammad.
2. Discuss their thoughts and feelings after the interview is completed.
3. The students could discuss question 2 with a friend before attempting the written exercise.

### Answers to Pupil's Book page 42

Answers will vary.

### Answers to Skills Book page 18

The missing words are: levels, areas, flooding, Karachi, even drier, droughts, move, temperatures, melt, rivers.

### Answers to Skills Book page 20

Answers will vary.



### Further activities

1. Organize the class into groups of four and allocate a different land type to each group: mountains, deserts, plains, coasts, and mangroves.
2. Ask the students to use books and the Internet to find out what the area was like before global warming began, how it is now, and what it might be like in the future.
3. They can collect photographs, draw pictures, and write captions for examples of this type of area.

## Lesson 4: What can I do to help stop climate change?

### Learning outcomes

Students should be able to:

- describe how everyday human activities can add to climatic change
- establish what can be done to help reduce global warming

### Resources

- Pupil's Book pages 43–44

### Pupil's Book steps

1. Begin with previous information from Books 3 and 4 about how we can all help to reduce climate change. Ask the students for their opinions. Tell them that they are going to read about ways in which all families can help.
2. Ask the students to read pages 43 and 44 and then let them close their books. Ask:
  - What are the seven things all families can do to help slow down climate change? (Individual students could be called upon to name each one: use the car less; practise the three Rs—**reduce, recycle, reuse**; plant trees; turn down the air conditioning; use energy-efficient light bulbs; turn off the television; buy food from local growers.)
3. Divide the class into seven groups and allocate one of the measures to each group. Ask them to explain how that will help to slow down climatic changes.
4. Read the exercise on page 44 with the class and ask each group to make a poster for the measure they were given to work on (see 3).
5. The students should now read page 44 to help them work on their posters.

### Answers to Pupil's Book page 44

Answers will vary.

### Further activities

1. The students could continue to work in groups and find out more about how the measures they have been concentrating on affect global warming and what they can do to persuade others to follow too.
2. They could write persuasive leaflets or scan their posters and print them for display in local shops or public buildings if they can get permission for this.
3. Read 'It's a Fact' on page 44 again with the class and ask them to look at a map of the world or maps of the different continents and to list the cities that might be at risk of flooding—also to find out about any flood-defence measures. An example is the Thames Barrage, which has protected London, England, from floods since 1984.



Thames Barrier, London



The Oosterscheldekering (in English: Eastern Scheldt storm surge barrier), which protects the Netherlands from flooding. It was opened in 1897.

## Lesson 5: What can Pakistan do to help stop climate change?

### Learning outcomes

Students should be able to:

- relate how Pakistan and other countries are trying to reduce global warming
- identify and describe renewable energy sources that are being used in Pakistan
- write a formal letter to the government asking for assistance to install solar panels

### Resources

- Pupil's Book pages 45–46
- Skills Book page 19 Solar power; page 21 Values

### Pupil's Book steps

1. Ask the students what they have learned about the major ways by which we add to global warming. Discuss the fact that they all involve the use of energy but that some forms of energy are renewable—they do not use up limited resources but use resources that are renewed all the time. Also they do not produce greenhouse gases. Ask:
  - Do you know about any forms of renewable energy?
2. Let them read pages 45–46 to find out about some renewable energy sources that Pakistan could use. Ask:
  - What have you found out about renewable energy resources that Pakistan could use? (solar power, wind power, hydropower, biomass, and biogas; invite volunteers to explain each of these, referring to the Pupil's Book when necessary).
  - Which of these renewable energy sources is Pakistan already using the most? (Water—Pakistan generates a lot of electricity through this source.)
  - Where in Pakistan could this form of energy be developed? (In northern Pakistan because it has many water sources.)

4. Read the exercise with the students and ask them to think about how television advertisements can be used to help in the conservation of energy. Discuss the fact that television clips and advertisements are usually very short, often less than a minute, and are very appealing because of the audio-visual effects.
5. The students should think of ways of capturing the attention of the television audience in a very short time, showing them how their actions could save energy in an appealing and convincing manner. They can then work with a partner or in groups of three or four to discuss, try out, and write an advertisement for television on energy conservation.

### Skills Book steps (Page 19 Solar power)

1. Read the instructions and then the words given in the box with the class. Explain any words they are not familiar with.
2. Read the letter too and ask the students to think about what the missing words could be.
3. They can then complete the letter and give it to a partner to read and to suggest any improvements, and also to check for any spelling errors.

### Skills Book steps (Page 21 Values)

1. Read and discuss the advertisement with the class. Then ask:
  - Who is suffering most because of the floods? (Children; they are dying.)
  - What kind of help does the advertisement ask for? (donations to help flood victims)
2. Ask the students to read the questions and write their answers.
3. Invite individual volunteers to read one of their answers aloud. Others could comment and say what they wrote, and why.
4. Ask if it is worthwhile for someone to give only one rupee. (Yes, because all the small donations will add up in the end.)

#### Answers to Pupil's Book page 46

Answers will vary.

]

#### Answers to Skills Book page 19

Missing words: village, electricity, news, town, money, solar, cheaper, power, renewable, carbon dioxide, fossil fuels, change, environment

#### Answers to Skills Book page 21

Answers will vary.

### Further activities

1. Find out about opportunities for using renewable energy in the local area and about any renewable energy projects that are already in place or are being developed.
2. The students could write a newspaper article about the above projects—or about any project they think could be developed.

#### Answers to Pupil's Book page 47

1. Khyber Pakhtunkhwa
2. dark blue
3. Yes, moderately

# Unit 5 Our world

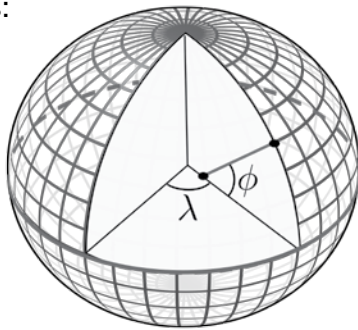
## Background knowledge for the unit

This unit is about the continents of the world and explains why different parts have different climates and habitats. The students learn about the different climate zones of the Earth and a variety of habitats such as tropical rainforests, tropical savannahs, deserts, chaparral, grasslands, temperate deciduous forests, temperate coniferous forests, and tundra areas. They also learn to find out where these are located or found and why they are in these specific regions/areas. The unit explains latitude and longitude and their links with climate and time.

The everyday language we use to describe the apparent movement of the Sun suggests that the Sun, rather than the Earth, moves—the Sun rises in the east and sets in the west, but the students will have learned from previous lessons that it is the Earth and not the Sun that is moving. The Earth's rotation is the basis for the length of the day (including night). To measure time, the day has been divided into twenty-four equal segments (hours). In a complete rotation, the Earth spins through  $360^\circ$ ; therefore, in an hour it spins through  $360 \div 24 = 15$  degrees. Each 15 degrees marks a time zone. Lines of longitude are marked in degrees, beginning with  $0^\circ$  at Greenwich, London—chosen (because of the observatory there) at an international meeting held in 1884 in Washington DC.

The Earth spins around an axis which is tilted at an angle of about  $23^\circ$  from the perpendicular to the plane on which it orbits the Sun. One hemisphere tilts towards the Sun and the other tilts away from it, creating warm and cold seasons. The temperatures of areas near the Equator differ little from season to season but this increases towards the Poles. In winter the areas near the Poles have permanent darkness and in summer permanent daylight, for about two months.

Latitude is more difficult to explain to students. It is an angle that is measured in relation to the Earth's axis:



A perspective view of the Earth showing how latitude ( $\phi$ ) and longitude ( $\lambda$ ) are defined on a spherical model. The spacing is 10 degrees.

## Expected learning outcomes for the unit

When they have completed this unit in the Pupil's Book and Skills Book most students should be able to:

- identify locations, shapes, and sizes of all the world's continents
- describe different types of habitat found in different parts of the world

They will learn how to:

- use diagrams, charts, photographs, and maps to find information about latitude, longitude, climate, time, and habitats
- ask questions and draw conclusions about climate and habitat
- interpret a longitude, time chart, and calculate the time in different parts of the world at any one moment

They will begin to understand:

- how latitude and altitude affect climate
- how longitude is linked with time

## Lesson 1: The continents of the world

### Learning outcomes

Students should be able to:

- identify and describe the names, locations, sizes, and shapes of the world's continents
- name and define locations of specified countries in each continent

### Resources

- Pupil's Book pages 48–49
- Skills Book page 22 Countries of the world
- A large map of the world
- A globe

### Pupil's Book steps

1. Show the class a large map of the world with the names of the continents and the oceans on it. Point to each continent and ask them its name. Write these on the board and ask if they can name a country in each continent. Point to the oceans one at a time and ask the students to name them. Then write the names on the board.
2. They can then look at the map on page 48. Ask them to check their list of continents and add any they have missed out. Ask:

- Why is the Pacific Ocean shown on the left side (west) of the map as well as on the right side (east)?

Make sure the students know that there is only one Pacific Ocean even though the name is in two places on the map. To clarify this, show them a globe and remind them that a map of the world shows the Earth, which is a solid ball (sphere) flattened out into a rectangle.

- What else can you see on the map besides the oceans and continents? (They should notice the compass rose which is by now familiar to them and also the three lines of latitude. Remind them that lines of latitude are lines marked on maps of the Earth, running horizontally across the map.)
  - What is the name of the line of latitude in the centre? (the Equator)
  - Which continents does the Equator pass through? (South America, Africa, Asia, and Oceania)
  - Can you name the line of latitude marked just above the Equator? (Tropic of Cancer)
  - Through which continents does the Tropic of Cancer pass? (North America, Africa, and Asia)
  - Can you name the line of latitude marked just below the Equator? (Tropic of Capricorn)
  - Which continents does the Tropic of Capricorn pass through? (South America, Africa, and Oceania. You could explain that the tropics get their names from the constellations which are groups of stars in the Zodiac.)
3. The students should read page 48 to find out more about the continents and oceans.

Ask:

- What do we call smaller areas of water that the oceans are split into? (seas)
  - Which ocean is nearest to Pakistan? (Indian Ocean)
  - What is the name of the sea bordering the south of Pakistan? (Arabian Sea)
  - What are the smaller areas of land that the continents are split into called? (countries)
  - Which continent is Pakistan in? (Asia)
4. With a partner, they could use their atlases to help them locate other countries in different continents: for example, countries they have learned about in history lessons, such as England, France, Greece, Egypt, the Netherlands, Germany, China, Mexico, the Bahamas, etc.
5. The students can now complete the exercise on page 49 in their notebooks.

### Skills Book steps page 22

1. Begin with a short quiz. You name a country. The students' task is to say which continent it is in, e.g. Iceland (Europe), Japan (Asia), Egypt (Africa), New Zealand (Oceania).
2. Then read the exercise with them and ask them to use the atlas to help them to complete it. Remind the students that islands are included as parts of continents even though they are separate from the mainland.

### Answers to Pupil's Book page 49

- A.
1. Asia
  2. Indian Ocean
  3. Africa, Antarctica
  4. Asia, Oceania
  5. Africa, Antarctica, Asia, Europe, North America, Oceania, South America
  6. United States, Mexico, Canada, Cuba, Dominican Republic, Guatemala, Costa Rica, Panama, El Salvador, Honduras, Trinidad and Tobago, Jamaica, Nicaragua, Haiti, the Bahamas, Barbados, Belize, Saint Lucia, Antigua and Barbuda, Grenada, Saint Vincent and the Grenadines, Dominica, Saint Kitts, Nevis.
  7. Afghanistan, Armenia, Azerbaijan, Bahrain, Bangladesh, Bhutan, Brunei, Cambodia, China, Cyprus, Georgia, India, Indonesia, Iran, Iraq, Israel, Japan, Jordan, Kazakhstan, North Korea, South Korea, Kuwait, Kyrgyzstan, Laos, Lebanon, Malaysia, Maldives, Mongolia, Myanmar (Burma), Nepal, Oman, Philippines, Qatar, Russia, Saudi Arabia, Singapore, Sri Lanka, Syria, Tajikistan, Thailand, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan, Vietnam, Yemen

### Answers to Skills Book page 22

3. Asia
4. Students can write the name of any one country using the *Oxford School Atlas for Pakistan*.

### Further activities

Divide the class into groups of four and allocate a continent to each group. A quiz of 10 questions should be set by each group about that continent, which they will ask other groups.

## Lesson 2: World climate; Why do different places have different types of climate?

### Learning outcomes

Students should be able to:

- establish how latitude affects climate
- interpret a climate map of the world using a key and lines of latitude for reference

### Resources

- Pupil's Book pages 49–50

### Pupil's Book steps

1. Let the students look at the map on page 49 to identify the Equator. Ask:
  - What degree will you find this line of latitude on? ( $0^{\circ}$ )Remind them that the lines of latitude are numbered from the Equator towards the North and South Poles. Ask the students to estimate the degree of the lines of latitude, known as the Tropics. (A little more than  $20^{\circ}$  north or south. Tell them that the Tropic of Cancer is at  $23^{\circ}\text{N}$  and the Tropic of Capricorn is at  $23^{\circ}\text{S}$ . Demonstrate how these references are to be written.)
2. Explain that the Tropic of Cancer is the farthest point north of the Equator where the Sun is directly overhead at its highest point in the sky. The Tropic of Capricorn is the farthest point south of the Equator where the Sun is directly overhead at its highest point in the sky. Ask:
  - What does this tell you about the climate of countries within the Tropics? (It is hot because they are on the parts of the Earth that are closest to the Sun.)
  - Do lines of latitude meet or cross one another? (No, because they are parallel.) Point out the lines on a page of a notebook and mention that railway lines are parallel, running side by side and will never meet no matter how far they extend.
  - Read page 49 with the class and ask them to read the key and identify what each colour represents. They can use the explanation given below the map to describe each type of climate. Ask:
    - Which parts of the Earth have the coldest climates? (places near the North and South poles)
    - Why are they the coldest places? (They are the farthest from the Sun. Ask them to identify the Arctic and Antarctic Circles.)
    - At roughly what latitude are the Arctic Circle and Antarctic Circle? (Just above  $50^{\circ}\text{N}$  and  $50^{\circ}\text{S}$ . Tell them the exact latitudes and invite volunteers to write these on the board:  $66^{\circ}\text{N}$  and  $66^{\circ}\text{S}$ .)
    - Which continents have the places with the hottest climates? (North America—southern parts, South America, Africa, and Asia)
    - What kind of climate does Pakistan have? (a mixture of arid and tropical)
    - What kind of climate does England have? (temperate)
    - What kind of climate does Greece have? (Mediterranean)
    - What kind of climate do countries in central Africa have? (tropical)
3. Read page 50 with the class and use the diagram to explain why the areas of the Earth between the Tropics have hotter climates than others and why the areas near the Poles have colder climates.
4. The students can then complete the exercise.

### Answers to Pupil's Book page 50

- arid, tropical, temperate
  - polar, temperate, Mediterranean
- Individual answers: location, direct rays of the sun, distance from the poles
- South America and Africa

### Further activities

- Divide the class into groups of four and allocate a different line of latitude to each group (Arctic Circle, Antarctic Circle, Tropic of Capricorn, Tropic of Cancer, and Equator. Since the Tropic of Cancer runs through the most land, distribute this area among three groups. Similarly, the Tropic of Capricorn and the Equator could be divided.).
- Ask them to look at a map of the world to list the countries these lines pass through.
- Individual students could then find out about some of the places in each country that the line runs through.

## Lesson 3: Longitude and latitude

### Learning outcomes

Students should be able to:

- determine why different parts of the world have different climates
- establish how climate zones are related to latitude
- interpret how time is related to longitude
- describe a location or identify a place on a map using latitude and longitude references

### Resources

- Pupil's Book pages 51–52
- Skills Book page 23 Longitude and latitude
- A globe
- A 360° protractor
- A map of the world with countries marked and named

### Pupil's Book steps

- Show the class a globe and let them study the lines of longitude. Ask:
  - Are lines of longitude parallel? (No.)
  - How can you tell? (They meet at the Poles. Parallel lines do not meet no matter how far they extend.)
- Let the students take turns to look at the globe from the top. Most globes are positioned on a stand so that they tilt in the same way as the Earth tilts on its axis. They will need to tilt it back or take it off its stand so that they can look straight down on to the North Pole. Discuss what they notice about the lines of longitude. They could also look at the South Pole in the same way—the lines meet at the South Pole.
- To demonstrate how lines of longitude are measured, show the students how to draw a large circle using a 360° protractor. Ask them to locate and mark 0° on the edge of the circle. They could then mark every fifteen degrees clockwise until they reach 180° west, e.g. 15°W, 30°W, etc. They should do the same working anti-clockwise, i.e. 15°E, 30°E,



etc. They should be able to conclude that both  $180^{\circ}\text{W}$  and  $180^{\circ}\text{E}$  are the same line. Tell them that they will learn more about this in the next lesson. They will need these drawings for the next lesson.

4. Ask the students to look for the line of longitude that passes through Pakistan and also for other places along it that have similar times of the day, for example, Uzbekistan, Kazakhstan, and Russia. Ask them to look for longitude  $0^{\circ}$ . Discuss the fact that it passes through London and that this was chosen at an international meeting of scientists held in 1884 in Washington DC because of the observatory at Greenwich, London. This line is called the Greenwich Meridian and is marked with a metal strip in the courtyard of the Greenwich Observatory.
5. Read pages 51 and 52 with the class and ask them to look carefully at the picture of the globe on both these pages so that they can see how the lines of latitude and longitude are numbered—latitude in one place and longitude in both directions—east and west. Ask:
  - At which line of longitude will these numbers meet? ( $180^{\circ}$ ). Explain that this line is the International Date Line and, to make sense of the time there, it has been agreed that any place just to the east of it is a day ahead of the places to the west. It passes through some small islands but it has been agreed that the line will be drawn so that it bends to miss any land.
6. Read the exercise on page 52 with the class, which also shows lines of latitude. Ask:
  - Which country is this?They should know that it is Africa, as they have already learned about Africa in Unit 3. Ask them to look at this map of Africa to see how the lines of latitude cross the lines of longitude. Explain that they can use the lines of longitude and latitude to find places or to tell people where they are: for example,  $20^{\circ}\text{N}$ ,  $10^{\circ}\text{W}$  is in the middle of Mauritania. Help the students to locate the examples at the beginning of the exercise. They can then complete the exercise.

### Skills Book steps

1. Read the first example with the class and show them how to find the point  $20^{\circ}\text{N}$   $80^{\circ}\text{E}$ . They should recognize India without having to look it up in their atlas.
2. Ask them to read the next example and to find the place on this map. Then ask:
  - Do you know which country this is? If not, they should look it up in their atlas. (USA)
3. They can then complete the exercise.

#### Answers to Pupil's Book page 52

1. Angola      2. Egypt      3. Namibia      4. Morocco      5. South Africa

#### Answers to Skills Book page 23

1. a.  $40^{\circ}\text{N}$   $100^{\circ}\text{W}$  USA      b.  $40^{\circ}\text{N}$   $140^{\circ}\text{E}$  Japan      c.  $20^{\circ}\text{S}$   $140^{\circ}\text{E}$  Australia  
d.  $10^{\circ}\text{S}$   $40^{\circ}\text{W}$  Brazil      e.  $60^{\circ}\text{N}$   $100^{\circ}\text{W}$  Canada      f.  $20^{\circ}\text{N}$   $80^{\circ}\text{E}$  India

### Further activities

1. Ask the students to use a map of the world to plan a trip. They decide where they want to go and plan a route from Pakistan to that place.
2. They will send postcards to friends at home to tell them their route but will not mention any names of places. They simply write the longitude and latitude of each country they go to. They should make ten stops during their journey.

3. Those who wish could do so in more detail, writing the longitude and latitude of each town or city they visit. (They can use plain pieces of paper cut out to look like postcards.)
4. They then give these, in order, to another group, who will trace the route on a map of the world and write the names of the places visited.

## Lesson 4: What time is it in the world?

### Learning outcomes

Students should be able to:

- interpret that longitude is related to time in different parts of the world
- identify and explain the meaning of time zones

### Resources

- Pupil's Book page 53
- A globe
- The drawings the students made using the 360° protractor during the last lesson

### Pupil's Book steps

1. Begin with what they already know from the previous lesson about longitude. Ask the students to take the drawing they made in the previous lesson and to check that they have marked each 15° all the way round the protractor where the numbers end at 180° and not 360°—the measurement of a circle. Ask:
  - Do you remember why this is?
  - How many sections of 15 degrees are there? (24)
2. Explain that this is the number of hours in a day (including night). The Earth turns 360 degrees in a day and night causing 24 hours. Demonstrate this using the globe—it turns through 15 degrees in one hour.
3. Explain that places on the same line of longitude have the same time of day. Give them time to look at the lines of longitude on a globe or a map of the world.
4. Ask them to read the top section of page 53, including 'It's a Fact'. Then ask:
  - What is a time zone? (an area that has the same time)
  - How does this affect large countries? (They can have different times in different parts of the country.)
  - What problems could this cause? (Train timetables might not match if the train crosses time zones.) Discuss how time zones affect Russia and China.
5. Ask the students to look at the world time zone map and to find places within the same time zone as Pakistan. Ask:
  - Are these places north, south, east, or west of Pakistan? (north and south)
  - Why are they not to the east or west? (These are different time zones because of their longitude location.)
6. Together, work through the example below the map, locating the time zone for Lahore.
7. They can now complete the exercise on this page.

### Answers to Pupil's Book page 53

- |             |          |          |          |
|-------------|----------|----------|----------|
| 1. a. 3     | b. 9     | c. 2     |          |
| 2. a. 16.00 | b. 13.00 | c. 17.00 | d. 22.00 |

### Further activities

The students could make a chart as follows, to show the times of other places when it is 12.00 in Lahore.

City	Time
Lahore, Pakistan	12.00
Cairo, Egypt	
Sydney, Australia	
Athens, Greece	
Rio de Janeiro, Brazil	
Accra, Ghana	
Rome, Italy	

## Lesson 5: The world's plants and animals

### Learning outcomes

Students should be able to:

- state the definition of biome
- identify and describe the main biomes of the world
- establish how latitude and altitude affect biomes

### Resources

- Pupil's Book pages 54–56
- Skills Book page 24 Rainforest animals of South America
- If possible, photographs with captions of the biomes mentioned in this unit: tropical rainforest, tropical savannah, desert, chaparral, grassland, temperate deciduous forest, temperate coniferous forest, and tundra.
- If possible, photographs of animals of the South American rainforests

### Pupil's Book steps

1. Ask the students to look at the map of the world on page 54. Explain and discuss biomes. Ask:
  - How is this map different from the one on pages 49 and 53? (It shows the main biomes of the world. The map on page 49 shows the different climates and the one on page 53 shows time zones.)
2. Ask them to read the key and look at the map to find out where the different biomes are. Let them refer to page 49. Then ask:
  - What kind of climate do the tropical rainforests have? (tropical)
  - Which climate zones are they mainly in?
  - What can you see in the photographs of the biomes?
  - Which part of the world might these be in? (They should look at the map and pick out the possible places. They can then check the picture's caption.)
  - Which biome is in great danger? (tropical rainforest)
  - What danger? (An area about the size of a cricket ground is being destroyed every second because people are cutting it down for wood or to clear the land for farming.)
  - Why are tropical rainforests important to people all over the world? (The trees produce plenty of oxygen, the gas we breathe.)

3. The students should now read about the different biomes. They could then describe a biome for a partner, who should not look at the book, and try to figure out which biome is being described.
4. Read the exercise with the students and ask them to choose a biome. They should use books or the Internet to find out more about the plants and animals they need to draw.

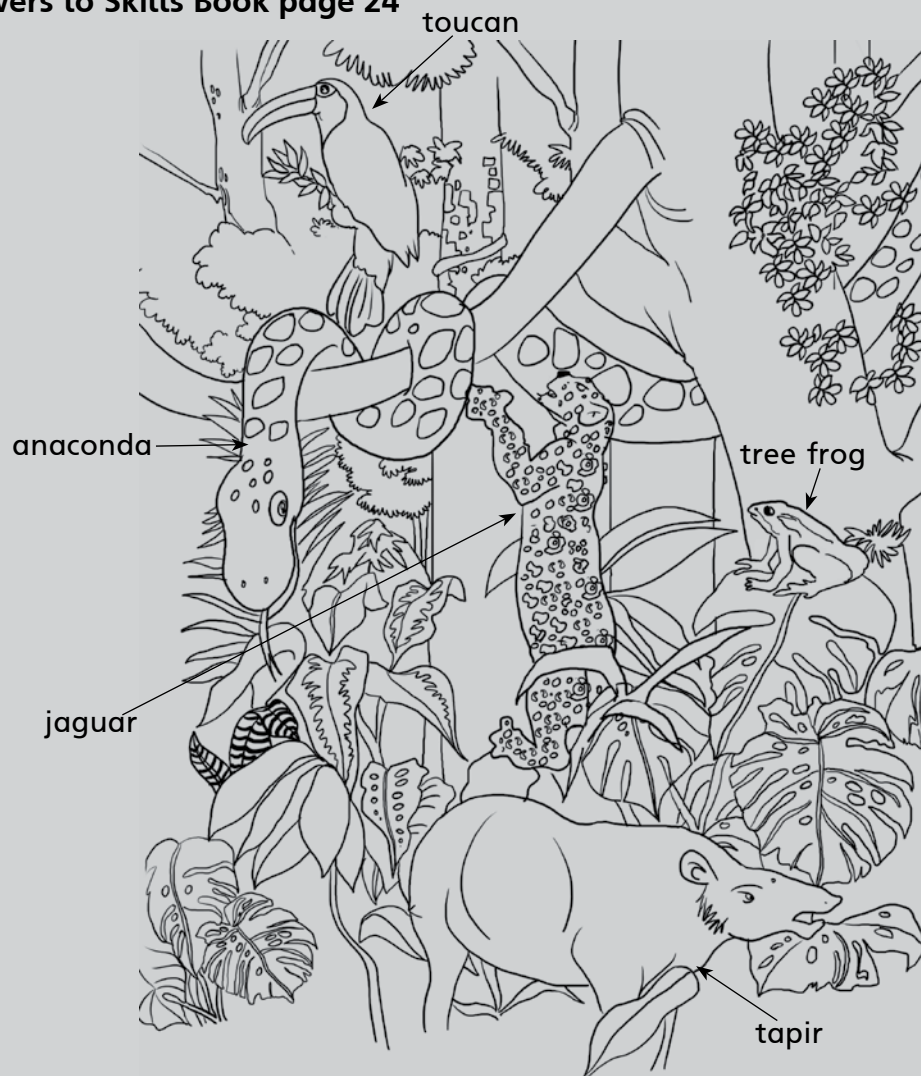
### Skills Book steps

1. Begin by asking the following questions:
  - What do you know about the plants and animals of tropical rainforests?
  - Where are these rainforests?
2. Ask them to read the descriptions of some of the animals of the tropical rainforests of South America and to find each animal in the picture.

### Answers to Pupil's Book page 56

Answers will vary.

### Answers to Skills Book page 24



## Further activities

Find out how the animals of the South American rainforest are suited to their habitat, e.g. some anacondas spend a lot of time in water. Their eyes are on the top of their head so that they can look for prey while the rest of their head and body is underwater. The rainforests have plenty of rivers, ponds, lakes, and streams.

Although tropical rainforests are in hot places they are humid because of the shade from the trees and never become as hot as treeless places. Many of the animals have markings that camouflage them among the trees, for example, the jaguar with its spots. It is a very good climber and so can hunt among the trees.

The toucan lives on fruit, which is plentiful in the rainforests. Because of its large beak it can stay in one place for a long time and reach for all the fruit around it. Its beak can sense temperature and helps to keep its body at the right temperature so it can survive well in high temperatures.

The tapir eats leaves and berries which are plentiful in the rainforest. It has thick skin on the back of its neck, which protects it from the few predators that attack it (such as the jaguar) and it can run very fast. It is good at hiding in water or among vegetation.

The tree frog is well suited to the rainforest because its body is adapted to living in trees rather than around ponds. Tree frogs are very light and can even land on leaves and twigs without breaking them. The discs on their fingers help them to grasp the twigs and leaves. There are many different species of insects among the trees, which they hunt for food. Some of them (for example, red-eyed tree frogs) have green skin that helps them to blend in with the green vegetation. Others are poisonous and so other animals do not eat them. Poisonous animals usually have bright colours that warn predators that they are poisonous.

## Lesson 6: Looking at places in more detail; Map A—The World; Map B—Asia; Map C—Pakistan

### Learning outcomes

Students should be able to:

- determine how map scales can be used to calculate distances on the ground using maps of the world, Asia, and Pakistan
- apply what they have learned to establish distances on a map of Europe
- identify and describe the different scales used for maps

### Resources

- Pupil's Book pages 57–58
- Skills Book page 25 Cities in Europe; page 26 Values
- Rulers

### Pupil's Book steps

1. Ask the class to look at the map of the world on page 57 and to read about its scale. Tell them that this is a small scale map which uses a small length on the page to represent a large one on the ground.

Ask:

- Why are world maps in small scale? (so that very large areas can be drawn on a piece of paper)

2. With a ruler, they should measure the width of Australia from west to east at its widest point. Ask:
  - How wide is it in centimetres?
  - What is this distance in kilometres on the ground?
3. Repeat step two for other places, e.g. the width of Iran from west to east, the length of Africa from north to south. Ask:
  - Do you think a map of Asia can be drawn with a larger scale than a world map on a piece of paper? (Yes, because it is smaller than the world.)
4. Ask them to look at the map of Asia and to read about the scale. The students could measure India at its widest point and work out this distance using the scale.
5. They should now be asked to look at the map of Pakistan. Ask:
  - Does this map have a larger or smaller scale than the map of Asia? (larger)
6. Ask them to measure the distance from Karachi to the northernmost point on the border between Pakistan and Afghanistan and use the scale to calculate how far this is on the ground.
7. Read the exercise on page 58 with the students and ask them to use their rulers to measure the distances carefully. They can then calculate how far each one is in kilometres on the ground.

### Skills Book steps (Page 25 Cities in Europe)

1. Let the students look at the map and read the names of the countries on it. Ask:
  - Which continent do you think this is a map of? (Europe)
  - Can you name four countries in the north of Europe? (Iceland, Finland, Sweden, and Norway)
  - Can you name three countries in the far south of Europe. (Turkey, Greece, Italy)
  - Which country is Stockholm in? (Sweden—it is the capital of Sweden.)
  - Which country is Helsinki in? (Finland—it is Finland's capital city.)
  - What is the distance between these cities? ( $2\text{ cm} - 1\text{ cm} = 250\text{ km}$ )
  - How far is this on the ground? ( $2\text{ cm} = 250 + 250 = 500\text{ km}$ )
 Repeat this for Paris and Prague, Naples and Istanbul, London and Paris, and Paris and Madrid.
2. They should now complete the table on page 25.

### Skills Book steps (Page 26 Values)

1. Begin by asking the students the following questions:
  - Do you think that what happens in other countries matters?
  - Can you explain why and give examples? (Give the others a chance to respond to the ideas given.)
  - Would it matter if we had no contact at all with other countries? (Discuss their ideas about the differences that contact with other countries makes.)
2. Tell them that they will read about some of the ways in which Pakistan interacts with different countries. Read the first item on the chart with the class and then ask:
  - Do you think it is good or bad that people in Pakistan can phone anyone in any part of the world? Explain why you think so.
3. Read the second point with the students and ask them to think about what they have learned from other lessons regarding trade with other countries.
4. The students can then discuss the other points on the chart with a partner and share their ideas and reasons.

- At the end of the lesson, invite feedback and after each point let others comment, beginning with any who disagree. Ask for their reasons.
- At another time you could choose one of the points from the chart as a topic for class debate.

### Answers to Pupil's Book page 58

The approximate distances calculated are:

- Quetta/Multan  
2 cm = 400 km
- Sukkur/Hyderabad  
1.5 cm = 300 km
- Islamabad/Karachi  
6 cm = 1200 km
- Peshawar/Gilgit  
2 cm = 400 km
- Gwadar/Zhob  
5 cm = 1000 km



### Answers to Skills Book page 25

Cities	Distance in cm	Distance in km
Stockholm and Helsinki	2 cm	500 km (250 + 250 or 2 × 250)
Paris and Prague	4 cm	1000 km (4 × 250)
Naples and Istanbul	5 cm	1250 km (5 × 250)
London and Paris	2 cm	500 km (2 × 250)
Paris and Madrid	5 cm	1250 km (5 × 250)

### Answers to Skills Book page 26

Answers will vary.

### Further activities

1. The students could plan a route by air around Europe, starting at London, in June. Tell them that they should measure distances as if the plane could go directly, in a straight line from one city to the next. They should visit six cities.
2. They should find pictures of the cities and write a 'travel log' about their journey: how far they travelled what they saw in each city, what the weather was like in June, and so on. They could do some of the research for this at home, using the Internet and travel brochures, newspaper/magazine advertisements, etc.
3. Students should attempt the CD activity.

### Answers to Pupil's Book page 59

- A.
1. Asia is a continent.
  2. Pakistan is a country.
  3. The Equator is a line on a map across the middle of the Earth.
  4. Lines of latitude go across the map.
  5. Lines of longitude go down the map.
  6. The Earth rotates once every 24 hours.
  7. A biome is a type of habitat found in an area.
  8. Tropical rainforests are found near the Equator.
  9. Deserts are places with little rainfall.
  10. The scale on a map helps us to measure distances.
- B.
2. a. In the tropical rainforests of South America  
b. It helps the frog to blend in with tree leaves.  
c. This means sleeping during the day and coming out at night  
d. Red-eyed tree frogs eat insects such as crickets, moths, and flies.



# Unit 6 Money and banks

## Background knowledge for the unit

This unit is about how money can be managed and the different ways in which we can pay for goods and services.

After a brief overview of the history of coinage, paper money and banking, and currencies, there is an explanation of banking, including bank accounts, saving, currency exchange, credit, debit, credit cards, debit cards, loans, and interest.

People have been using coins for thousands of years. Some of the earliest known tokens used as coins come from China, from around 1000 BCE. The first known paper money also came from China. The use of coins developed from bartering. In some societies people began to use 'standardized' items for barter—useful commodities such as grain or livestock. The word shekel (Israel) comes from a word for 'weighing'. The shekel was a standard weight of grain that was used as currency. In Iceland the early settlers (from about 874 CE) used bolts of woollen cloth, sheep, and cattle as currency.

Some coins from a mint which used moulds to ensure exact replicas have been found in Lydia (now part of Turkey) that seem to be from around the 7<sup>th</sup> century BCE.

The earliest banks were temples, which were safe storage places for riches, and had been used only by rulers to keep their wealth in. This was in the form of precious artefacts and useful commodities such as grain or cloth. People believed that their gods would protect the temples.

Others began to make safe storage places for valuables. The evidence for this comes from clay tablets from around 8000–1500 BCE in the Near East, e.g. the ancient city of Ur. These recorded items such as grain that were accepted for storage. Larger clay tablets recording the laws for banking were also discovered in and around Mesopotamia (now Iraq), parts of northern Syria, south-east Turkey, and south-west Iran.

Banking that involved credit is thought to have begun in ancient Assyria and Babylonia around 2000 BCE, when merchant banks made loans of grain to farmers and traders who transported goods from city to city. The Ancient Greeks and Romans developed this. Lenders who operated from temples began to accept deposits as well as make loans. They also exchanged money. Modern banking is thought to have developed from the 14<sup>th</sup> century in Italy when rich families, such as the Medici, set up banks and opened branches across Europe. In the 16<sup>th</sup> century the Netherlands also became a centre of banking and, in the 17<sup>th</sup> century, Germany.

Credit cards developed in the 1890s in Europe, when merchants began to give their customers a card on which they recorded items sold but not paid for. In the late 1930s businesses began to accept one another's 'cards'. These were not always actual cards but could be plastic tokens, metal discs, and tokens made of various other paper, plastic, or metal-based materials.

The first bank card was issued in the USA in 1946. It was a 'charge it' programme between bank customers and local merchants. The merchants would place sales slips at the bank and the bank billed the customer.

The first plastic credit card as we know them today was the Diners Club card, created by Frank McNamara in 1950 in the USA. The idea came to him when he had eaten at a restaurant and didn't have enough cash with him to pay the bill. It was used only at restaurants at first, and customers had to pay the entire amount when they received their bill; so it was really a charge card.

Inventors began to produce ideas for ATMs (Automatic Teller Machines) in the 1930s but the first successful one was installed at Barclays Bank, in Enfield, London, in 1967.

### **Expected learning outcomes for the unit**

When they have completed this unit in the Pupil's Book and Skills Book most students should be able to:

- describe how money developed
- determine how bank deposits are safeguarded
- interpret how banks operate credit and debit
- define the development of banks around the world
- identify and list the main banks of Pakistan

They will learn how to:

- use photographs, drawings, maps, and stories to get information about banking and money
- ask questions and draw conclusions about banking and money
- calculate currency exchanges

They will begin to understand:

- how banks operate
- Interest and bank charges
- debit and credit

## **Lesson 1: Who invented money? Money today**

### **Learning outcomes**

Students should be able to:

- determine how people began to use money for trading
- identify some international currencies and their rates of exchange

### **Resources**

- Pupil's Book pages 60–61
- Skills Book page 27 World currencies
- Some items that could be used for a 'bartering' activity such as pencils and other everyday school items, fruit and sweets, toys, games, football or cricket ball, etc.
- Small, regular items that could be used as 'money' to represent the value of items, e.g. shells, beads, small pebbles, etc.
- If possible, some foreign currency

### **Pupil's Book steps**

1. Prepare for the lesson by setting up a market. Place some items for bartering on a table. Discuss this market stall and pretend that money has not yet been invented. Invite a student to visit the market stall and choose something to buy. Ask what he/she would give in exchange (explain that everything will be given back after the lesson). Discuss whether that is enough to pay for the chosen object. For example, if he/she offers a pencil

in exchange for a large bag of fruit, tell him/her that it is worth six pencils. If he/she only has one, you could suggest something like 'a pencil, an eraser, and a pencil sharpener'. Repeat this using other items and with different students. The class could join in *setting a price*. Explain that this is called bartering.

2. Show the students a box or bag of small items such as pebbles. (Only use similar items.) Tell them that these are valuable and that they can be exchanged for goods at your stall. Ask the class to work in groups to decide how many pebbles (or other items) each object on your stall is worth. They could then try buying other things using these.
3. Explain that in the past people used things such as shells, rolls of cloth, grain, and even livestock as 'money' before they began using real money.
4. Ask the class to read the top section of page 60 to find out more about the development of money. Discuss what they have learned.
5. Show them some money from different countries and give them time to look at the pictures and patterns and to read the words and numbers on it. Introduce the term 'currency'. Ask if they have ever exchanged Pakistani money for money from other countries for a visit abroad. They could tell the rest of the class about it: their destination, where they exchanged the money, the name of the currency, what it was worth in Pakistani money, any exchange fees, and so on.
6. Ask them to read the rest of the page to find out about currencies of some different countries. Ask:  
Have you seen people paying for goods or services in any other ways—without giving cash? (cards, cheques, bank drafts)
  - Do you know what a cheque is?Explain that a cheque is a leaf that people tear out of a cheque book that they get from their bank. They write whom they are paying the amount they want to pay to, and then sign it. Their bank transfers the money to the other person's bank account. Ask if they have heard of a 'cheque guarantee card'. Explain that this verifies the identity of the cheque book holder and also assures that their bank will pay up to a certain amount. Some also use the card without a cheque, for direct payment from their bank account or to get money from a cash machine that automatically deducts it from the balance in their bank account.
7. The students should read the first paragraph of page 61, about bank/credit cards, and complete the adjacent exercise (a–d) in their notebooks.

### Skills Book steps

1. Read the instructions and information about currencies with the students and enquire if they have seen any of these currencies. If you have samples, let them look at the currencies.
2. Explain that they are going to colour the map to show where each of these currencies is used. Ask them to complete the exercise.

### Answers to Pupil's Book page 61

1. a. 192  
b. 306  
c. 369  
d. 60

## Answers to Skills Book page 27

Currency	Countries shaded
dollar	USA, Australia, New Zealand, Canada, Namibia (There are several others, too.)
rupee	Pakistan, India, Mauritius
euro	France, Germany, Spain, Italy, Finland (also Andorra, Austria, Belgium, and others)
peso	Mexico, Argentina, Chile, Uruguay, Philippines (also Colombia and others)
pound	United Kingdom, Sudan, Egypt (Syria and a few smaller countries)
dinar	Iraq, Libya, Algeria, Kuwait, Bahrain (also Tunisia and a few more countries)

### Further activities

1. Divide the class into groups of four and allocate a country and its currency to each group.
2. For homework they should find out as much as possible about that country's currency, for example, who and/or what is/are shown in any pictures, the country's main bank, names on the currency, the denominations of currency (coins and notes), and what these are worth in relation to Pakistani currency.

## Lesson 2: Banks; How do we earn money?

### Learning outcomes

Students should be able to:

- identify and describe bank accounts and debit and credit cards
- identify and define the terms income, loans, and interest

### Resources

- Pupil's Book pages 61–64
- Skills Book page 28 Roshaneh Zafar; page 30 Jobs

### Pupil's Book steps

1. Review what the students have learnt about bank accounts and read the section titled 'Banks' on page 61 with them again. Ask:
  - What is a bank account? (money entrusted to a bank from which the customer can withdraw cash when required)
  - How do people get their money out of their bank accounts? (They use a cheque from their cheque book, or they use their debit card. They can pay people for goods and services with cheques, withdraw cash from the bank, or use an ATM—cash machine.)
  - Who can have a bank account? (Anyone who has a certain amount of money that he/she wishes to keep in a bank can have a bank account.)
2. Ask the students to name some banks they know and list these names on the board. If they have not mentioned it, add the State Bank of Pakistan and ask if they have heard of it. Ask if they have seen any of its buildings. Also add the Grameen Bank of Bangladesh. Tell the students that they are going to read about these banks.

3. Read page 62 with the class. Then ask:
  - What is the name of the service banks give that help people to pay for expensive things (such as cars, houses, etc.) they need but do not have the money to buy? (loans)
  - Why do many banks not lend money to poor people? (They might not be able to repay the loan.)
4. Read the first four paragraphs of page 63 with the class and discuss the pictures and captions. Ask:
  - What did Roshaneh Zafar do to help poor people who wanted loans? (Let different students contribute to the answer.)
  - How did she help people to get out of poverty? (She set up the Kashf Foundation to help them get loans so as to improve their lives.)
  - Can you give some examples from these pages?
  - How do we earn money? (The students could suggest some answers before reading the text on page 63.)
5. Read the text on pages 63 and 64 under the heading 'How do we earn money?', then ask:
  - Why do some people not have enough money? (They don't hold well-paid jobs, cannot find work, they have not had a good education, they must take care of their children and other family members, or they may have disabilities—there are many reasons.)
6. The students should then complete the exercise on page 64.

### **Skills Book steps (Page 28 Roshaneh Zafar)**

1. Ask the students what they know about Roshaneh Zafar and tell them that they are going to read an interview with her. Ask one student to read the interviewer's questions while another reads out Roshaneh's answers. Invite the rest of the class to comment on the interview.
2. Now read the questions that follow the interview with the class (Exercise 2), or let them read these in pairs so they can help one another. They should then write down their answers.

### **Skills Book steps (Page 30 Jobs)**

1. Read the instructions and the list of jobs with the students. Invite a volunteer to say briefly what each job is about (one sentence would do). After each job ask the class:
  - How is it useful?
  - What would happen if no one did this job?
  - How would it affect our community?
  - Are there any jobs on the list that you would hate to do? Why?
  - Do you think anyone enjoys doing this job?
2. Ask the students to choose a job that interests them, circle it, and then complete the exercise.
3. Then ask about the jobs they thought the least enjoyable. Ask:
  - Now that you have thought about this job will it change how you think of people who do it?

Point out that it is important to respect all jobs and also the people who do them, even if they seem unpleasant, because they are all important to the community.

### Answers to Pupil's Book page 64

Answers will vary.

### Answers to Skills Book page 28

2.
  - a. Kashf Foundation
  - b. She wanted to help poor people in Pakistan, especially women, to improve their lives and find a way out of poverty.
  - c. It lends small amounts of money which the people pay back over time.
  - d. To educate their children, improve their homes, or start a business.
3. Answers will vary.

### Answers to Skills Book page 30 Jobs

Answers will vary.

### Further activities

1. Start a 'class bank' using imitation money. Different groups of students could operate the bank at different times for others (as customers) to open different types of accounts—current account or deposit account.
2. They could make bank cards and cheque books and keep records of their customers' money and credit cards. They will make some mistakes but will learn from the experience.
3. Perhaps someone from a local bank (or a member of one of the student's families who is a bank employee) could come to school to talk about some simple day-to-day banking practices and facilities.
4. From time to time you could hold a class meeting to discuss any problems they had to solve—or any problems they do not know how to solve. This project could go on for several weeks.

## Lesson 3: A story about lending money

### Learning outcomes

Students should be able to:

- determine and define loans
- establish and interpret the fact that honesty is a virtue

### Resources

- Pupil's Book 64–67
- Skills Book page 29 Money 'sayings'; page 31 Values

### Pupil's Book steps

1. Tell the class that they will read a story about a loan from the time of the Mughal Emperor Akbar. Read the story that begins on page 64 with the class, allowing volunteers to take turns in reading aloud. Ask:
  - Who, in this story was honest? (the second merchant and the first merchant's son)
  - Who was dishonest? (the first merchant)
  - How do you think the second merchant felt?

2. Ask the students to think about what people should do when they give or take loans. They might have different views, for example, always write it down and ask the person to sign something, never lend money, only lend to people you trust, only lend what you can afford. Ask:
  - How did Birbal get to the truth? (He tested the two merchants by hiding gold coins under some grain that he asked them to sell.)
  - What do you think of this way of finding out the truth?
3. Ask the class what they can find out about Birbal on this page. They can read 'It's a Fact', then ask:
  - Why do you think the Emperor Akbar trusted Birbal?
4. Read the exercise on page 67 with the class. They should complete this in their notebooks.

### **Skills Book steps (Page 29 Money 'sayings')**

1. Ask the students if they know any sayings about money and what they think they mean. Tell them that they will read some well-known money sayings.
2. Ask them to read the first saying with a partner and discuss its meaning, then invite feedback. You could give an example to help them to decide what they think: One person is very poor but has good health. The second person is very rich but has a very serious illness. 'Can money buy happiness?' One person is very poor but has a big, happy family who help one another. The second person is very rich but all his family has died. So, can money buy happiness? The students could think up some other examples. These will also help them to consider the second saying.
3. The students can then write their answers about the first two sayings.
4. Ask them to think about the third saying and to consider why it might be good never to see this person again, before they make up their minds about this.
5. Ask what the fourth saying might mean. (There is no endless supply of money. We can only spend what we have. When it is gone we have to wait until we have earned more.) This saying is often used by parents to their children! Discuss why.
6. The discussions of the first question will help with the above discussion. Ask the students what valuable things are free, and that these need not be goods.

### **Skills Book steps (Page 31 Values)**

1. Read the instructions and discuss the choices from the given boxes.
2. Let the students work in pairs to complete this exercise.
3. Now ask them to read the instructions for the next exercise and complete it with their partner.

### **Answers to Pupil's Book page 67**

1. Answers will vary.
2. Answers will vary.
3. She was worried that the friend might not pay it back.
4. He was honest.
5. If someone is dishonest about small matters, they will be dishonest about important ones too.

### Answers to Skills Book page 29

Answers to all these will vary, for example:

1. that some important things can't be bought, for example, love, family, and health.
2. that it is better to be healthy and poor rather than ill and rich. Money can't buy health.
3. that if you don't see them again they are dishonest, so you are better off without them.
4. that you can only spend what you have or earn.
5. that there are many important things in life that do not cost any money, e.g. health, family, kindness, love, friendship, and trust.

### Answers to Skills Book page 31

1 and 2. Answers will vary.

### Further activities

1. Ask the students to make up some of their own sayings about money.
2. They could write their own story about a loan. It might be a loan that was repaid and led to something very good or a loan that was not repaid and what happened as a result.

### Answers to Pupil's Book page 68

1. a.

p	y	e	n	r	u	p	e	e
e	o	n	p	l	a	e	f	t
p	e	u	r	e	r	s	r	d
y	d	i	n	a	r	o	u	o
b	a	h	t	d	i	z	b	l
a	f	g	h	a	n	i	l	l
p	v	l	r	i	a	t	e	a
r	e	n	m	i	n	b	i	r

2. a. Iraq                      b. Russia                      c. Japan                      d. Mexico                      e. Thailand

3. and 4. Answers will vary.



# Unit 7 Colonization of the subcontinent

## Background knowledge for the unit

This unit explores the growth of European trade in the subcontinent and how powerful trading companies set up large trading posts here that eventually grew into cities. The students learn how these 'East India' companies began to govern parts of the subcontinent and use their armies to capture land.

The unit also helps them to understand how the British East India Company became more powerful than the others, and despite the valiant efforts of warriors such as Hyder Ali and Tipu Sultan in Mysore, took control of most of the subcontinent. This situation was made possible partly because there was no great power here. The Mughals had lost most of their empire and there were other empires competing for power, e.g. the Marathas, the Durranis (also known as Abdalis), the Nizam of Hyderabad, as well as Hyder Ali of Mysore. The British East India Company, in effect, ruled the subcontinent for Britain.

During this time the British made great changes to our subcontinent—building railways, roads, and developing the postal system so that they could communicate better with their army leaders across the land and travel more easily between their army bases. We still have many British buildings here from that time and we still use the railways and stations they built.

## Expected learning outcomes for the unit

When they have completed this unit in the Pupil's Book and Skills Book most students should be able to:

- define and describe colonization
- establish how European traders set up trading posts in the subcontinent in the 18<sup>th</sup> century
- list the main goods that were traded
- describe some of the battles that were fought in the subcontinent in the 18<sup>th</sup> century

They will learn how to:

- use sources such as maps, paintings, photographs, and objects to find out about people and events in the past
- ask questions and draw conclusions about people and events of the past

They will begin to understand:

- how trade led to the colonization of the subcontinent
- how colonization causes a place to change

## Lesson 1: European traders and settlers

### Learning outcomes

Students should be able to:

- establish how Europeans began to trade in the subcontinent
- identify and describe the trading posts in the subcontinent that developed into cities
- determine how centuries are numbered

## Resources

- Pupil's Book pages 69–70
- Skills Book page 32 Europeans as traders
- Pupil's Book 4 Units 8–10 for **Further activities**

## Pupil's Book steps

1. Tell the class that they are going to learn about what it was like in the 18<sup>th</sup> and 19<sup>th</sup> centuries in the land that is now called Pakistan and India. Ask:

- What is the 18<sup>th</sup> century?
- Which year was the first year of the 18<sup>th</sup> century? (1700)
- Which year was the first year of the 19<sup>th</sup> century? (1800)

Help them to understand this by talking about their own ages. Explain that until a baby is one year old he or she is in his or her first year (the first year of the baby's life). After the first birthday the baby is a year old but in the second year of his or her life. Ask:

- How old are you?
- Which year of your life are you in? (This will be a year more than their actual age.)
- Which powerful empire ruled a large part of the subcontinent in the 17<sup>th</sup> century? (the Mughals)
- Who was the 4<sup>th</sup> Mughal emperor who was very rich and travelled with tents that were set up like a town? (Jahangir)

Tell the students that they will read about how his agreements with European traders helped to change the subcontinent's future. Read page 69 with the class and let them look at the map. Read the names of the cities, etc. on it and also the caption. Ask:

- How was the subcontinent changing in the 18<sup>th</sup> century? (More and more European traders were setting up trading posts and by that time the Mughal Empire was becoming much smaller and weaker.)
- Why did Europeans set up trading posts here? (It was convenient for them to buy goods from the Far East and Middle East from traders.)
- What goods did they buy? (spices, tea, sugar, silk, cotton cloth, opium, saltpetre, and indigo—goods not available in Europe)

2. Read the first paragraph on page 70 with the class and ask:

- What other changes took place here because of the trading? (Cities grew around the trading posts and therefore many Europeans settled here.)

3. Ask the students to read 'It's a Fact' on page 70. Ask:

- Why do you think trading companies had their own armies? (The armies guarded the trading posts and maintained law and order. Explain that the trading posts were huge—almost like towns.)
- Why do you think they had their own judiciary (legal system)? (To find out if crimes were committed in the trading posts and to punish anyone found guilty. The students have studied about the judiciary in Book 4.)
- Why did they mint their own coins? (They probably paid their workers with these coins which the workers could only spend these in the trading post.)

4. The students can then complete the exercise.

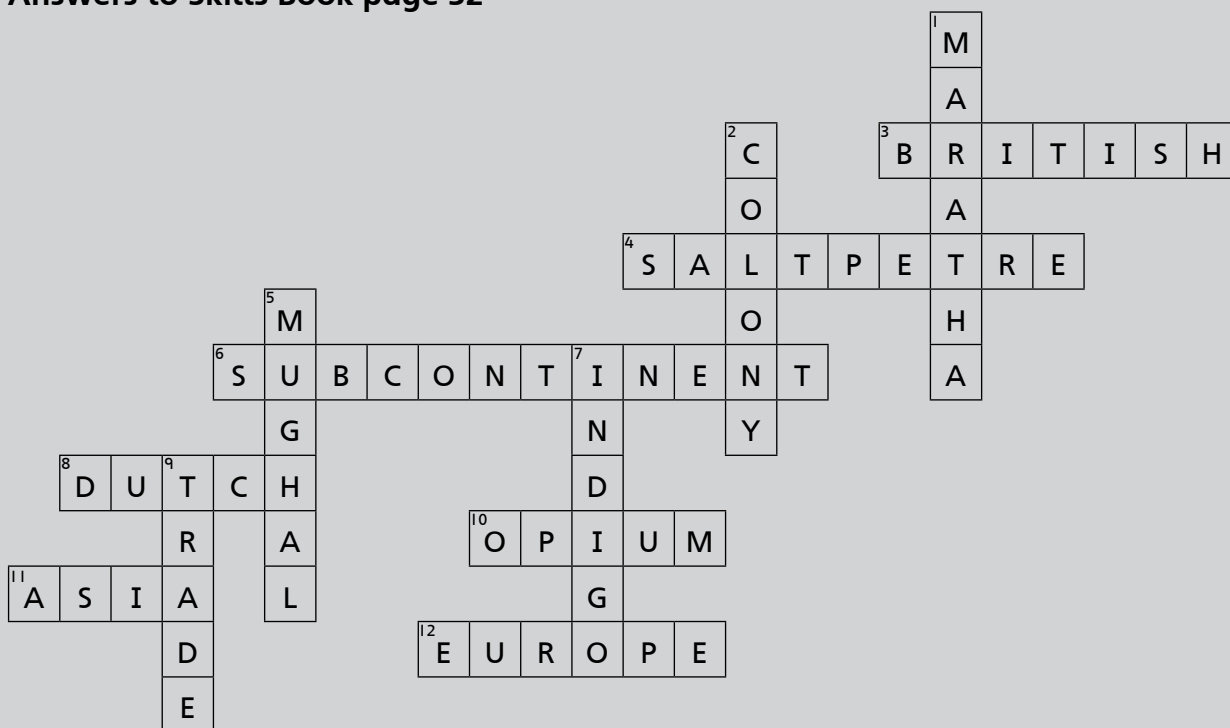
## Skills Book steps

1. Review the steps of completing a crossword puzzle as done in previous books and lessons.
2. Ask the students to read the clues and write the answers in the crossword puzzle. Encourage them to use the Pupil's Book to find the answers and to spell the words. The glossary of the Pupil's Book will also be of help.

### Answers to Pupil's Book page 70

- A. 1. Britain, France, Denmark, Sweden, Portugal, Holland  
 2. Europeans settlements were mainly around the coasts as these were easy to reach by ship and traders did not have to travel overland as this was slow and difficult.
- B. Traders from the Spice Islands and China could bring their goods here along the Silk Route. Europeans had ships that were good enough to sail as far as India. They knew the sea routes that the early explorers had discovered. Review previous learning from Book 4, about exploration.

### Answers to Skills Book page 32



### Further activities

- The students could be asked to read Book 4, Unit 8 (Mughals 2), Unit 9 Science and Exploration, and Unit 10 Colonization again and discuss what was happening in India and Europe that helped European trade with the subcontinent flourish and grow. Key factors: the Emperor Jahangir encouraged trade; later the Mughal Empire became weaker; Europeans were exploring the seas and learning routes across them; Europeans wanted goods they could not get at home; European rulers were looking for new land to rule.
- In pairs they could discuss the positive and negative aspects of European trade and colonization in the subcontinent.

## Lesson 2: The East India Companies

### Learning outcomes

Students should be able to:

- identify and describe European trading companies in the subcontinent in the 18<sup>th</sup> century
- use maps and paintings to find out about the past

## Resources

- Pupil's Book pages 70–71

## Pupil's Book steps

1. Tell the students that they will learn more about the European trading companies that set up trading posts in the subcontinent. Remind them why large numbers of Europeans began trading here (refer to Lesson 1). Ask:
  - How did the trading companies maintain law and order in the trading posts? (They had armies and law courts, and could imprison people who broke the law and even execute them.)Discuss the fact that the trading companies were very powerful and ask them to read about this on pages 70 and 71. Then ask:
  - What were these trading companies called? (East India Companies)
  - Which trading company began to use its army to capture and rule the land? (The British East India Company.)
2. Tell the students that the British East India Company's army acted as though it were the British army—the national army. Ask:
  - What helped the British East India Company's army to win all its battles with local landowners and rulers? (They had better weapons and training than the Indian armies.)
3. Ask the class to read 'It's a Fact' on page 71. Then ask:
  - Why did European countries fight one another over India? (India was very valuable because of the goods they could get only by trading here. Add that there were also lands they thought could be colonized, for example, the Portuguese had a colony in Goa—see Book 4 Unit 10 Colonization.)
4. Together read section A of the exercise on page 71. Tell the students that the answers can be found on pages 70–71 and that the maps and pictures will help too. The students can then complete this section of the exercise.
5. For section B of the exercise the students should work in pairs. You could allocate the roles of reporter and trader. Read the first question with them and ask the class to suggest why a European company had Indian officials in charge of trading posts. (Indian officials would know more about the local area than British officials. They would also know the local language and culture and be better able to work with local traders.)

### Answers to Pupil's Book page 71

- A.
1. European companies had trading posts **around the coast** of the subcontinent.
  2. The **British** traded from Fort George in Madras.
  3. The **British** East India Company began to rule parts of the subcontinent.
- B. Answers will vary.

## Further activities

The students could enact the interviews they wrote.

## Lesson 3: A struggle for power

### Learning outcomes

Students should be able to:

- determine and describe the shifts in power that were occurring in the subcontinent during the 18<sup>th</sup> century
- find out about important 18<sup>th</sup> century battles in the subcontinent

### Resources

- Pupil's Book pages 72–73
- Skills Book page 34 Rulers in the 18<sup>th</sup> century

### Pupil's Book steps

1. Tell the class that they are going to find out what happened to the Mughal Empire in the 18<sup>th</sup> century and about another powerful Empire in the subcontinent. Ask them to read page 72 and to look at the pictures and captions. Ask:
  - What made the Mughal Empire weak? (The Emperor Aurangzeb's sons fought one another.)
  - What happened because of this? (The Marathas began to conquer Mughal lands.)
  - Who were the Marathas? (Hindus from part of Maharashtra in the west of India)
  - Which other empire ruled a large part of the subcontinent and beat the Marathas in the Third Battle of Panipat in 1761? (the Durrani—Abdalis)
2. The students should also look at the pictures and read their captions to say what they can find out about the Marathas and the Durrani from them.
3. Ask the class what they find out about the weapons the Durrani used by looking at the picture at the top of page 73. (They used cannons.) Ask:
  - What other weapons were used in the battle between the Durrani and the Marathas? (The students should use the pictures on page 72 to answer this: spears, swords, knives, and guns.)
4. Read section A of the exercise on page 73 with the class. Tell them that the answers can be found on pages 72–73 and that the pictures will also help.
5. The students can then complete this section of the exercise.
6. Discuss section B of the exercise. The students should notice the soldiers' clothing, especially their headdresses which seem to be made from expensive materials. Their belts, headdresses, and swords appear to have jewels on them.

### Skills Book steps

1. Discuss the instructions and ask the students to follow them to complete the first exercise.
2. The students could solve B with a partner.

### Answers to Pupil's Book page 73

- A.
1. False. British East India Company ruled it.
  2. False. The Marathas ruled most of it.
  3. True
  4. True
  5. False. They had guns.
- B. Answers will vary. Examples: They are wearing rich clothes. They have feathers and jewels in their headdresses. There are jewels on their swords and belts.

### Answers to Skills Book page 34 Rulers in the 18<sup>th</sup> century

- A.
1. In 1760 the **Marathas** ruled most of the subcontinent.
  2. The **British East India Company** ruled Bengal and Ceylon (now **Sri Lanka**).
  3. The **Sultan of Mysore** ruled the land near the south-west coast.
  4. The **Nawabs** ruled Awadh.
  5. The **Durranis** ruled Sindh and Lahore. They came from **Afghanistan**.
  6. They captured Punjab and Delhi when they beat the **Marathas** at the Third Battle of Panipat.
- B. Mughals, Durranis, British

### Further activities

1. Different groups of students could research the Durranis or the Marathas and contribute to class books about them, for example, their ancestors and home lands, their culture and religion, how their empires grew.
2. They could use the Internet to get pictures/illustrations of this era.

## Lesson 4: The Kingdom of Mysore

### Learning outcomes

Students should be able to:

- recount the heroic efforts of Hyder Ali and Tipu Sultan to stop the British from increasing the area they ruled
- identify and describe important 18<sup>th</sup> century battles in the subcontinent
- ask and answer questions about the past

### Resources

- Pupil's Book pages 73–75
- Skills Book page 35 The Kingdom of Mysore
- A map of India and Pakistan

### Pupil's Book steps

1. Using an atlas, ask the students to locate Mysore. Offer assistance if necessary. Inform them that they will learn about two famous rulers of Mysore in the 18<sup>th</sup> century—Hyder Ali and his son Tipu Sultan.
2. Read the paragraph about the Kingdom of Mysore on page 73. Explain that Hyder Ali believed that the most dangerous threat to his kingdom and to other kingdoms still ruled by local kings—were the British. Ask:
  - How did Hyder Ali defeat the British at Pollilur? (He used rockets.)
3. Next, ask the students to read page 74 and assist them in locating Chittoor on a map of India. Ask:
  - How did Hyder Ali die? (from illness on the battlefield)
  - Did the British take his land after his death? (No, his son Tipu Sultan fought them and captured Chittoor.)
  - What did he do to make life difficult for enemy armies? (He destroyed food crops and farm animals so that there would be no food for them.)
  - How did the British manage to defeat Tipu Sultan and capture Mysore? (with help from the Marathas and the Nizam of Hyderabad)

- What can still be seen in Mangalore to remind us of Hyder Ali and Tipu Sultan? (Lal Bagh—the gardens they built there). Ask the students to describe the gardens that they see in the picture.
4. Read section A of the exercise on page 74 with the class. Tell them that the answers can be found on pages 73–74 and that the pictures will help. They can then complete this section of the exercise.
  5. Discuss section B of the exercise. Ask:
    - What do you think Hyder Ali and Tipu Sultan thought would happen if the British continued to capture land in the subcontinent? (They might conquer all, or most of India, which included the area that is now Pakistan.)
    - What do you think Indian rulers like the Nizam of Hyderabad thought they might gain by helping the British against people in their own country? (The local rulers were fighting one another for power here. The Nizam of Hyderabad and others, such as the Marathas, probably thought they would be protected by the British and that their own power would increase once Hyder Ali and Tipu Sultan were defeated.)

### Skills Book steps

1. Tell the class that they will need to read pages 72–74 of the Pupil’s Book again, in order to find most of the information they need to complete the fact files about Hyder Ali and Tipu Sultan. They will require assistance to check their dates of birth.
2. Explain that the boxes in the fact files are for them to draw pictures of Hyder Ali and Tipu Sultan.

#### Answers to Pupil’s Book page 74

1. Mysore is in the **south** of India.
  2. **Hyder Ali** ruled the kingdom of Mysore from 1761 to 1782.
  3. Tipu Sultan fought the **British** in 1741.
1. Answers will vary. The students should mention ideas such as Tipu Sultan and Hyder Ali believing that the British would end up ruling most of the subcontinent.
  2. Answers will vary but should include the idea of local rulers wanting to increase their own power by getting rid of Hyder Ali and Tipu Sultan and being protected by the British against other enemies.

#### Answers to Skills Book page 35

Hyder Ali	Tipu Sultan
Born in: <b>about 1720</b> Died in: <b>1782</b>	Born in: <b>1750</b> Died in: <b>1799</b>
Battles won: Battle of <b>Pollilur</b> in 1780 against the <b>British</b> .	Battles won: Battle of Chittoor in <b>1782</b> against the <b>British</b> .
Anything else we know about this battle: <b>Hyder Ali used rockets.</b>	Anything else we know about this battle: <b>Tipu Sultan destroyed the soldiers’ food supply.</b>
Anything that remains to remind us of him: <b>Lal Bagh (gardens) in Mangalore</b>	Anything that remains to remind us of him: <b>Tipu’s Tiger in London</b>

- B. Because he fought hard and his badge was a tiger.

### Further activities

1. The students could find out more about Ranjit Singh, who ruled lands near Sindh until he died in 1839.
2. They could also find out more about Tipu Sultan or Hyder Ali.

## Lesson 5: The British gain control

### Learning outcomes

Students should be able to:

- determine the factors that helped the British to take control of the subcontinent
- collect and document information about the Battle of Seringapatam
- develop an understanding of heroism and bravery

### Resources

- Pupil's Book page 75
- Skills Book page 33 Rulers of the subcontinent
- A map of India and Pakistan

### Pupil's Book steps

1. Find out if any of the students know anything about Seringapatam. Tell them that it was a part of Tipu Sultan's kingdom and that it is located in the south of India. Help them to locate Seringapatam and inform them that they are going to read about the battle there, where Tipu Sultan died.
2. Ask the class to read page 75. They could take turns in reading aloud. Ask:
  - Why did Indian rulers want British protection? (The British armies were strong and had very good discipline and weapons.)
3. Explain that discipline in the army refers to training and obedience. Tipu Sultan's army was also very strong and well-disciplined but the British armies were much larger because they also had Indian soldiers from the rulers who wanted British protection. Ask:
  - What weapon did Tipu Sultan (like his father) use that the British did not have? (rockets; but before long, the British too had rockets)
  - What happened at Seringapatam in 1799? (A British army with about 50,000 soldiers—some from Madras and Hyderabad—attacked Seringapatam. Tipu Sultan fought back with some 30,000 men. About 1400 soldiers from the British army and 6000 from the Mysorean army died. Tipu Sultan also died in battle.)
  - Were Hyder Ali and Tipu Sultan right about wanting to keep out the British more than any other attackers? (Many people would say yes, because the British took over almost the whole of the subcontinent.)
  - Why was Tipu Sultan nicknamed 'The Tiger of Mysore'? (He fought very bravely and his badge had a tiger on it.)
  - What do you know about his model of a tiger? (It was made in such a way that it could move. It 'attacked' a British soldier who lay on the ground beside it.)
  - What happened to the model tiger? (The British took it after the battle, along with other riches. It is now in a museum in London.)
4. Read section A of the exercise on page 75 with the class. Tell them that the information they need can be found on this page. They should consider all the information and list the advantages and disadvantages that Tipu had at the battle.



5. Discuss section B of the exercise and why Tipu Sultan who had beaten the British in other battles lost this one.

### Skills Book steps

Tell the class that they will need to read pages 72–74 of the Pupil's Book again to find the information they need to complete the timeline.

#### Answers to Pupil's Book page 75

- A. Advantages for Tipu Sultan: he had rockets, the British knew he would be hard to beat, he had a strong army.  
Disadvantages: the British had many more soldiers, they killed Tipu Sultan, after that his army would have felt even weaker.
- B. He had a much smaller army than the British who had soldiers from Madras and Hyderabad, as well as British soldiers.

#### Answers to Skills Book page 33

- A. 1. The Maratha Empire was at its largest and the Marathas ruled most of the subcontinent. 1758  
2. The Durranis beat the Marathas at the Third Battle of Panipat. 1761  
3. Tipu Sultan won the Battle of Chittoor. 1782  
4. The British took Mysore. 1791  
5. The British beat Tipu Sultan's army at Seringapatam. 1799
- B. Ranjit Singh died. The British took Sindh. 1839

### Further activities

1. The students could read more detailed accounts of the Battle of Seringapatam.
2. Discuss what might have happened if Tipu Sultan had won the battle.
3. Debate whether or not the British would have continued to rule the subcontinent.

## Lesson 6: The British in Sindh

### Learning outcomes

Students should be able to:

- establish how the British took control of Sindh
- learn why Sindh was important to the British
- determine and identify the causes of wars

### Resources

- Pupil's Book page 76
- Skills Book page 36 Values

### Pupil's Book steps

1. Read page 76 with the class. Then ask:
  - Why did the British want to rule the Indus Valley? (for its fertile land and because many people lived there)
  - Which people ruled most of Sindh? (Sikhs)
  - What was the name of the powerful Sikh ruler of the land nearby? (Ranjit Singh)

- Why did the British wait until 1839 before attacking Sindh? (They knew that Ranjit Singh's army was very strong and that he would fight hard to defend Sindh.)
  - What happened after Ranjit Singh died? (Others fought to rule in his place. The army was no longer powerful or ready to defend Sindh, so the British attacked and won.)
  - Why was Sindh very important to the British, apart from the good land and large population? (The British already controlled Punjab, so when they took Sindh they were in charge of all the borders in the north of the subcontinent, as well as all the coasts.)
  - Why do you think it was important to be in charge of all the borders and coasts? (They could control whoever and whatever came in and went out.)
2. Read the exercise on page 76 with the class and tell them that the answers to section A can be found here.
  3. Remind them of the discussions you had earlier on about why Sindh was important to Britain and why they did not attack it before 1839. They can then complete both sections of the exercise.

### Skills Book steps

1. Ask the students to read pages 72 to 77 of the Pupil's Book again, and to make notes about the battles they read about. Ask:
  - What do you know about the Third Battle of Panipat?
  - Who fought this battle? (The Marathas fought the Durrani/Abdalis.)
  - What was the reason for fighting this battle? (They wanted to take over part of the land that is now Pakistan.)
  - Who won? (The Durrani won. They took Punjab and Delhi.)
2. Ask the same questions about the other battles listed on the chart. This encourages the students to read for information and to make notes of the main points.
3. Ask them if they notice any similarity between the battles. Ask:
  - Were they fought for similar reasons? (Yes, for acquisition of territory.)
  - What reasons? (The Marathas, Duranni/Abdalis, the people of Mysore, and the British fought to gain control of land.)
4. Discuss recent wars fought or wars that are still being fought. Ask the students if they know what the people are fighting over, maybe for the same reason, land. (Other reasons for wars include rights for minority groups, religious beliefs, trade, and issues such as fishing rights, use of water supplies, etc.)
5. The students can then complete the exercise.

#### Answers to Pupil's Book page 76

- A.
1. The British did not try to take this province during Ranjit Singh's lifetime.
  2. The British army leader who led the attack on Sindh
  3. A word for an army base
  4. The British built the Napier army base here.
  5. After taking Sindh the British were in charge of the \_\_\_\_\_ and the coasts of the subcontinent.
- B.
1. It had good fertile land and a large population.
  2. They thought that Ranjit Singh, who ruled land nearby, would use his powerful army to defend Sindh.

						S	I	N	D	H
			N	A	P	I	E	R		
B	A	R	R	A	C	K	S			
	K	A	R	A	C	H	I			
B	O	R	D	E	R	S				

## Answers to Skills Book page 36

A.

Battle	Year	Who were fighting?	What for?
Battle of Pollilur	1780	Hyder Ali/the Mysoreans and the British	The Kingdom of Mysore
Battle of Chittoor	1782	Hyder Ali/Tipu Sultan/the Mysoreans and the British	The Kingdom of Mysore
Battle of Seringapatam	1799	Tipu Sultan/the Mysoreans and the British	The Kingdom of Mysore

- B.
1. They were all fought for control of land.
  2. Answers will vary.

### Further activities

1. Link this with the students' previous work in geography lessons.
2. They could write about what they find out that might have attracted the British to Sindh, for example, crafts and skills, any long-established industries, the crops grown there etc.

## Lesson 7: How Britain changed the subcontinent

### Learning outcomes

Students should be able to:

- describe how the British changed the subcontinent
- identify any buildings or other structures built by the British in their neighbourhood, city, or other parts of the country

### Resources

- Pupil's Book pages 77–78

### Pupil's Book steps

1. Ask the class if they have seen anything that the British built in Pakistan (or in India, if they have been there). Perhaps the local railway and the station date from colonial times.
2. Tell them that they are going to find out about the changes the British made in the land that is now Pakistan, that we can still see today. Ask them to look at the pictures and read their captions on page 77. Ask:
  - What can you find out from these pictures about how the British changed Karachi? (They built the railway station, the railway, the Empress Market, and the army barracks.)
3. Ask them to read the rest of the page and to find out how the Empress Market got its name (from their Queen, Victoria, named 'Empress of India').
  - Why did they build so many railways here? (to facilitate travel across the subcontinent at a time when travelling by road was slow and difficult—so that they could easily transport tea from the plantations to the ports)
4. Inform the students that many people claim that the British started the postal system in Pakistan but that this is not true! Sindh had a very old postal system that the Mughals started. When the British arrived, they changed it so that people sending letters paid for them by buying postage stamps.

5. Ask the class to read page 78 to find out about the postal system. Ask:
  - Why did the British introduce this new postal system? (so that they could send messages quickly)
  - Where did they want to send messages, to whom, and why? (They wanted to send messages from army leaders to the different barracks and army stations so that they knew what was happening in different places and could send out warnings or information quickly.)
6. Point out the old stamp from Sindh (called a 'Scinde Dawk'). If the students cannot make out the details in order to answer the questions, tell them that the letters 'EIC' stand for 'East India Company'. Ask:
  - Why do you think the stamp had 'East India Company' written on it? (The British East India Company ruled most of the subcontinent as if it were the British government. The company minted its own money and printed its own postage stamps.) Point out the words '½ anna' and ask:
  - What does this mean? (The stamp cost half an anna. So people paid that amount to send a letter. There were 16 annas in one rupee.) You could compare this with modern postage costs!
7. Read the exercise on page 78 with the class and review the earlier discussion of places in their neighbourhood, etc. that the British built. The students could complete the activity for homework, with help from their families.

#### Answers to Pupil's Book page 78

A. Answers will vary.

B. Answers will vary.

#### Further activities

1. Make a classroom display of buildings or other structures the students have found out about that the British built in Pakistan.
2. The students could include photographs, their drawings, and written reports to add to the display.
3. Students should attempt the CD activity.

#### Answers to Pupil's Book page 79

- A.
1. Britain, France, Portugal, Denmark, Sweden, and Holland (the Netherlands)
  2. They all have coasts.
  3. Mughal
  4. Maratha
  5. Tipu Sultan was the 'Tiger of Mysore' because he fought very very hard and his badge was a tiger.
  6. Land nearby was controlled by the powerful army of Ranjit Singh. The British knew he would help to defend Sindh.
  7. Ranjit Singh death made it easier for the British to take Sindh.
- B. The British East India Company became much bigger than the other European East India Companies. The European trading companies fought one another but the British Company usually won. It had a very well-trained army and very good weapons. There were many local rulers fighting for control rather than fighting against the British. Some of these (for example, the Marathas and the Nizam of Hyderabad) helped the British by providing armies.
- Answers will vary but should include Napier Barracks, Empress Market, Karachi Cantonment Station, the railway, and Frere Hall in Karachi.

# Unit 8 The War of Independence

## Background knowledge for the unit

This unit explores the War of Independence, especially:

- the dissatisfaction among Indian soldiers in the British East India Company and among civilians that arose partly from a lack of understanding, and sometimes high-handedness, of British officials and army leaders and partly from a growing feeling that we should have our own government, independent from Britain
- the fighting and bloodshed that arose and the consequences
- the end of the British East India Company
- the beginning of the British Raj, when the British government took over and ruled most of the subcontinent.

The East India Company's army consisted mainly of Indian soldiers known as sepoy. It could not manage without them. In 1857 a group of sepoy in Meerut turned against the army because of changes in their working conditions and pay. They were also unhappy about the cartridges they had to use in their guns because they were greased with animal fat, the source of which was debatable and could be offensive to some of the soldiers, i.e. Hindus and Muslims. They began a riot, breaking into the ammunition store, taking weapons and ammunition and setting imprisoned soldiers free. This led to riots breaking out at other military barracks and towns. Civilians who had other grievances (about taxes and inheritance law) began to join in. This took place mainly in the upper plains of the Ganges and in central India.

Marathas such as the Rani of Jhansi and Tatya Tope became celebrated heroes after leading armies against the British. Finally, in 1858, the East India Company was dissolved and the British government began to rule India as a crown colony.

Britain proclaimed Queen Victoria Empress of India in 1876. Benjamin Disraeli, the British prime minister from 1874 to 1881 called India 'the brightest jewel in the crown'. It was Britain's largest colonial territory and an important part of the British Empire.

A great deal of Britain's wealth in the 18<sup>th</sup> and 19<sup>th</sup> centuries came from India, from taxes, mineral ores, textiles, silk, indigo, gold, cotton, and spices (especially pepper, which was so valuable that it became known as 'black gold'). India was also a huge market for British goods. It provided cheap and skilful labour in the British armies and civil services.

The expression 'jewel in the crown' had a double meaning: the Koh-i-Noor diamond became part of the Imperial State Crown of Queen Victoria. The diamond was one of the 'spoils of war' for hundreds of years. Its early history is not known for certain but the Mughal Emperors Babur and Humayun mention it in their memoirs. Later, Shah Jahan had it set among the jewels of his Peacock throne, which has since been lost. But the diamond survived and was later owned by the Durrani of Afghanistan. During later conflicts it came into the hands of Ranjit Singh and remained with the rulers of the Sikh Empire in Punjab until the British East India Company took it from Duleep Singh, the last ruler there.

## Expected learning outcomes for the unit

When they have completed this unit in the Pupil's Book and Skills Book most students should be able to:

- identify and describe the events leading to the War of Independence
- establish how the Rani of Jhansi and Tatya Tope became involved in the war
- determine how Britain came to rule the subcontinent

They will learn how to:

- use sources such as maps, paintings, photographs, and objects to find out about people and events in the past
- ask questions and draw conclusions about people and events in the past

They will begin to understand:

- how conflicts arise between people
- some ways in which conflicts could be avoided

## Lesson 1: From traders to rulers

### Learning outcomes

Students should be able to:

- interpret how the British used new technologies to communicate over the great distances between different parts of the subcontinent
- identify and describe some causes of dissatisfaction and resentment and their effects
- identify some of the lasting changes made by the British in the subcontinent

### Resources

- Pupil's Book pages 80–81
- Skills Book page 37 The subcontinent from 1837–57

### Pupil's Book steps

1. Tell the class that they are going to learn about how the rule of the British East India Company affected the lives of people in the subcontinent and the lasting changes they made. Review the information about the East India Companies that came here in the 1600s, then ask:
  - Why did the British East India Company come to the subcontinent in the 17<sup>th</sup> century? (to trade)
  - How did it end up ruling parts of the subcontinent? (It used its armies to capture land.)
2. Ask them to read page 80 and the first two paragraphs of page 81. They should look at the pictures and the captions too. Ask:
  - What changes did the British East India Company make in the subcontinent? (They built railways, new roads, canals, and ports.)
  - What did they use these for? (transporting goods and soldiers)
  - What new technology did they use to communicate with people far away? (the electric telegraph which they will learn more about in Unit 10)
  - How did they pay for all this? (through taxes which they kept increasing) Explain that there was an old law in Britain that if a man died without a son the government took his land, home, and all other wealth he had. No one else was allowed to inherit.
  - How do you think people here felt about this law and the taxes? (Many people were upset and angry about it.)
3. Discuss what could be done about this. Ask:
  - What could they do?
  - What would happen if they tried?
  - What else disturbed some people here? (They thought that the British priests who set up schools and churches here wanted to convert them to Christianity.)

4. Ask the students to read 'It's a Fact' on page 81. Ask:
  - What do you think about this? Explain your answer.
5. The students can then complete the exercise.

### Skills Book steps

1. Discuss the first map on this page and what it shows. (the groups of people who ruled the subcontinent in 1837) Explain that on this map the people from the subcontinent have been grouped by religion because there were several princely families and dynasties but the regions where they ruled were mainly Muslim or mainly Hindu. Ask:
  - What differences do you see between 1837 and 1857? (The British ruled more of the subcontinent in the north and around the coasts. The mainly Muslim or mainly Hindu areas did not change, except where the British took over.)
2. Explain the instructions for section A with the class and ask them to look carefully at the shaded areas of each map and the changes.
3. They could discuss section B with a partner before completing it.

#### Answers to Pupil's Book page 81

- A.
1. They built railways, ports, canals, and new roads and they also introduced the electric telegraph.
  2. Answers will vary but could include how these changes affected transport and communication.
  3. From taxes paid by the people of the subcontinent
- B. Answers will vary but should include some descriptions of, and reasons for, dissatisfaction.

#### Answers to Skills Book page 37

- A. The British ruled more of the subcontinent. Hindu and Muslim areas did not change except where the British took over.
- B. The British ruled much more of the north. They completely took over a Muslim area in the north-east. They took over a little more of the south and began to spread around the coasts.

### Further activities

Use a map of the subcontinent to help the students to find out exactly which groups of people ruled different parts of the land that is now Pakistan and India and which parts the British ruled.

## Lesson 2: Trouble in the British army

### Learning outcomes

Students should be able to:

- describe the situation in the subcontinent just before the War of Independence
- identify the causes of unrest
- ask questions and find answers through reading and from pictures of people, objects, and events from the past

## Resources

- Pupil's Book pages 81–82
- Skills Book pages 38–39 The causes of the War I

## Pupil's Book steps

1. Tell the class that they are going to find out about Indian soldiers in the British army in the subcontinent and also why some of them turned against their leaders. Ask:
  - Why do you think Indian soldiers joined the British army that was ruling their homeland?  
Explain that they were paid well and some were better off in many ways than they would have been as civilians. The army allowed for their religious customs that differed from their own.
2. Ask the students to read 'Trouble in the British army' from page 81. Ask:
  - What made the Indian soldiers unhappy? (The army changed their work and pay and they were worried about what might happen next.) The students should also look at the picture and read the caption then discuss the Punjabi officers' uniforms and weapons.
3. Ask the class to read the first paragraph on page 82 to discover what else made the soldiers unhappy. Ask:
  - What else upset some of the Indian soldiers? (The army's new guns used cartridges greased with animal fat.)
  - What is a cartridge? (A small, rounded box in the shape of a cylinder, to hold gunpowder. These cartridges were made of paper so the grease protected them from moisture and made them slide into the gun easily.)
  - Why was the grease a problem? (It might have been pig fat; if so, Muslim soldiers would not touch it. It might have been from cows; if so, Hindu soldiers would not touch it.)
  - 'These cartridges seem to have been a serious mistake by the army'—how do you think they made such a mistake? (The army leaders who brought in the new guns might not have been aware of the different religious beliefs of the soldiers. It proved to be a serious mistake because they needed these soldiers.)
  - What happened to the soldiers who disobeyed the order to use the new guns? (They were punished because in any army soldiers have to obey orders. British officers in Delhi made these 85 soldiers stand in front of the others while they took their uniforms and shoes. Then they imprisoned them.)
4. Read the exercise on page 82 with the class and explain any parts they do not understand. Tell them that they can find the answers on pages 81–82.
5. The students can then complete the exercise.

## Skills Book steps

1. Tell the students that they will find out about the unhappiness different people felt as a result of what was happening in their country.
2. Read the instructions on page 38, then let the students read the information in the boxes given on pages 38 and 39, to decide which people would be affected.
3. They can then complete the exercise, using pages 80–82 of the Pupil's Book to help them. They should explain their answers.



### Answers to Pupil's Book page 82

- A. 1. Without them its army would not have been strong enough because they could not get enough British soldiers to the subcontinent.  
2. They were paid well and had good living conditions, which was provided with the taxes paid by the people of the subcontinent.  
3. Answers will vary. Some would have been happy because they had good jobs and earned good wages, e.g. soldiers, workers on the roads, canals, and ports. Others would not have been happy because of the high taxes and the inheritance laws.
- B. Answers will vary.

### Answers to Skills Book page 38

- A. People living in the subcontinent had to pay tax to the British. The British increased the tax.

People affected: all

The British made a law that when a man died without a son to take over they could take his land.

People affected: a prince and his family, rich people, a small farmer

The British army got new guns. They had paper cartridges that were greased with animal fat.

People affected: Indian soldiers (Muslims and Hindus)

British priests came to the subcontinent and started churches. Some of them tried to make people become Christians.

People affected: Answers will vary

### Answers to Skills Book page 39

The British captured Sindh at the Battle of Miani in 1843. They joined it with Bengal to make a province.

People affected: a prince and his family, and varied answers.

The British army stopped allowing holidays at Hindu festivals.

People affected: high caste Hindu soldiers, ordinary people, rich people

High caste Hindu soldiers in the British army had to travel overseas. They thought that this was an insult to their caste.

People affected: high caste Hindu soldiers

The British built new roads and railways. These made trade easier. Goods came here from far away. Many of these were cheaper than local goods. Large traders used roads and railways instead of boats.

People affected: Answers will vary.

### Further activities

1. Find out about other attacks by Indian soldiers on the barracks and officers of the British army, and the fighting that broke out in towns, from books and other sources such as the Internet.

2. The students could draw a map of the subcontinent and mark the places where most of the unrest took place.

### Lesson 3: Resistance

#### Learning outcomes

Students should be able to:

- describe the attack on the British garrison at Meerut that started the War of Independence
- establish and explain how unrest can develop into a riot
- identify the causes of war
- ask questions, the answers of which could be found through reading and from photographs of the past

#### Resources

- Pupil's Book pages 82–83
- Skills Book page 40 The causes of the War 2

#### Pupil's Book steps

1. Tell the students that they will read about what happened after the 85 'disobedient' soldiers were punished. Ask:
  - How do you think other soldiers felt about this? (Some might have agreed that they should be punished because they disobeyed their officers. Others might think that the officers' orders were unreasonable.)
2. Explain any words on page 82 that the students might not be familiar with e.g. civilian: an ordinary citizen—not a member of the armed forces or police. Then let them read the paragraph on page 82 titled 'Resistance'. Ask:
  - What did the other soldiers do? (Some of them broke into the prison to free the 85 soldiers—and other prisoners. There was fighting in the town. Civilians were wounded and killed.)

Discuss how any fight can spread, involving many people who might not even know what it is about. Also discuss how the attack might have made people who felt resentful feel that this was their chance to express their resentment. Point out that in any civil unrest innocent people can get hurt or killed.
3. Let the students read the first two paragraphs on page 83 to find out how soldiers at other garrisons reacted. Then ask:
  - Did all the soldiers join in the attack on the fort at Delhi? (No)
  - Do you think many who did not join in supported it? (Yes)
  - How can you tell? (They did not try to stop it.)
  - When the Indian soldiers captured Delhi, who did they want as the ruler of India? (The last Mughal Emperor, Bahadur Shah Zafar)
  - Why did they choose him? (Perhaps because he was the last Mughal Emperor and they thought he had a claim to be ruler—also he happened to live in Delhi.)
  - Did he welcome this? (No)
  - What were the British soldiers doing during the fighting? (The students could read 'It's a Fact' on page 83 to find out.)

- What made the British army in Delhi weak? (They were not ready for an attack because they did not believe it could happen. There were not enough soldiers to defend the fort at Delhi.)
4. Read the exercise with the class and explain any parts they do not understand. Tell the students that they can find the answers on pages 82–83.
  5. The students can then complete the exercise.

### Skills Book steps

1. Discuss all the events that led to the war.
2. Read out the instructions on page 40.
3. Let the students read the information in the boxes on pages 38–39 of the Skills Book as well as pages 80–83 of the Pupil’s Book again.
4. They should also read the information box on this page.
5. They should then discuss statements 1–5 with a friend and decide which are true/false, giving reasons for their answers.
6. They can then complete question 6, explaining their answer.

#### Answers to Pupil’s Book page 83

- A.
1. False. They were not ready nor did they have enough soldiers there.
  2. False. The British soldiers blew them up.
  3. False. Some joined in the attack; others just watched and did not try to stop it.
  4. False. He did not do anything nor did he want to be Emperor of all India.
- B. Answers will vary.

#### Answers to Skills Book page 40

- A.
1. False. There were many causes. The problem with the gun cartridges included religious beliefs and misunderstandings but the War was not about religion.
  2. False. It was one of the factors that started the War but was not the only cause.
  3. False. It was for land.
  4. False. It was one of the factors of the War but was not the only cause.
  5. False. It was one of the factors that contributed to the start of the War but was not the only cause. Inheritance of land was one of the main grievances people here had.
  6. True. Some people were upset about taxes. Others were concerned about inheritance of property. Soldiers were upset about changes to their pay and working conditions and also about the new gun. Some soldiers thought the 85 of them who were punished had been treated unfairly.

### Further activities

1. A class debate about whether the war could have been prevented and, if so, how, may be held.
2. Hold a discussion about conflict and how it can be avoided, for example, through people understanding and respecting one another’s beliefs, worries, and feelings, etc.

## Lesson 4: Fighting for independence

### Learning outcomes

Students should be able to:

- establish and relate how the unrest in the subcontinent developed into a war for independence from British rule
- identify and describe the roles of the two Marathas, Tatya Tope, and the Rani of Jhansi, in the fight for independence

### Resources

- Pupil's Book pages 84–85

### Pupil's Book steps

1. Tell the class that they will now read about two civilians who led people into battle against the British army namely Tatya Tope and the Rani of Jhansi. Both were Marathas. Ask:
  - What do you know about the Marathas? (They captured most of the Mughal Empire and helped the British to fight against Tipu Sultan.)
2. The students should read page 84 to find out why these two Marathas fought the British. It will be useful to first explain any words on page 84 that the students might be unfamiliar with e.g. executed: killed by people in charge, for committing a crime or for doing something they disagree with; independence: a country has independence when it rules itself and is not ruled by another country; mutiny: when soldiers or other armed forces refuse to obey their leaders; regiment: a group of soldiers under the same commander who live and work together.
3. They should now look at the two pictures at the top of page 85 and read their captions to find out more about the Rani of Jhansi and the fort at Jhansi. Ask:
  - What was one reason why the Rani of Jhansi fought the British? (When her husband the King of Jhansi died, he had no son; so the British took his land.)
  - What happened to her? (She died fighting at Gwalior.)
  - What made Tatya Tope fight them? (He was fighting for independence.)
  - What happened to him? (The British put him on trial in court. He said that he obeyed the Maratha leader and not the British. They executed him.)
  - Did most of the Indian soldiers fight the British? (Most did not fight them and stayed loyal to the British.)
  - Why do you think Indian soldiers fought against their own people? (There could be several reasons loyalty being an important one.)
4. Go over the exercise with the class and explain anything they do not understand. Tell the students that they can find the answers on page 84. The children can then complete the exercise.

### Answers to Pupil's Book page 84

1. A large group of soldiers who work together under a commander
2. Killed as a punishment
3. The king \_\_\_\_ had no son when he died
4. The place where the Rani died fighting
5. The Rani of J\_\_\_\_ died fighting the British.
6. T\_\_\_\_ Tope was a Maratha who fought the British.

R	E	G	I	M	E	N	T
E	X	E	C	U	T	E	D
M	A	R	A	T	H	A	
G	W	A	L	I	O	R	
	J	H	A	N	S	I	
	T	A	T	Y	A		

### Further activities

1. Research the Tatya Tope family.
2. Collect information about the Rani of Jhansi.
3. Draw their family trees.

## Lesson 5: British rule and a British queen as Empress

### Learning outcomes

Students should be able to:

- explain how the British government disbanded the East India Company and took over the rule of the subcontinent
- determine how the subcontinent was governed in the 19<sup>th</sup> century

### Resources

- Pupil's Book pages 85–86
- Skills Book page 41 People of fame; page 42 Values

### Pupil's Book steps

1. Let the students know that they are going to find out how the subcontinent, known as 'India' until 1947, came to have a British queen as its Empress.
2. Let them read the section titled 'British rule and a British queen as Empress'. Ask:
  - When did the British Raj begin? (1858)
  - Can you name four countries of today which once belonged to the Indian subcontinent? (India, Pakistan, Burma, and Bangladesh).
3. Review the meaning of 'colony' with the class, (far-off land that a country captures and rules). Then ask:
  - How did most of the subcontinent become a British colony? (The British East India Company had ruled these places but after the War of Independence the British government took over.)Explain that Queen Victoria became known as Empress of India later, in 1876. By that time Britain had colonies in many parts of the world and there was a British Empire.
4. Ask the students to read the first paragraph of page 86 and 'It's a Fact'. They should also look at the photograph and the information about the statue. Ask:
  - What did the British call India and why? ('The Jewel in the Crown', because it was extremely important to them. This also refers to the Koh-i-Noor diamond in the queen's crown. (See **Background knowledge** of this unit.)
  - Was Queen Victoria interested in learning about the subcontinent? (Yes)

- How can you tell? (Even though the Queen never came to the subcontinent, she had two Indian Muslims working in her palace and she asked one of them to teach her Urdu.)
- Where was the statue in the picture during the British Raj? (in front of the Frere Hall in Karachi)
- Where is it now? (in a museum)
- Why was the statue moved? (Britain no longer rules our country. Point out the damage to the statue.)
- Is the statue in good condition?
- What do you think happened to it? (It is a very large statue which was placed on a very high pedestal in the gardens that were called 'The Queen's Garden' and 'The King's Garden'. These gardens were renamed Bagh-e-Jinnah after independence.)

### Skills Book steps (Page 41 People of fame)

1. Read the introduction to the activity with the class and ask different students to say what they know about the first person shown on the page, Bahadur Shah Zafar. If they have forgotten they could refer to page 83 of the Pupil's Book.
2. Repeat this for the other personalities on this page.
3. Ask the students to write the information that completes the 'passports'.

### Skills Book steps (Page 42 Values)

1. Tell the class that they are going to discuss the views of different people regarding the War of Independence and that this will help them to understand how conflicts can be caused.
2. Read the introduction to page 42 and section A, including the statements to the maps of Britain and India.
3. Divide the class into groups of four and ask them to discuss why the British called the War of Independence 'The Indian Rebellion'. Allow about five minutes and then invite feedback, listing their ideas on the board. Tell the class that some of the British officials took the trouble to get to know the cultures and beliefs of the people here but others did not: they thought they could simply use their authority. Where taxes and inheritance laws were concerned, these probably seemed fair to the British officials as they were the same in Britain but to the people of the subcontinent they were unfair.

Remind the students of their previous learning about the causes of the War: there was more than one reason that led to it but it drew together many people who wanted independence and later influenced others, who worked hard to achieve it.

### Answers to Pupil's Book page 86

- A.
1. Queen Victoria, the Queen of Britain; the British government took over the rule of the subcontinent.
  2. Urdu
  3. The British
  4. Britain no longer rules us.
- B.
1. Answers will vary but should refer to natural resources, cheap labour, and trade; also that India was a large part of the British Empire and the source of much of Britain's wealth in the 18<sup>th</sup> and 19<sup>th</sup> centuries.
  2. Answers will vary but should include railways, canals, ports, postal system, public buildings, trade, and education.

### Answers to Skills Book page 41

<p><b>Name</b> Bahadur Shah Zafar Who he was <u>The last Mughal Emperor</u> What he did <u>Became Emperor of all India during the War of Independence</u> Why he did this <u>He didn't want to but felt that he couldn't refuse when people asked him.</u></p>	<p><b>Name</b> Tatya Tope Who he was <u>A Maratha leader and army general</u> What he did <u>Led troops against the British during the War of Independence</u> Why he did this <u>He wanted the subcontinent to be free from British rule. He felt that the inheritance laws were unfair.</u></p>
<p><b>Name</b> The Rani of Jhansi Who she was <u>The widow of the Maharaja of Jhansi</u> What she did <u>Led troops against the British during the War of Independence</u> Why she did this <u>She wanted the subcontinent to be free from British rule. She felt that the inheritance laws were unfair.</u></p>	<p><b>Name</b> Queen Victoria Who she was <u>Queen of Britain</u> What she did <u>Became the ruler of the subcontinent after the War of Independence and was later named Empress of India.</u> Why she did this <u>The British government took over rule of the subcontinent in 1858.</u></p>

### Answers to Skills Book page 42

Answers will vary.

### Further activities

1. Ask the students to imagine that they are either the Rani of Jhansi or Tatya Tope and to prepare a speech to give to the soldiers and civilians they hope will support them in the War of Independence.
2. Students should attempt the CD activity.

### Answers to Pupil's Book page 87

- A.
1. The British army had mainly **Indian** soldiers.
  2. The Indian soldiers at Meerut broke into the prison to **set other soldiers free**.
  3. The Indian soldiers who fought the British were **mainly from Bengal**.
- B.
1. Two civilians who fought with the soldiers were **Tatya Tope** and **the Rani of Jhansi**.
  2. The subcontinent became a **colony** of the British Empire.
  3. **Queen Victoria** became Empress of India.
- C. Answers will vary. Some students might think she did not want to know about it because she never came here. Others might think the opposite because she asked two Indian Muslims to work in her palace and learned Urdu from them.

# Unit 9 The struggle for independence

## Background knowledge for the unit

This unit explores the movement towards home rule for the subcontinent that followed the War of Independence:

- the political groups that were formed: the Indian National Congress and All India Muslim League
- leaders: Syed Ahmed Khan, Mohammad Ali Jinnah, Mohandas Gandhi, Jawaharlal Nehru
- significant events: the Lucknow meeting in 1916, the Amritsar massacre, the Round Table Conferences in London
- independence: the partitioning of the subcontinent and the creation of Pakistan in 1947

The events leading to independence are well documented in the speeches made by Jinnah, Gandhi, Nehru, and others, in newspaper reports and various documents on the Internet. However, as with all such material, reports might have some bias, reflecting the views of the writer.

The story of independence is complicated; so to simplify it for the students' comprehension of the key points, this unit focuses on important people, the main political groups, and some key events. It provides opportunities for students to consider and discuss the clashes between different individuals and groups and to begin to understand their points of view.

The achievements of Syed Ahmed Khan should be highlighted and students told that he was given the title of 'Sir' by the British because of his contributions in the educational sector. His contributions towards bridging the gap between the Muslims and their British rulers were also recognized. He is fondly known as Sir Syed.

## Expected learning outcomes for the unit

When they have completed this unit in the Pupil's Book and Skills Book most students should be able to:

- describe the political developments that followed the War of Independence
- explain how the Muslim League and Indian National Congress were founded
- describe the key leaders in the movement for independence: Jinnah, Gandhi, and Nehru

They will learn how to:

- find out about the past through reading, from photographs from the time, and from historical sites
- ask questions and draw conclusions about people and events in the past

They will begin to understand:

- how political parties are formed and develop and how they can influence events
- how conflict can be resolved through discussion

## Lesson 1: New political groups

### Learning outcomes

Students should be able to:

- establish how the Indian National Congress and All India Muslim League began—and their aims
- consider the opinion of a leader on achievement of home rule
- discuss the beginnings of the idea of partition of the subcontinent



## Resources

- Pupil's Book pages 88–89

## Pupil's Book steps

1. Tell the students that they are going to find out about the people and the new political groups that began to work towards independence of the lands in the subcontinent that Britain ruled, i.e. most of India and the land that is now Pakistan, Bangladesh, and Burma.
2. When the students have read the first two paragraphs of page 88 ask the following questions:
  - What good did the War of Independence cause to happen? (The British government realized that they must let the people of the subcontinent take an active part in the governance of their own land.)
  - What was the first new political party in India? (Indian National Congress)
  - Which new political party did Muslims form? (All India Muslim League)
  - Why was it necessary for Muslims to form a separate political party? (They were outnumbered by Hindus and did not feel that the Congress represented the Muslim cause fairly.)
3. Ask them to read the third paragraph of page 88 and 'It's a Fact'. Then, ask the following questions:
  - How did Syed Ahmed Khan think Britain could help the Muslims? (Britain could help Muslims to have their voice heard, because they had little power alone.)
  - What good did Syed Ahmed Khan say could come from the west, in particular, Britain? (good education)
  - Why do you think Syed Ahmed Khan thought this? (Encourage the students to express their ideas and say whether they think he was right and why.)
4. The students can then complete the exercise on page 89.

### Answers to Pupil's Book page 89

- A.
1. True
  2. True
  3. False. Muslims could join the Indian National Congress but they were outnumbered many times over by Hindus, and so wanted their own political party to be sure of proper representation.
  4. True
- B. Answers will vary but should include the fact that Syed Ahmed Khan thought that education was important and advised people to learn all they could in order to succeed.

## Further activities

1. Find out more about Syed Ahmed Khan from books and the Internet.
2. Make a list of, and collect information about, the schools, universities, and colleges Syed Ahmed Khan supported.

## Lesson 2: Mohammad Ali Jinnah

### Learning outcomes

Students should be able to:

- define and describe Muhammad Ali Jinnah's efforts for home rule
- identify the agenda of an important meeting in the movement for home rule
- establish and identify fair means of elections

### Resources

- Pupil's Book pages 89–90
- Skills Book page 47 Values

### Pupil's Book steps

1. Begin by asking the class this question:
  - Why do we have a national holiday on 25<sup>th</sup> December. (To commemorate the birthday of Quaid-i-Azam, Mohammad Ali Jinnah.)Tell them that they are going to learn how Jinnah became involved in the movement for home rule and about an important meeting of the Indian National Congress, of which he was a member.
2. Ask the students to read page 89 and then ask the following questions:
  - Where did Jinnah train as a lawyer? (London)
  - How do you think this helped him in discussions with the British government? (He understood the British legal and political systems and was well-educated and able to speak persuasively as a result of this training.)
  - Did he want the subcontinent to be partitioned or kept as one nation? (one nation)
  - Why do you think he wanted this? (The students give their own ideas. Perhaps he thought that Muslims would have a stronger position in a united country.)
3. Ask the students to read 'It's a Fact' and the next four lines on page 90. Then ask:
  - Which two political groups met at Lucknow in 1916? (the Indian National Congress and the Muslim League)
  - Did the two groups agree on what they wanted from Britain? (Yes)
  - There were many more Hindus than Muslims, so how did they agree to make Muslims' votes count in the elections? (The Muslims could have separate elections for the people they wanted in government.)
4. The students can then complete the exercise in their notebooks.

### Skills Book steps

1. Tell the class that the exercise in the Skills Book will help them to understand fairness during elections and how difficult it can be to conduct 'fair' elections.
2. Together, read the introduction. Before reading about the choices for the main courses, ask if the election will be fair if everyone in the class votes for their 'favourite' meal. If they answer in the negative or there is a mixture of yes/no answers invite some students to explain. Then ask them to look at the pictures and read the captions. Then ask:
  - Is it fair to the five vegetarians? (Ask the students to explain their answers.)
3. They should then read what the vegetarians said, and think about the suggestion that there be a separate vote for a vegetarian main course. They should also read what the non-vegetarians said. Ask:

- Why do the non-vegetarians think it is not fair to give the vegetarians a separate vote? (The non-vegetarians who liked chicken might have wanted to make sure there was a chicken course, or some of them might dislike lentils or be allergic to a food, and so on, but they will not have a separate vote for chicken meals or meals without lentils, etc.)
4. Divide the class into groups of four to discuss the final question:
    - What do you think is fair?
 They can then report back to the class and listen to one another's explanations.
  5. This could be linked to the request of the Muslim League for a separate vote and discuss why it might seem fair to some people but not to others.

### Answers to Pupil's Book page 90

1. He hoped that both groups could work together to make India one country.
  2. He wanted it to have home rule and be free from British rule.
  3. They were in a minority. There were many more Hindus, so they were worried that they might not have enough say in the government.
  4. It was agreed that Muslims should have separate elections.
- B. Answers will vary but should include the point that people saw him as a leader and he was chosen as the President of the Muslim League.

### Answers to Skills Book page 47

Answers will vary but should take into account all the points mentioned in the steps to this page of the Skills Book.

### Further activities

1. Set the class a homework task to read about the life of Jinnah and to make a note of something interesting to report to the class.
2. Choose different students to present their 'interesting fact' to the class. The rest of the students listen and a comparison of ideas and comments could follow.

## Lesson 3: Mohandas Gandhi

### Learning outcomes

Students should be able to:

- determine how Gandhi approached home rule for India
- identify and interpret an important meeting in the movement for home rule
- explain how leaders appeal to different people

### Resources

- Pupil's Book pages 90–91
- Skills Book page 43 Leaders of the subcontinent

### Pupil's Book steps

1. Tell the class that they are going to learn about other leaders of the subcontinent who helped in gaining independence from British rule.
2. Together, read the section titled 'Mohandas Gandhi' from pages 90 and 91. Then ask the following questions:

- How was Gandhi's education similar to Jinnah's? (He too trained as a lawyer in London.)
  - Which people did Gandhi seem to be most interested in helping? (poor workers)
  - What kind of lives did he believe people should lead? (simple lives without riches such as expensive clothes or jewels)
  - What did he think was the best way to get home rule? (through peaceful protest)
  - Who else besides Jinnah and Gandhi was also a lawyer trained in London? (Nehru)
- Tell the students that Nehru and Gandhi worked as colleagues in the Indian National Congress and that Nehru campaigned for better conditions for workers of the British colonies. He spoke out against the Indian civil service as being too British.

3. Read and discuss 'It's a Fact' on page 91 and ask:

- What do you learn about Gandhi and Nehru from the names people gave them? (Answers will vary. But note that 'Mahatma' (Great Soul) suggests that people thought highly of Gandhi's spiritual side. Also note that *Pandit* (scholar) suggests that they thought highly of Nehru's learning and wisdom.)

4. The students can then complete the exercise on page 91.

### Skills Book steps

1. Tell the class that the exercise in the Skills Book will help them to remember important facts about some of the leaders in the movement for independence. Point out that they will be able to answer some of the questions about the leaders from what they have learned from the Pupil's Book and will learn more in other lessons. They will not be able to complete the entire page yet.
2. Read the introduction to section A and the names of the personalities with the class. Ask:
  - Can you name the personalities you have read about in the Pupil's Book? (Syed Ahmed Khan, Mohammad Ali Jinnah, Mohandas Gandhi, and Jawaharlal Nehru)
3. Tell them to match the information in the boxes to the personality it fits. They will learn more about these leaders, including Chaudhry Rehmat Ali, in the lessons to follow and can then complete the page after these are concluded.
4. The students could complete section B based on the leaders they have read about, or you could leave this until they have completed lessons 6 and 7.

#### Answers to Pupil's Book page 91

- A.
1. Gandhi also trained as a lawyer in London, joined the Indian National Congress, and wanted home rule for the subcontinent.
  2. Jinnah was a member of the Muslim League, Gandhi was not.
  3. The poor people and workers were on Gandhi's side because he tried to improve their working conditions. Poor people had no riches and might have liked the way he lived a simple life like theirs.
  4. Answers will vary. Example: Gandhi was more interested in the spiritual side of life while Nehru was more of a scholar.
- B. They all benefitted from education in Britain.

#### Answers to Skills Book page 43

Syed Ahmed Khan started the All India Muslim League.  
He built the Aligarh Muslim University in Uttar Pradesh.

Mohandas Gandhi led poor workers in peaceful protest for better pay and working conditions.  
He was also known as Mahatma (meaning Great Soul).

Mohammad Ali Jinnah joined both the Muslim League and the Indian National Congress because he thought Hindus and Muslims should work together for independence. He was the first Governor General of Pakistan.

Jawaharlal Nehru was the first Prime Minister of India.  
Chaudhry Rehmat Ali proposed the name 'Pakistan'.

### Further activities

1. Set the class a homework task to find out what was happening in the rest of the world at the time when the independence movement was taking place, particularly in Europe.
2. The students could be divided into groups and asked to collect pictures and make charts to show the events of the subcontinent and parts of Europe during the 'struggle for independence'.

## Lesson 4: The Amritsar Massacre

### Learning outcomes

Students should be able to:

- identify and describe early protest meetings against British rule and the massacre at Amritsar in 1919
- establish what makes people treat their fellow humans with brutality

### Resources

- Pupil's Book pages 91–92
- Skills Book page 45 People, places, and events
- A map of Pakistan and India

### Pupil's Book steps

1. Tell the class that they are going to learn how leaders of the subcontinent organized protests against British rule and also about the massacre of many protesters at the hands of a British army official. As they are going to read about a very distressing incident, it is best to prepare them for this. You might prefer to look at the picture of the Amritsar Monument and bullet holes before reading about what happened. (See point 4.)
2. Ask the students if they know where Amritsar is. Help them to find it on a map of India and Pakistan. Ask:
  - Can anyone tell the class anything about Amritsar? Write the students' answers on the board. Note that it is in the north-west of India very close to the border with Pakistan and only 32 km (20 miles) from Lahore. It houses the headquarters of the Sikh religion and the famous Golden Temple. Another famous monument is Jallianwala Bagh. Tell the class that they are going to read about a very distressing event at Jallianwala Bagh.
3. Together read the first two paragraphs on page 91. Then ask:
  - What were the protest meetings about? (British rule of the subcontinent)
  - Did the protest meetings change this? (No. The British governor of Punjab banned protest meetings.)

- Why do you think he did this? (Since part of his job was to keep law and order in Punjab, he might have thought that there would be riots that he could not control.)
  - Why do you think the British general sent soldiers to shoot the protesters, who were not rioting but attending a peaceful protest meeting? (British officials knew that there was unrest in the subcontinent. Army officials were suspicious about any protest meetings or large gatherings of people. Historians have written that the army general giving the command to shoot believed that this would put a stop to any riots.)
  - What do you think people here wanted to do after that? (Discuss the students' responses. They will naturally be very shocked and upset to read about it, even if they have heard about it before. Tell them that many British people at the time were also shocked. The British politicians Churchill and Asquith spoke out against the massacre. Churchill said it was 'monstrous' and Asquith said it was 'one of the worst outrages in the whole of our history.')
4. Look at the pictures and read the captions about Jallianwala Bagh with the class. Ask:
- Why do you think the bullet holes have been left and not repaired? (They are a reminder of the people who died there.)
  - What other reminder is there of the people who died at Amritsar? (the Amritsar Monument)
  - What do you think happened afterwards? (Two days later there were protests. The British armed forces and police responded with air attacks and shooting. Twelve people died and twenty-seven were injured. There was an inquiry about the massacre in Britain. Representatives from India were invited. The inquiry concluded that:
    - i) People should have been asked to leave the meeting. The length of the gunfire was a grave error.
    - ii) The general should not have used the attack to try to scare people into obedience. He had overstepped the bounds of his authority.
    - iii) It noted that there had not been any conspiracy to overthrow British rule in the Punjab.
    - iv) The minority report of the Indian members added that: Notices banning public meetings were not distributed properly.
    - v) There were innocent people in the crowd and there had not been any violence there.
    - vi) The general should have told his troops to help the wounded or asked the civil authorities to do so.
    - vii) They called his actions 'inhuman and un-British' and said that they had greatly harmed the image of British rule in India.

The general who ordered the attack had to leave the army. He could not be prosecuted because his army leaders had supported his actions. However, the medal he was going to be awarded for military service was not presented to him. Twenty-one years later a Sikh independence activist who was present at the massacre shot and killed the general in London.)
5. Ask the students to read the first two paragraphs on page 92 and 'It's a Fact'. Ask:
- Why did only a few people turn up to see the British Prince? (They were no longer pleased to see royal visitors from Britain.)
  - Why were they silent? (They were silent because of what had happened at Amritsar.)
- In 1997 Queen Elizabeth II went to Amritsar and paid her respects by standing in silence. She made a speech saying that history cannot be undone but should serve as a lesson to avoid such sadness in future.
6. The students can now complete the exercise.



## Pupil's Book steps

1. Tell the class that they are going to learn how the leaders of the subcontinent worked towards gaining home rule.
2. Ask them to imagine that they lived during the time of British rule when many people had decided that they wanted home rule. Ask:
  - What would you have wanted the leaders to do? (Discuss each answer by asking: What do you think would have happened if you did that?) Tell the students that the British held meetings to discuss how the subcontinent should be governed.
  - Who do you think should have been at those meetings?
3. Read pages 92 and 93 together then ask the following questions:
  - Who went to the first meetings? (the British)
  - What did the Indian National Congress do? (They held their own meetings.)
  - What did they decide at their meetings? (India should have home rule without British influence. Separate elections for Muslims should end because separation by religion was wrong.)
  - What were the views of many Muslims about this? (They thought their wishes would not count because there were so many more Hindus.)
  - How did the meetings in Britain change? (Leaders from the subcontinent went too.)
  - What name was given to these meetings? (Round Table Conferences—remind the class that at that time 'India' meant the entire subcontinent.)
4. Ask the students to read 'It's a Fact', look at the pictures and read the speech bubbles. Ask:
  - In 1935 how did Britain begin to split up some parts of the land it ruled in the subcontinent? (It separated Burma and Aden from India. Then it separated Sindh from the Bombay Presidency and made Bihar and Orissa two separate provinces.) Help them to locate these places on a map of the subcontinent. Point out that Aden was a port on the coast of Yemen. The British had ruled Aden and the land around it as part of the Bombay Presidency but it remained a colony when they began to split up the subcontinent.
  - What plans did the British have for the subcontinent? (They wanted to split it into separate states with some government of their own but to stay in charge of money, taxes, the army, and the police.)
  - What did the Indian National Congress and Muslim League think of that? (They disagreed and wanted no British rule at all.)
5. Read the exercise with the class and discuss any questions the students do not understand.
6. They can then complete the exercise in their notebooks.

## Skills Book steps

1. Tell the students that they are going to complete a timeline of important events from 1885 to 1947. Read the introduction to this page with them and ask them to look at the first picture. Ask:
  - Who is this? (Syed Ahmed Khan)
  - What important thing did he do? (He established the Aligarh Muslim University and was a founding member of the All India Muslim League.)
  - When was the All India Muslim League founded? (They could re-read page 88 to check—1906.)



2. Let the students study the second picture. Ask:
  - What does this picture show? (the meeting of the Indian National Congress and the Muslim League in Luknow)
  - In which year was this held? (They can check by reading page 90 again—1916.)
3. Follow the previous procedure and ask:
  - What does this picture show? (the Amritsar Monument)
  - Where in Amritsar is it? (Jallianwala Bagh)
  - What is it for? (to commemorate the people who died in the massacre there)
  - In which year was the massacre? (They can check by reading page 91 again—1919.)
4. Continue as done previously and ask:
  - What does this picture show? (a Round Table Conference in London)
  - What was the conference for? (to discuss home rule for the subcontinent, with the British government)
  - In which year was this? (They can check by reading page 93 again—1928.)
5. After they look at the last picture, ask:
  - What does this picture show? (the national flag of Pakistan)
  - What event does it commemorate? (independence)
  - In which year was this? (They probably know—1947.)
6. The students can now write a sentence about each event and draw lines to join their sentences to the correct date on the timeline.

### Answers to Pupil's Book page 93

- A. 1. No. They said they would split the subcontinent into separate states with some of their own governance.
2. They said it was wrong to separate people by religion.
3. They were worried that their wishes would not count because they were outnumbered by Hindus.
4. They separated Burma and Aden from India, and Sindh from the Bombay Presidency. They made Bihar and Orissa separate provinces.
5. Money, taxes, the army, and the police

### Answers to Skills Book page 44

Syed Ahmed Khan helped found the All India Muslim League in 1906 because he thought the Indian National Congress favoured Hindus and the Muslims were a minority.

The Lucknow meeting of the Indian National Congress and the Muslim League was held in 1916 to decide what to ask from the British government.

In 1919 British troops shot at a crowd of people during a peaceful protest meeting at Jallianwala Bagh, Amritsar, which supported home rule. This monument commemorates those who died.

The Round Table Conferences were held in London from around 1928 to discuss home rule for the subcontinent. Leaders from the subcontinent went to the meetings.

The new nation of Pakistan was created on 14<sup>th</sup> August 1947. This is its flag.

### Further activities

1. The students could use books or the Internet to find out more about the meetings that took place concerning the government of the subcontinent: who organized them; where; who attended them; what happened after each one.
2. Ask them to collect pictures of these meetings, places, etc. and display them on the soft boards in the classroom.

## Lesson 6: A new nation

### Learning outcomes

Students should be able to:

- learn about the different views of people here regarding what should happen once the subcontinent got home rule
- consider different views about the partitioning of the subcontinent

### Resources

- Pupil's Book page 94

### Pupil's Book steps

1. Inform the students that they will learn about the discussions held by the leaders of the subcontinent as they worked towards home rule. Explain that they were not in complete agreement as to whether there should be one nation or two—with a separate nation for Muslims. Tell them that this was called the partition of India. Ask:
  - Why do you think some people wanted to split the subcontinent according to religion? (List the students' answers on the board.)
  - Why do you think some people were against this? (List their answers on the board.)
2. Read through the students' ideas and then tell them that they are going to find out what important people of that time said about it.
3. Together read page 94 and 'It's a Fact'. Ask:
  - Which people said that there should be one nation? (Mohandas Gandhi and the politician and poet Vinayak Damodar Savarkar)
  - Who said that the subcontinent should be partitioned? (Muhammad Ali Jinnah and the politician and poet Allama Iqbal)
  - What reasons did they give for partitioning? (to save Muslims from being overshadowed by the Hindus; also because Muslims have a different way of life and religious practices as compared to Hindus)
  - What reasons were given against partitioning? (Religion should not be the basis for a division. It should be one man one vote, whether Hindu or Muslim. Minority is no reason for privilege and majority is no reason for penalty.)
4. Read the exercise with the class and discuss any questions they do not understand.
5. They can then complete the exercise in their notebooks.

### Answers to Pupil's Book page 94

- A. 1. **Mohandas Gandhi** and **Vinayak Damodar Savarkar** said that India should be one nation.  
2. **Muhammad Ali Jinnah** and **Allama Iqbal** said that India should be split into two nations.
- B. 1. Two reasons from: We should not be divided by religion. It should be one man one vote, whether a Hindu or Muslim. Minority is no reason for privilege and majority is no reason for penalty.  
2. So that Muslims would not be overshadowed by Hindus. Because Muslims and Hindus have different ways of life and different religions.

### Further activities

1. Ask the class:
  - Which of the people shown on this page had changed his mind about partitioning? (Jinnah. See page 94.)
2. Divide them into groups of four and ask the students to discuss why they think Jinnah changed his mind. They could research this for homework using books and the Internet and by asking their families.

## Lesson 7: Independence for Pakistan

### Learning outcomes

Students should be able to:

- describe the pre-partition struggle and sacrifices
- identify and establish the process of the creation of Pakistan

### Resources

- Pupil's Book page 95
- Skills Book page 46 The Emergence of Pakistan and India
- A modern map of Pakistan and India
- If possible, a photograph of the Pakistan Monument in Islamabad

### Pupil's Book steps

1. Begin by asking the following questions:
  - Why do we have a national holiday on 14<sup>th</sup> August?
  - What do we celebrate on Independence Day?
  - Do you do anything special or use any special symbols on that day? (Individual students could tell the class what they do on this day.)
2. Show a photograph of the Pakistan Monument in Islamabad and ask:
  - Do you know what this is and where it is? Once the Monument and its location have been identified, ask:
    - What happens in Islamabad each year on Independence Day? (The national flag is raised on the Parliament House and the Presidency, and the National Anthem is sung.)
    - What other celebrations have you seen on television?
    - How do the people in your area celebrate Independence Day?

3. Tell the class that they are going to learn how our country was created on 14<sup>th</sup> August 1947. Ask:
  - How old is Pakistan? (They could calculate this in years and months or even years, months, and days.)
4. Different students could read sections of page 95 aloud to the class. Ask:
  - Which religious group, in addition to Muslims, asked for their own nation? (Sikhs)
  - Where? (Punjab)
  - What did the British want to do? (unite Muslims and Hindus)
  - What worried Jinnah? (The Indian National Congress might join with the British to stop the Muslim nation from being created.)
  - What did he plan for people across the subcontinent? (peaceful protest marches)
  - Were the marches peaceful? (No, there was violence in which people were injured or killed and buildings were damaged.)
  - When the subcontinent got home rule and was split into two nations, how did this affect many people? (Many Muslims in the 'new India' and Hindus and Sikhs in the 'new Pakistan' left their homes. Hundreds of thousands died or suffered hardship because of this and many died or were injured in the fighting that began.)
5. It is said that Chaudry Rehmat Ali invented the name Pakistan. P for Punjab; A for Afghania (near the north-west border of the subcontinent); K for Kashmir; S for Sindh; Tan from Balochistan. Also the name meant Pak (pure) Nation (stan).
6. Read the exercise with the class and discuss any questions they do not understand.
7. The students can then complete the exercise in their notebooks.

### Skills Book steps

1. Ask the class to look at the map of the subcontinent on page 46 of the Skills Book and compare it with a modern map.
  - How was Pakistan different when it was first created? (It included parts of the land now known as Bangladesh but these were separate from the land that is now Pakistan.)
  - How was India different from modern India? (Hyderabad was not included in India.)
  - What do the arrows show? (the directions in which people moved from their homes to other parts of the subcontinent after the partition)
2. Discuss the directions in which the people moved. (Many Hindus and Sikhs who lived in the new Pakistan left their homes to move to India. Many Muslims in India left their homes to move to the new Pakistan.)
3. The students can now fill in the gaps in the sentences, referring to page 95 of the Pupil's Book if necessary.

### Answers to Pupil's Book page 95

- A.
1. Pakistan became a nation in 1947.
  2. Jinnah was the first Governor General of Pakistan.
  3. Many Hindus and Sikhs from Pakistan moved to India and many Muslims from India came to Pakistan because of the religious majority.

### Answers to Skills Book page 46

1. When the subcontinent was partitioned, Pakistan had two parts: **West Pakistan** and **East Pakistan**.
2. Many Muslims left their homes in the new **India** to move to **Pakistan**.
3. Many Hindus and Sikhs left their homes in the new **Pakistan** to move to **India**.
4. The north-western border of West Pakistan separated it from **Afghanistan**.
5. The northern border of East Pakistan separated it from **Nepal, Bhutan, and China**.
6. East Pakistan was surrounded by **India** on almost every side.

### Further activities

1. Make a class scrapbook about Independence Day celebrations: photographs, reports, drawings and commemorative items that can be glued into the book, such as pictures of the national flag, commemorative stamps, etc.
2. Students should attempt the CD activity.

### Answers to Pupil's Book page 96

- A. Answers will vary: for example, Muhammad Ali Jinnah, the founder of Pakistan and its first Governor-General; Syed Ahmed Khan, who founded the All India Muslim League; Jawaharlal Nehru, who was the first Prime Minister of India; Mohandas Gandhi, who worked for Independence through the Indian National Congress; Chaudhry Rehmat Ali, who wrote about his ideas for the new Pakistan and is said to have proposed the name Pakistan.
- B. Answers will vary: the children enact a discussion according to what they have learned about Jinnah and Gandhi.

# Unit 10 Inventions and discoveries

## Background knowledge for the unit

This unit provides information about some key inventions and discoveries of the 19<sup>th</sup> and early 20<sup>th</sup> centuries. It explores how these affected industry, trade, education, communication, and everyday life, namely: electricity, the telephone, cars, the camera, aircraft, television, and computers.

The students discover how science and technology build on earlier discoveries and inventions and how they enable ideas to be put into practice. They find out how some discoveries and inventions do not seem to have a purpose at the time but are later prove to be vital. They also find out how new materials and techniques enable old ideas to be put into practice.

## Expected learning outcomes for the unit

When they have completed this unit in the Pupil's Book and Skills Book most students should be able to:

- recount the history of electricity
- describe how the telephone was developed
- explain that the use of petrol in engines developed from carts and steam-driven vehicles
- explain how a camera works
- describe how aircraft fly
- determine how televisions work
- explain how computers were first developed

They will learn how to:

- find out about the past from everyday objects and from older versions of these in museums and pictures
- investigate objects from the past through making and using models
- ask questions and draw conclusions about people and events in the past
- consider the environment when using technology

They will begin to understand:

- how new materials and tools help scientists and inventors to put their ideas into practice
- how we can use new technology wisely

## Lesson 1: Electricity

### Learning outcomes

Students should be able to:

- identify and describe how electricity was discovered
- determine how electricity production developed in Pakistan

## Resources

- Pupil's Book pages 97–98
- A light bulb, a candle, and matches (You will need to check your school's health and safety policy regarding matches.)

## Pupil's Book steps

1. Show the class a candle, and light it if possible. Tell them that before electricity was invented this was what many people used for lighting up their homes after dark. Then show them a light bulb and ask:
  - What was discovered before light bulbs and other 'electrical' items could be used? (When electricity was discovered methods of its transmission had to be developed. Power companies had to be set up and cables and wires were required to transfer electricity from the generators to the buildings where it was needed.)
2. Explain that at first electricity was mainly used for light, but once there were power companies producing electricity, inventors began to use this energy to change the way many tasks were carried out. Ask:
  - What do we use electricity for? (heating, laundry, cleaning, running factories, communication, etc.)
3. Explain that electricity was not invented, but that it exists in nature. Scientists were able to discover the process for its production and inventors found ways of using it. Ask:
  - When do you think scientists first found out about electricity?
4. Tell the students that they will be surprised when they read about this. Together, read the first two paragraphs of page 97 for this information. Ask:
  - Why do you think electricity was never used in ancient times? (They did not have the materials and technology to use it.)
5. Continue reading the rest of page 97 and ask:
  - Why do you think people began to use electricity at the end of the 19<sup>th</sup> century? (By then they had machines for many purposes but these were powered mechanically or by steam, for example, carpet cleaners were mechanical; there were mechanical typewriters—keyboards; trains—even some road vehicles were powered by steam; also, factories had mechanical and steam-powered machines. People had also begun to use gas for light and to cook with, so there were plenty of possible uses for electricity.) Ask:
    - How much electricity was being produced in Pakistan in 1947 when the country was created? (60 megawatts—enough for 15 modern families for one year!)
    - Why could very few people here use electricity in their homes? (There were no cables to carry electricity over long distances.) Point out that most countries produced a small quantity of electricity at that time and ordinary people did not have much use for it at home.
    - How much electricity could Pakistan produce by 2010? (20,922 megawatts)
6. The students can then complete the exercise at the top of page 98.

### Answers to Pupil's Book page 98

- A. 1. False. He discovered, not invented, electricity.  
 2. False. Scientists as early as 1000 BCE knew about electricity.  
 3. True
- B. Answers will vary.

### Further activities

1. Find out where your local electricity supply comes from and how it is sent from the power plant to the places where it is used.

2. As a shared writing activity you could help the students to contribute to composing a 'class' letter to the electricity company to ask for information.
3. The students could research and write leaflets about safety and electricity: safe play near overhead power lines, substations, electrified railway lines; electrical safety at home, etc.
4. Link this with work in science lessons on how to light a bulb using a battery, conductors, and insulators, etc.

## Lesson 2: The phone

### Learning outcomes

Students should be able to:

- explain how and when the telephone was invented
- explain how sound travels through solid materials

### Resources

- Pupil's Book pages 98–99
- Skills Book page 48 A simple telephone
- elastic bands
- two average-sized food cans (no sharp edges); a piece of string about 4m long (and, if possible, a piece of wire or nylon fishing line about 4m long), a hammer, two nails

### Pupil's Book steps

1. Begin the lesson by asking:
  - How was electricity used to help with communication in the days of British rule in the subcontinent? (They sent messages using the electric telegraph. See Unit 8.)
2. Tell the students that they will learn more about the electric telegraph in Unit 11 but explain that this was a system which sent messages as signals that had to be printed out and could not be used for speaking to people far away. Tell them that telegraph means 'far writing' and telephone means 'far sound'.
3. Give the students elastic bands and ask them if they can make a sound using an elastic band. Let them try this and tell them to look at the elastic band as it makes the sound.  
Ask:
  - What do you have to do to the elastic band to make a sound? (Pluck it.)
  - What did you observe? (The elastic band has to vibrate—shake—to make the sound.)
  - Have you seen other things vibrating to make a sound? (the strings of musical instruments such as the violin or guitar)
  - Do any of you play the piano?
  - What happens inside the piano when a key is hit? (The wire attached to the note vibrates. Tell them that a British engineer named Alexander Graham Bell noticed this and he wondered what would happen if he sang into an open piano.)
2. Together, read the first three paragraphs under the heading 'The phone' on page 98.  
Ask:
  - What did Bell discover when he tried singing into the piano? (The wires vibrated and made the same musical note. They copied the sound.)



- How did they begin to vibrate when Bell did not touch the piano? (To demonstrate this, ask the students to sing and, as they do so, to place the fingers of one hand on the front of their neck just below the chin.)
  - What can you feel? (Explain that to make a sound with our voice we make the 'voice box' in our throat vibrate. These vibrations make the air vibrate. The vibrating air makes other things vibrate, including wires. Bell's voice had made the piano strings vibrate. That is how he discovered that wires can copy a sound.)
  - What did he do next? (He made sounds travel along a wire.)
  - What did he want to do after that? (make the sounds clearer so that people could hear words and sentences travelling along a wire)
3. Read the rest of the page and the sentence at the top of page 99 with the class to find out what Bell did next. Tell them that when Bell wanted to start a telephone company he did not have enough money and at first could not persuade anyone to lend it to him because most of the people he asked thought that there would be no use for the phone!
- Ask:
- How did Bell's telephone company change the look of many towns and cities? (Wires attached to poles criss-crossed the streets.)
5. The students can then complete the exercise on page 99.

### Skills Book steps

1. Prepare the materials by making a hole in the bottom of each can, using a hammer to knock a small nail into it. The students will need to use the nail to fix the string to the can. Tell them that they can learn how Alexander Graham Bell's phone worked when they make this simple model, which should work!
2. Ask the students to push the ends of the string through the holes in the two cans, as shown in the picture, then tie it to the nail, this will hold it in place inside the can.
3. Two students should then use the 'telephone' as shown in the picture. It will work if the string is kept tight. The one listening should hear the other's voice when he/she speaks. They can also make sounds for one another to listen to by plucking the tight string or gripping it with a damp cloth and pulling the cloth along the string. Ask:
  - What did you hear?
  - How did the sound get to your ears? (The sound of the voice made the air vibrate; this made the can vibrate, which in turn made the string vibrate, and then the other can vibrated; this made the air in the other can vibrate too.) Explain that when the air vibrates it makes the tiny bones in our ears vibrate. Our ears have nerves that carry a message to our brain. The brain can make sense of such message. See Further activities.
4. The students then try replacing the string with nylon wire and fishing line, and then comparing the quality of the sounds they hear.

### Answers to Pupil's Book page 99

- A.
1. He sang a note into a piano and the wires vibrated and played the same note. He made a simple phone.
  2. They vibrated.
  3. 1876
  4. He made a phone with two parts, one for speaking and the other for listening.
  5. He started a telephone company and put up wires on poles to link buildings to a telephone exchange.

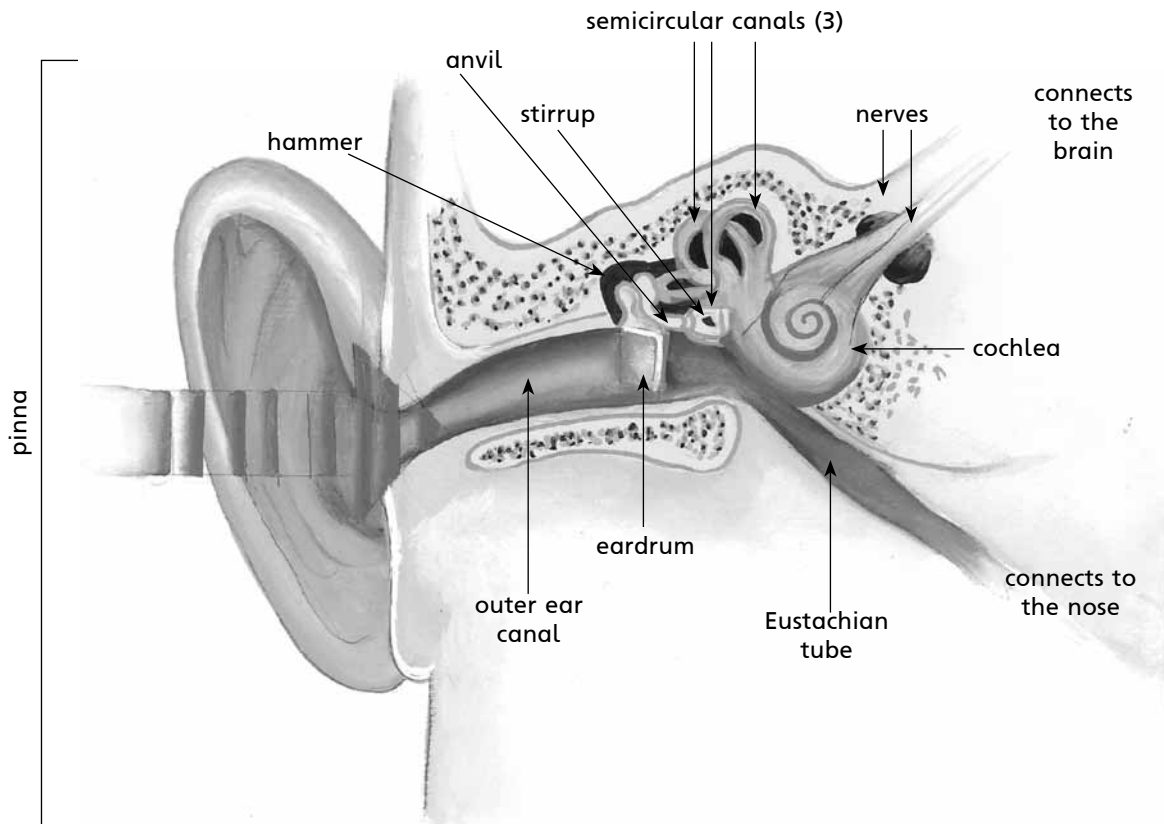
B. They had telegraph poles holding wires criss-crossing the streets.  
Answers will vary for example, it was good because it meant that people could speak to one another across long distances; it was bad because it made the streets look very messy.

### Answers to Skills Book page 48

- A. The students make the model telephone and test it.
- B. 1. The sound of the voice makes the air vibrate; this makes the can vibrate which in turn makes the string vibrate; this makes the other can vibrate; then the air in the other can also vibrates.
2. Answers will vary.
3. Answers will vary. Usually the quality of sound is better with wire than with string.

### Further activities

Show the students a diagram of the inside of the human ear that lets them see how sounds are collected by the ear and make the ear drum and then the bones in the ear vibrate to send a message to the brain:



## Lesson 3: The car

### Learning outcomes

Students should be able to:

- establish how and when the car was invented
- find out about the first cars and how cars have changed over time

### Resources

- Pupil's Book pages 99–100
- Photographs of cars from different ages. You could ask a motor manufacturer for pictures of their cars through the ages.

### Pupil's Book steps

1. Begin the lesson by asking some questions about cars.
  - For how long have people been using cars? (Tell them that the first car factory was Karl Benz's factory in Germany in 1888. It later became Mercedes Benz.)
  - What did people use for transport before they had cars? (People used carts, horse-drawn carriages, rickshaws, etc. which were pulled or carried by animals or people. Also trains powered by steam were used.)
2. Together, read the section titled 'The car'. Then ask:
  - What did they start using as power for carts? (steam engines)
  - What made this difficult? (A steam engine needed a lot of coal or other fuel.)
  - Who made the first petrol-driven car, and where? (Karl Benz, in Germany)
3. Ask the class to look at the picture of Karl Benz's first car and to describe it. Discuss how it is different from modern cars.
4. Show the students pictures of cars from different ages and ask them to put them in order. Discuss how they could tell which are the oldest and which are the newest cars.
5. Ask the students to read the first two paragraphs on page 100 and 'It's a Fact'. Ask:
  - How did Henry Ford change the way car factories work? (He used a production line. Explain the working of a 'production line'; show the students pictures, if possible.)
  - What difference did the production line make? (Different people made different parts of a car which increased the speed of making a car. It also made cars cheaper.)
  - What was Ford's cheap car called? (Model T)
  - Which was the first car factory in the subcontinent? (Mahindra and Mahindra of Mumbai, 1945)
  - Which was the first car manufacturer in Pakistan? (Adam Motor Company. They have closed down now)
  - Which was the first car to be made from parts made in Pakistan? (Revo)
6. The students can then complete the exercise on page 100.

### Answers to Pupil's Book page 100

- A.
1. The first automobiles were driven by \_\_\_m.
  2. Before cars, people used \_\_\_ to pull carts.
  3. The first petrol car was built in this country.
  4. A word that means brought *from another country*
  5. Karl \_\_\_ opened the first petrol car factory.
  6. A production \_\_\_ has different people making different parts of something.
- B. Answers will vary.



## Further activities

1. The students could choose any make of car to research. Ask them to find out who opened the factory, where and when it started, and to explain how the car has changed over the years.
2. They could draw and write about a modern car, perhaps their family car. Ask them to list anything on the car that would not have been possible to have at the end of the 19<sup>th</sup> century, and to say why.

## Lesson 4: The camera

### Learning outcomes

Students should be able to:

- explain how and when the camera was invented
- describe how the first cameras worked
- explain the terms centuries and BCE

### Resources

- Pupil's Book pages 101–102
- Skills Book page 49 How a camera works
- a shoebox, some metal foil, scissors, a pin, greaseproof paper, a lamp, and scotch tape
- a camera—if possible a Kodak Box Brownie, or an old camera that uses film

### Pupil's Book steps

1. Inform the students that they are going to find out how cameras were invented. Explain that the camera progressed from many earlier discoveries by scientists, some as long ago as the 5<sup>th</sup> century BCE.
2. Let the students examine a camera and observe what happens to the shutter when a picture is taken. (It opens.) Ask:
  - Why do you think that happens? (Tell them that the very first cameras also had a shutter but that it was much simpler than this one. Also point out the lens.)
  - Which other instruments do you know of that use lenses? (microscopes, spectacles, telescopes)
3. Read about the camera on pages 101 and 102 with the class. Ask:
  - What is behind the shutter of a camera? (a tiny hole)
  - What is the hole for? (to let in light)
  - Why? (Light reflects from objects and then goes through the hole and into the camera. There it makes an upside-down picture of the objects. Ask the class to look at the picture of the camera obscura.)
  - When were the first pictures made in this way? (In the 5<sup>th</sup> century BCE. Make sure that the students understand how to count the centuries BCE.)
  - What does BCE stand for? (Before the Common Era; the 1<sup>st</sup> century BCE is numbered up to 99.)
  - What year does the 5<sup>th</sup> century BCE begin with? (400)
  - Which is later—450 BCE or 500 BCE? (450 BCE)
  - How were the pictures made clearer? (Better lenses were used.)
  - How did a French scientist improve cameras so that he could keep the pictures? (He painted a flat metal plate with chemicals and it worked.)

- How did the American George Eastman improve this? (He used a type of plastic coated with chemicals. He stored back-to-front pictures on it and printed them on special paper.)
4. Allow the students to observe the picture of Eastman's camera. Ask:
    - What did Eastman call his camera? (Brownie)
    - Which camera company did Eastman start? (Kodak)
  5. The students can then complete the exercise on page 102.

### Skills Book steps

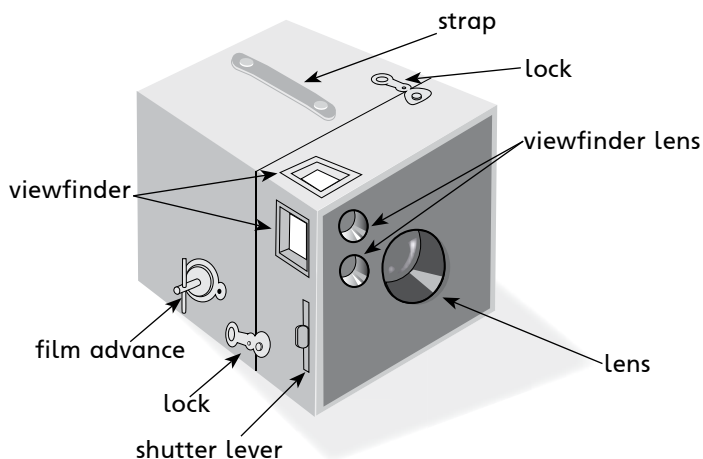
1. You could make the pinhole camera as shown, before the lesson or let the students make one if you have enough materials. Let them look into the shoebox. The pinholes should point towards a light. Ask:
  - What do you see? (They should see the light upside-down.)
  - What do you think you will see if you point the pinhole towards the window? (Let them try it.)
  - What do you see? (They should see the window upside down.)
2. Ask them to draw what they see.

### Answers to Pupil's Book page 102

- A.
1. Pictures get into a camera when **light** reflects from them onto the **lens**.
  2. Scientists made pictures like this in ancient times. The first we know about was in the **5<sup>th</sup> century BCE in China**.
  3. In the **10<sup>th</sup> century CE** Ibn al-Haytham looked at **pictures** reflected through a tiny hole.
  4. Scientists used pieces of **metal** painted with **chemicals** to keep the pictures from cameras.
- B. It had a film made from a type of plastic.

### Further activities

The students could examine the insides of older cameras that use film and draw labelled diagrams of them. Or you could show them this picture and explain how the camera was used:



To use this camera, you would not hold it up to your eye but point the lens towards the subject and look down into the viewfinder. The camera could be used on its side, so there are two viewfinders. After taking a picture, you would turn the film advance knob to wind the film. Later cameras showed guide numbers to help you to wind it by the right amount. The later Box Brownies held films that took eight photographs. They took pictures that came out in shades of white, grey, and black, but not in colour.

## Lesson 5: Aircraft

### Learning outcomes

Students should be able to:

- explain how and when aircraft were first made
- explain how planes fly
- discuss the first aviators

### Resources

- Pupil's Book pages 102–103
- Skills Book page 52 A mythical inventor
- paper for making paper planes

### Pupil's Book steps

1. Tell the students that they are going to find out how the aircraft was invented. Explain that the plane is a development from earlier discoveries by scientists in the 9<sup>th</sup> century CE. Tell them that there are stories throughout history of people wanting to fly and myths about being able to do so. Begin with the story in the Skills Books. (See **Skills Book steps**.)
2. Discuss the photograph of the hang-glider and ask:
  - How is this different from the wings of Daedalus and Icarus? (It has a very light, aluminium-alloy frame with lightweight fabric such as parachute material.)
  - How does it stay up? (Air pushes upwards just as water does. The wings are large enough to hold/trap the required amount of air beneath them so that the hang-glider stays up.)
3. Help the students to understand air pressure. They could hold a sheet of card flat and then try moving it quickly downward. They should feel the upward push of the air. Tell them that hang-gliders and gliders fly on currents of moving air.
4. Ask the students to read page 102 and the two paragraphs on page 103 to get more information. Ask:
  - Who made the first glider we know of? (Abbas Ibn Firnas)
  - Where and when was it made? (in Spain in the 9<sup>th</sup> century)
  - What happened to it? (It did not fly very far and crashed to the ground. Explain that he might have known what was needed in order to make a glider but did not have the strong, lightweight material needed.)
  - Who made the first plane with an engine? (the Wright brothers)
  - Where and when was it made? (in the USA in 1903)
  - For how long did it stay in the air? (12 seconds)
  - Was their next plane better? (Yes. It flew 24 miles in just over 23 minutes.)
  - Did they make planes that flew well enough for passenger transport? (Yes. They started an airline for goods and passenger transport.)
5. Read 'It's a Fact' with the class and ask:
  - Why did Leonardo da Vinci's aircraft, in the 15<sup>th</sup> century, not fly; in fact, could not even be made? (People did not have suitable materials or technology.)
  - Would any of them have worked? (Yes. One has been made using modern materials and it flew for a short time.)
6. The students can then complete the exercise on page 103.

## Skills Book steps

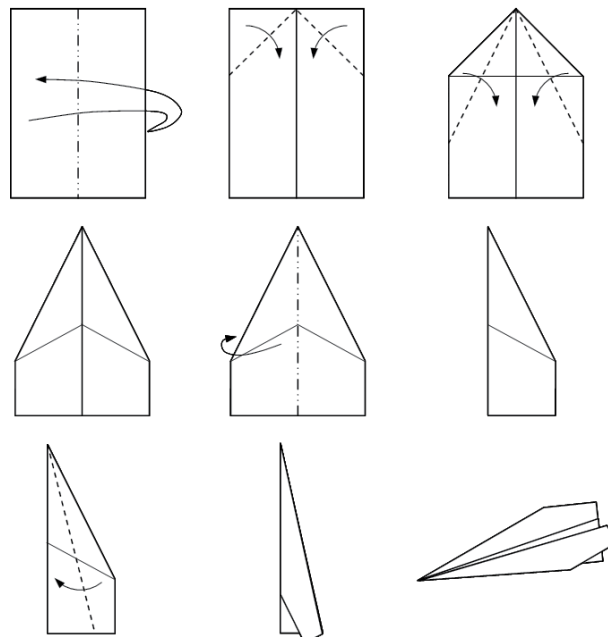
1. Read this story with the class before beginning the lesson in the Pupil's Book pages 102–103.
2. Tell the students that this is a famous Ancient Greek myth. Review what they have already learned about Ancient Greece (see Book 3). Explain that a myth is a story that has been made up; sometimes about real people and places; sometimes to explain things in nature or science; and sometimes to explore ideas or to give a message or warning about how people should behave.
3. The story could be read aloud by different students who would like to read.
4. Invite volunteers to retell the story using their own words. Ask:
  - Why did Icarus fall from the sky? (He ignored his father's warning and flew too near the Sun. This made the wax that held the feathers onto his wings melt, so the feathers dropped off causing him to fall.)
  - Could people really fly if they made wings like those of Daedalus and Icarus? (No, because wings like these—large enough to support their weight—would be too heavy. Hang-gliders, which are large enough and light enough to keep them in the air, could be made instead.)
5. The students can now answer the questions on this page.

### Answers to Pupil's Book page 103

- A.
1. Abbas Ibn Firnas, in the 9<sup>th</sup> century
  2. The Wright brothers in the USA
  3. 1903
- B. They did not have the technology or materials to make them light enough and strong enough.

## Further activities

1. The students could make and test a paper plane. The following figures will help to make one.



2. Ask the students if they can find a way to change their plane to make it fly further. they could add some scotch tape to the nose for weight; they could cut and fold flaps on the wings; they could trim the nose so that it has no point.
3. If you have a large enough open space at school, have a 'paper plane championship'. Each student could launch his/her plane thrice and measure the farthest distance flown. They could record the results on a chart:

Name	Distances		
	1st try	2nd try	3rd try

## Lesson 6: Television

### Learning outcomes

Students should be able to:

- describe how and when the television was invented and when it was first manufactured
- explain how modern inventions develop from earlier inventions: television developed from radio and photography
- name the first television broadcasting companies

### Resources

- Pupil's Book pages 103–104
- Skills Book page 50 How the television works; page 51 Try this!
- a circle of card about 15 cm in diameter
- a wooden stick about 30 cm long
- a pin or drawing pin to attach the card circle to the stick so that it can spin

### Pupil's Book steps

1. Inform the students that they are going to read about how the television was invented. Explain that some earlier inventions helped.
2. Ask the class to read the section titled 'Television' on page 103 and also to look at the photograph and read its caption. Ask:
  - Which inventions made scientists think of sending moving pictures with sound through the air? (The camera, gramophone, silent films, and radio. The radio sent sound through the air on radio waves, without wires. It was different from the telephone because wires were needed for the sounds to travel along. People called the radio a 'wireless' because of this.)
  - Who invented the 'televisor' that became television? (John Logie Baird. Tell the students that Baird was British—from Scotland—but a German scientist had found a way to scan a picture and show it on a wall, 45 years before that.)



4. Ask the students to read the first two paragraphs on page 104. Ask:
  - How was Baird's invention different from Nipcow's? (It could scan sounds as well as pictures.)
  - Where was the world's first public television broadcast made? (Washington DC, USA)
  - When was it made? (in 1927)
  - When did Pakistan get its first television company? (1964)
  - Where was the television company located? (in Lahore)
5. The students can then complete the exercise on page 104.

### Skills Book steps (Page 50 How television works; page 51 Try this!)

1. Ask the students to look carefully at the pictures on page 50. Help them to read the labels and explain that photoelectric cells respond to different amounts of light (they can 'read' the light). They travelled from Baird's 'televisor' along wires to a 'receiver'.
2. The students should look at the pictures as they read the sentences below them.
3. Ask them to put the sentences in the correct order to explain what is happening in the pictures.
4. Move on to page 51 and tell them that this shows how to make a model that will help to explain how Baird made the first television broadcast.
5. Follow the instructions (step by step) given on page 51.
6. Hold the stick and disc in a bright place facing a wall and spin it. Look at the wall. Ask: What do you see? (Patterns of light made by the sunlight coming through the holes in the moving disc should be visible.) Tell the class that Baird used a similar idea to make moving pictures.
7. The students can now answer the question on this page.

#### Answers to Pupil's Book page 104

- A. 1. a. telephone      b. radio      c. gramophone      d. camera  
2. John Logie Baird
- B. They travelled along wires.  
They used radio waves to send the pictures through the air, so that wires were not needed to join the 'televisor' to television sets.

#### Further activities

1. The students could experiment with spinning discs to make different patterns on a wall.
2. They could find out more about the inventions from the Internet or books.

## Lesson 7: Computers

### Learning outcomes

Students should be able to:

- describe how and when the computer was invented and when it was first manufactured
- explain how inventions develop from earlier inventions, e.g., computers developed from many different devices used for calculating and measuring
- describe the first modern computers

## Resources

- Pupil's Book pages 104–105
- Skills Book page 53 Values
- an abacus

## Pupil's Book steps

1. Tell the class that they are going to find out about how the computer was invented. Explain that some earlier inventions helped in its development.
2. Ask the students in which century they think people first used computers. Tell them that the first modern computers could not have been made or used without electricity, but that computers developed from ancient devices for measuring and calculating. For example, the Ancient Egyptians used an abacus for calculations. Show them an abacus and invite a volunteer to demonstrate how it is used.
3. Together, read the section titled 'Computers' and ask:
  - Are you surprised by anything on this page?
  - Why?
  - How was Charles Babbage's computer different from modern ones? (It was mechanical and was not powered by electricity.)
  - What name was given to the first modern computer? (Colossus. Explain that this means something very big.)
  - What made this a good name for the computer? (It was huge!)
  - How have computers changed since then? (They have become much smaller. They are now a fraction of the size of the first computers.)
  - Where was the world's first electronic, digital, programmable computer made? (England)
  - How was it useful to the British during the World War II? (They used it to read the German Armed Forces' radio messages.)
5. The students can then complete the exercise on page 105.

## Skills Book steps

1. Divide the class into groups of four. Ask them to discuss whether the inventions they have learned about are good. Let them explain their answers to the class.
2. Tell the students that the exercise they are going to do is about the question they have discussed. They should think about each invention in turn and make notes about what good they think it does and what they think is bad about it.
3. Explain how to use the chart and ask them to write their answers on it.
4. They can then choose the invention they think is the most useful, and explain why.

### Answers to Pupil's Book page 105

- A.
1. False. The astrolabe from 150 BCE was a type of computer for calculating the movements of the moon, stars, and planets.
  2. True.
  3. False. The picture shows women programmers working on the Colossus computer in England.
  4. False. He made a mechanical computer.
  5. False. A copy of the 'Difference Engine' is in a museum. He didn't finish building it.
- B. It is electronic like a modern computer but it is much bigger.

### Further activities

1. Collect pictures of computers (better still, old ones that are no longer needed) and make a class computer museum display.
2. The students who bring in the computers (or pictures of them) should find out and write about when they were made alongwith information about the amount of memory they have and how they store data, for example, on large or small floppy discs, CDs, memory sticks, and so on.
3. Students should attempt the CD activity.

### Answers to Pupil's Book page 106

- A.
1. Lights
  2. Answers will vary: televisions, washing machines, hairdryers, dishwashers, shavers, tumble dryers, lawnmowers, vacuum cleaners, irons
  3. Answers will vary: they had wheels with spokes like bicycle wheels; did not go as fast, had no battery, so the lights were oil lamps; no indicators, so the driver had to give hand signals for turning left or right
  4. It was much bigger. (It was also much slower.)
- B. Answers will vary.

# Unit 11 The role of the media

## Background knowledge for the unit

This unit helps the students to learn about some important developments in communication technology in the nineteenth and early twentieth centuries such as postage, the electric telegraph, railway communication systems, newspapers, and radio.

The unit also explores how advances in technology opened up new ways in which people could send and receive messages, e.g., greetings, warnings, questions, announcements, news, advertisements, etc. It explores the role and influence of the media on communication and provides an opportunity for students to discuss how the media can influence people's thinking.

## Expected learning outcomes for the unit

When they have completed this unit in the Pupil's Book and Skills Book, most students should be able to:

- describe the history of the postal system in Pakistan
- explain how the electric telegraph was developed and how it worked
- describe the development of railways, railway signalling, and how the early signalling system worked
- explain and describe the development of printing which led to newspapers, and retell the history of newspapers in Pakistan
- describe the history of radio broadcasting around the world and particularly in Pakistan
- explain how the media can influence people

They will learn how to:

- find out about the past through reading and from photographs and objects from the past
- investigate objects from the past by making and using models

They will begin to understand:

- how new technology can change the way things are done
- how the opinions or biases of a speaker, writer, photographer, or television producer can influence the audience

## Lesson 1: Sending messages

### Learning outcomes

Students should be able to:

- describe the historic Indus Valley postal system and how the British developed it
- explain the use and working of the electric telegraph
- explain how the speed of communication increased throughout history, especially in the 19<sup>th</sup> and 20<sup>th</sup> centuries

## Resources

- Pupil's Book pages 107–108
- Skills Book page 54 The electric telegraph

## Pupil's Book steps

1. Ask the class what they remember from the previous lessons about the way mail was sent long ago in the Indus Valley. Remind them that for a long time, people in the Indus Valley sent messages by runners—people whose job was to run from one place to another carrying messages. Explain that the runners would each have their own 'run' that went from one 'station' to another. If any of their messages had to go any farther they would hand them over to another runner. Read the first two paragraphs of page 107 with the class so that they can find out how the British developed this mail system and introduced postage stamps here.
2. Ask the students what they remember from Unit 10 about inventions that helped to speed up communication. Ask:
  - Do you remember what you read about the electric telegraph? (Tell them that they can find out more about it on this page and ask them to read to the end of the page.)
  - How were the messages sent? (Electricity and magnetism were used, and the messages were sent in a code.)
  - What is a code?

Explain that a code is when you exchange the letters of a word for other letters, numbers, or symbols, and if they are sent along wires, electronic signals that can be read as symbols. A very simple code is to use numbers instead of letters of the alphabet A = 1, B = 2, C = 3, D = 4, etc. The students could complete a chart as shown in the following example and then write some words using the code or they could tap the numbers for someone listening, e.g. 4 taps = D):

A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

3. Together read, 'It's a Fact' so that the students can find out how the electric telegraph sent coded messages. Explain that the telegraph operator tapped the signalling machine to send each letter of a word (usually as a series of slow and quick taps). The message receiver printed out the message as dots (.) for quick taps and dashes (–) for slow taps.
4. The students can then complete the exercise on page 108.



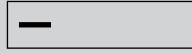
## Skills Book steps


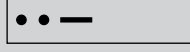

1. Tell the class that they are going to learn how the electric telegraph sent messages and what they looked like when the receiver printed them. Explain that the Morse code was named after its inventor and became an international code.
2. Ask the students to read the introduction to this page and to study the code. Ask them how they would tap these letters and numbers: T E Z 3 A 16 R. Then ask:
  - Which letters are the quickest to tap? (E and T because only one dot or dash is used)
  - Why do you think these letters were given a very quick code: just one dot or one dash? (The inventor was British and the language he used was English. In English the letters E and T are used more than any others.)
3. They can now follow the instructions and complete the page.



### Answers to Pupil's Book page 108

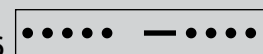
- A.
1. The first postage stamps in Asia were called **Scinde Dawk**.
  2. This was also the name of **a very old mail system**.
  3. Instead of runners the British East India company used **horses and camels** because **they were quicker**.
  4. Electricity made it even quicker to send messages using the **electric telegraph**.
  5. This sent messages along **wires** using codes.
- B. Answers will vary but could include: telephone—far sounds; telescope—far looking; television—far vision

### Answers to Skills Book page 54

1. B  K  T 

Q  U  8 


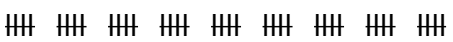

12  16 

56 

2. Answers will vary.
3. Samuel Morse invented this code.

### Further activities

1. The students could use a page of English text to check how many times each letter occurs and to appreciate how the Morse code was devised.
2. They could record their findings on a chart. Here is an example that is partially filled in:

Letter	Tally	Total
A		137
B		45
C		48

Note that the *tally* is one stroke or line for each time the letter is counted (I). The fifth stroke or line is made horizontally across the previous four (IIII). This makes it easy to count the total.

3. Ask the students if they think this code would work for other languages such as Urdu. If not, how would they change the code? They could work in groups to investigate this during language lessons.

## Lesson 2: Railway communications

### Learning outcomes

Students should be able to:

- explain how railway signalling developed
- explain how signals are used in communications and their development with improved technology

### Resources

- Pupil's Book pages 108–109
- Skills Book page 55 The railway signal

### Pupil's Book steps

1. Begin the lesson by asking:
  - Have you seen the signals used on railways? (Tell them that modern railways mainly use electric signals that light up. However, the first railways had no signals as signalling was done manually by people.)
2. Read page 108 'Railway communications' and ask:
  - If someone walked ahead of the train waving a flag, what does this tell you about the speed of the train? (It was very slow!)
  - How did they signal? (With their arms and hands. Tell them that the first steam-powered locomotives that pulled trains were not very fast but the later the ones were much faster, even faster than cars.)
  - What have you found out about old railway signals? (They looked like straight arms at the tops of tall poles. A signalman moved them up and down.)
  - What was the main problem with these signals? (Train drivers couldn't see them if it was dark or foggy.)
3. Read the first two paragraphs on page 109 with the class. Ask:
  - Why were there a lot of crashes? (Drivers couldn't tell if there was a train standing on the track ahead unless they could see it and it took a long time to get a message to a train a long way down the track.)
  - Which new invention helped? (the electric telegraph)
  - In what other way was electricity helpful? (It could be used to operate signals and move pieces of the railway track.)
4. The students can then complete the exercise on page 109.

### Skills book steps

1. Tell the students that they can learn how old railway signals worked from this exercise. Ask them to look at the train signals key, and read it with them. Make sure they understand the signals. They could practise using their arms to give the signals: Stop, Caution, and Clear. You could play a game. Call out a signal for the students to make with their arms. Anyone getting it wrong should drop out until there is only one student left. If they are all getting the signals right, the student who shows the signal last drops out.
2. Read the introduction with the class and ask them to draw the correct signals for each place on the map. They should look out for other trains and for stations and junctions (places where tracks join).

### Answers to Pupil's Book page 109

- A. 1. Drivers couldn't tell if there was a train stuck on the track ahead and it took a long time to get a message across long distances.  
2. the electric telegraph  
3. Signals and parts of tracks could be moved using electric switches.  
4. Coloured lights could be used. Drivers could see these in the dark and the fog. They were bright enough to show in the daytime too.
- B. No answers. The children could try various ways of sending a message e.g. using pieces of card or cloth, or flags of different colours, with different colours having a different meaning; different sounds. They should test their ideas, measuring the longest distance over which they could send a message.

### Answers to Skills Book page 55

Train A to Green Hill: signal should show caution.

Train B to Green Hill: signal should show clear.

Train C to Blue Lake: first signal should show clear, second signal should show caution.

### Further activities

1. Make a class museum on old railways. The students could bring in photographs, postcards, magazines, and objects their families are willing to loan. They should label each and make a short information panel about it to display in the 'museum'.
2. Also they could 'interview' older people who remember the old railways and write about the interview.

## Lesson 3: The news in print

### Learning outcomes

Students should be able to:

- identify and describe different ways in which news has been spread in the past
- explain how newspapers developed and the impact of the news provided

### Resources

- Pupil's Book pages 109–110
- Skills Book page 56 Newspapers of the subcontinent; page 58 Values

### Pupil's Book steps

1. Ask the class how they think people used to spread news before there were newspapers, radio, and so on. For example, they could read the news out loud in public places, write notices and put them in public places, or send signals in code that could be seen or heard a long way off. The people receiving the news would have to know the code.
  - How long ago do you think the first newspaper was printed? (Discuss what they have learned about printing from Book 4, Unit 11 Printing and Books. It was printed in Germany in 1609.)
2. Ask them to read 'The news in print' on page 109 to find out about the early newspapers in the subcontinent. Ask:
  - Which language was used for the first newspapers in the subcontinent? (English)



- Why? (The British ruled most of the subcontinent and many people here spoke English.)
  - Did the newspapers just give facts about the news? (No. They also gave opinions or tried to influence people.)
  - What happened if these opinions were anti-British? (The editors were sacked or sent to prison and a newspaper could even be closed down.)
3. Ask the students to read the paragraph on page 110. Ask:
    - Who founded the newspaper *Dawn*? (Mohammad Ali Jinnah)
    - In which language was it printed? (English)
    - Why do you think it was in English? (It might have been that though the people of the subcontinent spoke many different languages, most spoke English too. It could be read by more people if it was in English.)
    - In which city was *Dawn* founded? (Delhi)
    - Where is it published today? (Karachi, Lahore, and Islamabad)
    - How did the editor of *Dawn* use the newspaper to influence people in 1946? (He urged Muslims to take part in protests to support the partition of the subcontinent.)
  4. Read 'It's a Fact' at the bottom of page 110 with the class. Ask:
    - What do you know about the newspaper *Dawn*? (Perhaps they have it at home.)
    - Can you name three other Muslim newspapers from the time of independence? (*Morning News*, *Jang*, and *Anjam*)
    - In which languages were they printed? (*Morning News* was in English; *Jang* and *Anjam* were in Urdu.)
  5. Read the exercise on page 110 with the students and ask them to think about each sentence before writing True or False. They should correct the false sentences.

### Skills Book steps (Page 56 Newspapers of the subcontinent)

1. Ask the class to name as many newspapers of the subcontinent as they can. List their answers on the board.
2. Together read about the different newspapers mentioned on this page and check if any of them are listed on the board. Ask:
  - Which is the oldest newspaper named on this page? (*Bengal Gazette*; 1780)
3. The students can then list the newspapers on the chart in order of date, beginning with the oldest, and then complete the information.

### Skills Book steps (Page 58 Values)

1. Review what the students have learned about early newspapers in the subcontinent that printed opinions. Ask:
  - Why was the editor of the first (British) newspaper in the subcontinent sacked and sent back to Britain? (He criticized the British East India Company and was punished for it.)
  - Why was another editor of a British newspaper here fined by the East India Company and imprisoned? (He wrote about corruption in the Company and about the suffering of the Indian people. The Company did not want its corruption exposed or any attention drawn to the people's suffering because it was responsible for their misery.)
  - Were those British editors writing just facts or also opinions? (They wrote facts but in a way that showed their opinions.)
  - Do you think newspapers should print only facts or should they give opinions? (Let the students express their ideas and then discuss it with a friend or a small group before writing their answers and reasons in the speech bubbles on this page.)

### Answers to Pupil's Book page 110

- A. 1. False. There were newspapers that sold all over the subcontinent, including *Dawn*.  
2. True  
3. True
- B. Answers will vary.

### Answers to Skills Book page 56 Newspapers of the subcontinent

Name of newspaper	Language	Date founded	Town
Bengal Gazette	English	1780	Calcutta (Kolkata )
Madras Courier	English	1785	Madras (Chennai)
Bombay Herald	English	1789	Bombay (Mumbai)
Bombay Samachar	Gujerati	1822	Bombay (Mumbai)
Times of India	English	1838	Bombay (Mumbai)
The Hindu	English	1878	Madras (Chennai)
Mathrubhumi	Malayam	1923	Kozhikode
Hindustan Times	English	1924	Delhi
Dawn	English	1942	Delhi
Dainik Jagran	Hindi	1942	Jhansi
Dhina Thanti	Tamil	1942	Madurai

### Answers to Skills Book page 58 Values

Answers will vary.

### Further activities

1. The students could choose a newspaper to research. Ask them to find out who founded it, where and when it was founded, and in what language.
2. They could write the information about each paper on a card, with the name of the newspaper at the top, and file these alphabetically to form a database, or enter the information into a computer database.

### Lesson 4: The news on air

#### Learning outcomes

Students should be able to:

- explain how radio broadcasting developed at the beginning of the 20<sup>th</sup> century, particularly in the subcontinent
- describe the importance of radio broadcasting for large numbers of people

## Resources

- Pupil's Book pages 111–112
- Skills Book page 57 The growth of radio

## Pupil's Book steps

1. Begin the lesson by asking:
  - When was the radio invented?
  - Did your grandparents have radios?
  - Did your great-grandparents have radios when they were young? (They probably did, because by 1947 radios were very common across the subcontinent.)
2. Read page 111 with the class and ask:
  - What were the first radio programmes? (news)
  - Who were the early radio broadcasters, and why did they start radio stations? (governments: to send out news; radio manufacturers and department stores: to sell radios; newspapers: to broadcast news and opinions)
3. Discuss the development of the radio in the subcontinent by asking:
  - When did the radio come to the subcontinent?
  - Who was the first broadcaster?
  - Who took over?
  - What did they name the broadcasting company?
4. Discuss information about the radio that the students read in Book 4 Unit 11. Ask:
  - Why was the radio called a 'wireless'? (No wires linked the transmitter to the receiver.)
5. Ask the students to look at the photographs and read the captions. Then invite volunteers to say what they have observed in them. (what radios looked like in the 1940s, why they were called 'wirelesses', the location of Radio Pakistan)
6. They can then read 'It's a Fact' on page 111 to find out how the subcontinent got its first wireless radio transmitter. Ask the students to read the next page and ask:
  - How many radio stations did Pakistan have when the country was created in 1947?
  - Who took over these radio stations?
  - What was the name of the new radio broadcasting company?
  - When and where did television broadcasting begin?
  - What is the name of the world's first public television broadcasting service?Explain that public service broadcasting means 'broadcasting for the benefit of the people rather than just to make money'.
7. The students can then complete the exercise on page 112.

## Skills Book steps

1. Read and explain the questions with the class if necessary.
2. Ask them to read pages 111 and 112 of the Pupil's Book to find the answers to the questions.

### Answers to Pupil's Book page 112

- A.
1. The Indian Broadcasting Company
  2. All India Radio
  3. Yes, because All India Radio had three radio stations here.
  4. No, because Pakistan Television began in 1964.
- B. Answers will vary.

### Answers to Skills Book page 57

- A. 1. broadcasting news                      2. Marconi  
3. 1920s    4. BBC (British Broadcasting Corporation)  
5. 1922    6. 1927  
7. transmitter                                8. a radio  
9. through the air as radio waves        10. three
- B. So that people would have something to listen to and would buy radio sets

### Further activities

1. Help the students to make a timeline of radio broadcasting in the subcontinent. They should begin by drawing a line on which to write the important dates. This could be drawn horizontally across a page, ready for the dates to be written on it, beginning with the earliest on the left.
2. Ask them to read the information given in the Pupil's Book again and to make a note of the important dates and what happened during those years. They should write the earliest date at the left-hand end of the timeline and the latest date at the other end. They can then mark the timeline off in blocks of 25 years and use a calculator to work out how much space to leave between the 25-year markers.
3. Once the timeline is created the students should write a heading for each key event and link it to the timeline.

## Lesson 5: Advertising

### Learning outcomes

Students should be able to:

- retell the history of advertising
- explain how technological developments in the media opened up new ways of advertising in the early 20<sup>th</sup> century
- describe how advertising funded the media development resulting in free radio and television programmes

### Resources

- Pupil's Book pages 112–113

### Pupil's Book steps

1. Begin with a discussion about when advertising began. Students might think it began when the media developed in the 19<sup>th</sup> and early 20<sup>th</sup> centuries: newspapers, radio, and television. Tell the students that they might be surprised at what they find out from page 112 of the Pupil's Book. Ask them to read the section on 'Advertising' on this page. Ask:
  - Has anything on this page surprised you? (Advertising is known to have been used since ancient times—writing persuasive messages on the media of the time, for example, papyrus, wood, or stone.)
2. Ask the students to describe ways in which advertisers attract people's attention and ensure that they continue reading, listening, or watching. They entertain by singing, dancing, reciting rhymes, telling 'mini stories', etc. The students could give examples from modern advertisements they have heard, read, or watched.

3. Read page 113 with the class, including the caption for the picture and 'It's a Fact'. Ask:
  - How do public service broadcasters raise money to pay for radio or television programmes without having advertisements? (People pay for a licence to listen to the radio and watch television.)
  - What difference did radio make to advertising? (It enabled advertisements to reach many people at the same time.)
  - When and where did television advertising begin? (in the 1940s, in the USA)
4. The students can then complete the exercise on page 113.

### Answers to Pupil's Book page 113

- A.
1. False. People in ancient times advertised using the media of their time.
  2. True
  3. False. There were television advertisements in the 1940s.
  4. False. There were radio advertisements that people could *listen* to.
- B. Answers will vary but should take into account that there were several newspapers in the subcontinent at that time and many people had radios but very few had television sets.

### Further activities

1. Help the students to collect copies of pictures of old advertisements for a wall display.
2. They could also find out from older members of their families about advertisements they remember, from newspapers, magazines, radio, or television.
3. The students could draw and write about these.
4. Students should attempt the CD activity.
5. The students could then discuss how advertising has changed over the years.

### Answers to Pupil's Book page 114

- A.
1. They could use the British mail system that developed from the old Scinde Dawk.
  2. They started to use horses and camels instead of human runners.
  3. by electric telegraph
  4. It meant people had the electric telegraph, and enabled inventors to create radio and television.
- B. Answers will vary. They should take into account the number of people who could receive news via each of these media, who broadcast the news and how biased it might be, what news was broadcast or printed and what might be omitted, who could understand it, whether they were likely to get the news in a language they knew, and how many people in different places might have been able to read at the time.

# Unit 12 Trade

## Background knowledge for the unit

This unit helps the students to learn the meaning of trade, including vocabulary connected with trade: market, goods, services, licence, retail, economy, trading partner, export, and import. They will have come across some of these terms in previous learning in history, geography, and civics.

The main focus of the unit concerns Pakistan's trade—within the country, across the subcontinent, and with overseas trading partners. The students learn about our country's most important products and services and also about its main imports and exports.

There are also opportunities to consider the ethics of trade and industry and how care for the environment can guide our buying habits.

## Expected learning outcomes for the unit

When they have completed this unit in the Pupil's Book and Skills Book, most students should be able to:

- explain the meaning of trade
- describe the key vocabulary concerning trade
- identify and list Pakistan's main products and key imports and exports
- identify Pakistan's main trading partners

They will learn how to:

- interpret charts and graphs about trade
- record information in charts

They will begin to understand:

- how trade is important for a country's economy
- how buying habits can affect the environment

## Lesson 1: Local trade

### Learning outcomes

Students should be able to:

- identify and define words connected with trade
- explain how individuals and small and large organizations trade

## Resources

- Pupil's Book pages 115–116
- Skills Book page 59 Trade

## Pupil's Book steps

1. Begin the lesson by asking:
  - What is trade? (buying and selling)
  - What do people buy and sell?

Write some examples on the board. If all are objects, tell the students that these are called goods. Point out that we also pay for things people do for us and ask for examples. List some examples and explain that we call these services.

- Read page 115 with the class and ask them to look at the pictures and read their captions.  
Ask:
  - What does trade mean? (buying and selling)
  - What is the word for any place where people buy and sell things? (market)
  - What is the word for things we buy and sell? (goods)
  - What is the word for things we pay people to do for us? (services)
  - What is the word for something we get when we pay for permission to use or do something? (licence)
  - For what services do people pay for a licence? (receiving television broadcasts from public service broadcasters. Discuss how the BBC and other public service broadcasters earn money to pay for programmes.)
  - Where can you buy local goods? (At a shop or market. The students could give some local examples.)
  - Where can you buy goods from farther away? (at a bazaar or shopping mall)
 Ask for examples of famous bazaars and shopping malls. (bazaar: Anarkali Bazaar in Lahore; shopping malls: Park Towers and Forum in Karachi, etc.)
- Read the exercise on page 116 with the class. Ask them to make a list of the goods and services they and their families have bought/used this week before they complete the exercise.

### Skills Book steps

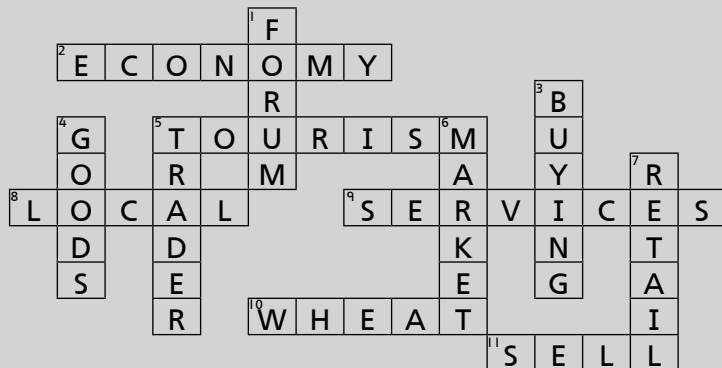
- Ask volunteers to explain how a crossword puzzle should be completed.
- The students should read the clues and write the answers in the crossword puzzle. Encourage them to use the Pupil's Book to help find the answers and spell the words. The glossary of the Pupil's Book will also help.

### Answers to Pupil's Book page 116

Answers will vary.

### Answers to Skills Book page 59

A.



### Further activities

- To learn the new words connected with trade, ask the children to copy the words, read them, then cover them and try to write them again.
- They can then give them to a partner to check in the Pupil's Book.
- To help them learn the words, write them on large pieces of card or paper and put them on a display board along with their meanings.

## Lesson 2: Regional trade

### Learning outcomes

Students should be able to:

- identify and describe the main products of the different parts of Pakistan
- explain how trade is carried out within the country
- explain that goods and services are part of the country's economy

### Resources

- Pupil's Book pages 116–117
- Skills Book page 60 Goods and services

### Pupil's Book steps

1. Explain that a region can mean different things but is always part of a larger area. In this case it means 'part of a country'. Ask:
  - Why do different regions produce very different crops and have different industries? (The crops will depend on the climate, land, and soil. Industry can depend on many factors e.g. the crops that are grown, minerals found in a region, transport, natural features (such as rivers, lakes, mountains, and plains), and on local traditions, skills, and culture.)
2. Ask them to read about regional trade on page 116 and to look at the picture and read the caption. Ask:
  - How does trade help people in different regions? (They can buy goods and services that are not produced in their home region.)Explain that sometimes regions buy goods and services from other regions even when they also produce them.
  - Why do you think they do this? (They might not be able to produce enough at all times, and so face shortages if they don't trade; they might produce different types of a product—different styles of clothes, different sports gear, etc.)
  - How does trade affect our towns and cities? (Offices are built, more people come to work there, and so more buildings are needed. The traffic increases and there is a greater demand for electricity, water, hospitals, education, and other services.)
3. Read page 117 with the class, and ask them to look at the pictures and read their captions. They should then use the chart and pictures to help them answer the following:
  - Can you name an important produce of Balochistan? (coal, gas, or minerals)
  - Which regions produce wheat to sell to other regions? (Punjab, Sindh, Khyber Pakhtunkhwa, and Gilgit-Baltistan)
  - Which is the nation's main banking region? (Islamabad Capital Territory)
  - The students can then complete the exercise on page 117.

### Skills Book steps

1. Tell the students that they are going to learn about the goods and services of the different regions of Pakistan by looking at the chart on this page and then checking it with the chart on page 117 of the Pupil's Book, to find out in which regions each of the goods and services are produced.
2. Read the headings on the chart with them and discuss the completion of the first line: aircraft are produced in Punjab but are not one of the main industries of the other



regions, so only Punjab is marked. Discuss how they can check this using the Pupil's Book. Look at the chart on page 117 then look at the second line of the chart in the Skills Book: only Islamabad Capital Territory is marked. Ask the class to check the Pupil's Book to make sure this is correct. Ask:

- Which crop is listed next in this chart? (barley)
- Where is barley produced? (The students should check with the chart in the Pupil's Book. Barley is produced in Gilgit-Baltistan, so they should mark that column in this chart.) If necessary, complete a few more lines of the chart in the same way with them.

### Answers to Pupil's Book page 117

- A. 1. Punjab, Sindh, Khyber Pakhtunkhwa, and Gilgit-Baltistan  
 2. Sindh and Punjab  
 3. Sindh, Khyber Pakhtunkhwa, Punjab, and Gilgit-Baltistan
- B. Punjab

### Answers to Skills Book page 60

Goods or services	Region					
	Balochistan	Sindh	Khyber Pakhtunkhwa	Punjab	Gilgit-Baltistan	Islamabad Capital Territory
Aircraft				✓		
Banking and finance		✓				✓
Barley					✓	
Cement		✓		✓		
Coal	✓			✓		
Cotton		✓		✓		
Electrical goods				✓		
Fertilizers				✓		
Fruit		✓	✓	✓	✓	
Gas	✓			✓		
Information and communication technology						✓
Machinery		✓		✓		
Maize			✓		✓	
Mangoes		✓				
Minerals	✓			✓		
Petrol						
Plastics		✓				

Rice		✓	✓			
Rock salt				✓		
Sports goods				✓		
Sugar		✓	✓	✓		
Surgical instruments				✓		
Textiles				✓		
Tobacco			✓			
Tourism	✓				✓	
Vehicles				✓		
Wheat		✓	✓	✓	✓	

### Further activities

1. Find out where the goods sold in local markets and shops come from.
2. The students could make their own chart to record these.

## Lesson 3: Exports

### Learning outcomes

Students should be able to:

- explain the term 'export'
- list Pakistan's main exports

### Resources

- Pupil's Book pages 118–119

### Pupil's Book steps

1. Begin the lesson by asking:
  - What are exports? (Goods and services that are sold to another country are called exports.)
  - Do you know what goods and services Pakistan exports? (The students can refer to page 117.)
2. Read the first paragraph of page 118 with the class. Explain that surplus means anything left over that is not needed. Then ask them to read the next paragraph and to look at the picture and read its caption. Discuss the exports of Pakistan namely, some food crops, textiles, and carpets.
3. Tell the students that textiles are our main export but that many other goods are exported and that they can find out about these from the graph. Read the headings and information given on it and point out the numbers on the left hand side that show the value of the exports in millions of US dollars. Ask them to read the list of exports across the bottom of the graph to see which product has the longest coloured column. Ask:
  - Which export was the most valuable in the year 2010 to 2011? (textiles)

They could check the value of our country's textile exports by placing a ruler across the top of the coloured column and looking along it to the number of dollars on the left which is just over \$1 000 million.

- What is our second most valuable export? (foods)
  - Which is the third most valuable export according to this graph? (Petroleum goods and 'other goods' are of about the same value—approximately \$1000 million.) Explain that 'other goods' covers every item of export that is not listed separately.
  - Why do you think exports are often shown on graphs? (It is easy to see at a glance which are the most valuable. It is also easier to compare the changing values of exports from one year to the next if they are presented on a graph.)
4. Read the exercise on page 119 with the students and ask them to complete it using information from the graph.

### Answers to Pupil's Book page 119

- A.
1. Pakistan exports this building material.
  2. Pakistan's main export
  3. We import and \_\_\_\_ petroleum goods.
  3. Pakistan's second largest export
  4. An important export counted separately from textiles
  5. Shoes are made from this export.

	C	E	M	E	N	T	
T	E	X	T	I	L	E	S
E	X	P	O	R	T		
	F	O	O	D	S		
	C	A	R	P	E	T	S
L	E	A	T	H	E	R	

- B. The students might be surprised to learn that Pakistan imports as well as exports petroleum goods. Explain that there are different types of petroleum goods such as waxes, kerosene, liquid petroleum gases etc. At times Pakistan might need to import some of these but at other times is able to export them; Or the surplus might reduce and there might be a shortage at other times.

### Further activities

1. The students could choose an export to find out more about e.g. the countries it is exported to. They could track an export from production to transport (road, rail, air, sea), arrival at the destination country, and then sale to the companies that buy it.
2. They could make a chart or scrapbook using the information and pictures of the exports, countries the export is sent to, and the means of transportation.

## Lesson 4: Imports

### Learning outcomes

Students should be able to:

- explain the term 'import'
- list Pakistan's main imports
- describe how our choices of goods affect the environment

## Resources

- Pupil's Book pages 119–121
- Skills Book page 63 Values

## Pupil's Book steps

1. Begin the lesson by asking:
  - What are imports? (The goods and services bought from another country are called imports.)
  - Do you know what goods and services Pakistan imports? (The students can find out from page 120.)
2. Read the section on Imports from page 119 with the class. Ask:
  - What are two of the goods that Pakistan imports? (Pakistan imports wheat and sugar.)
  - Does this surprise you?
  - Why? (The students might remember from Pupil's Book page 117 and Skills Book page 60 that many regions of Pakistan produce wheat and sugar. However, we need more of these than we are able to produce. Point out that this might not always happen. There might be times when we have enough.)
  - Can you name a port in Pakistan where imports arrive in containers? (Karachi)
3. Ask them to read page 120, including 'It's a Fact' and to study the graph. This will enable them to find the answers to the following questions:
  - What is Pakistan's most valuable export? (petroleum goods)
  - What is the second most valuable export? (Other goods. Explain that 'other goods' covers every import that is not listed separately.)
  - What is the third most valuable export? (foods)
  - What other imports are shown on the graph? (Remind them that the numbers on the left hand side of the graph show the value of the imports in millions of US dollars. Ask them to read the list of imports across the bottom of the graph and check the value of the imports by placing a ruler across the top of each coloured column and looking along it at the number of \$millions on the left.)
  - Why are imports often shown on graphs? (It is easy to see which are the most valuable. It is also easier to compare the changing values of imports from one year to the next if they are presented on a graph.)
4. Together, read the exercise on page 120 and then ask the students to complete it using information from the graph.

## Skills Book steps

1. Discuss the effect on the environment if we buy locally-produced goods or goods brought from other regions or overseas. The farther goods are transported, the more fuel is used to bring them to us. The more fuel we use, the more gases are released into the air. Many of these gases harm plants, animals, the land, and us.
2. Read the introduction with the class and ask them to choose ten goods their families have bought. They should try to find out where each item came from by reading the packaging and labels, or their parents might know, especially if they are local goods. They can complete section A at home.
3. The next day, invite the students to share their research. Different students could tell the class about one item they checked. They might be able to help one another by sharing information about any goods whose sources were unknown to them.

4. Section B will need more research. You could get this from local organizations for trade. The final part of the exercise is a sentence for the students to complete about how they can help the environment when they buy things. Ask them to choose one locally-produced item that they can always buy instead of goods from farther away.

### Answers to Pupil's Book page 121

- A.
1. petroleum goods
  2. other goods—a combination of many different goods on every import that is not listed separately
  3. foods
  4. Answers will vary.
  5. about US\$ 4,000 million
- B. There are many different kinds of chemicals and Pakistan might need to import some of these. Alternatively we might have a surplus of others to export. There is a possibility that the surplus might reduce sometimes and there might be a shortage at other times.

### Further activities

1. The students could choose an import to find out more about, maybe an item they have at home.
2. They could make a diagram to show where they got it, where it came from before that, and how it arrived in Pakistan from another country.
3. They could trace the transportation journey on a map of the world.

## Lesson 5: Trading partners

### Learning outcomes

Students should be able to:

- define the term 'trading partners' and find out about Pakistan's trading partners namely USA, China, and the European Union
- identify and list the main goods Pakistan trades with the USA, China, and the European Union

### Resources

- Pupil's Book pages 121–122
- Skills Book pages 61 and 62 Pakistan's exports
- a political map of the world (showing the names of countries)

### Pupil's Book steps

1. Tell the class that there are trading partnerships between countries around the world. This means that the countries have made agreements regarding trade. Although individual companies trade with others in different countries, governments also negotiate trading agreements that help. (See 'It's a Fact' on page 120.)
2. Ask the students to look at the map on page 121. Explain that the red patches show countries that trade with Pakistan. Ask them to name as many of these countries as they can. They could first try this without looking at a map that has the countries' names written on it to see how many they can recognize.

3. Read 'Trading partners' on page 121 with the class. Ask:
  - Which countries are Pakistan's main trading partners? (the USA, China, and the European Union)
  - What are the main exports to the USA? (clothing, household goods, sports goods, and camping goods)
  - What are the main imports from the USA? (raw cotton, tanks, weapons, ammunition, and parts for military equipment; also steel-making materials, and civilian aircraft)
  - Why does Pakistan import cotton even though it produces a lot of cotton? (The USA is a very large cotton producer. Pakistan's skilled textile workers produce very large amounts of cotton goods, including clothing and household linens. The USA does not have this tradition and so it exports cotton and imports the goods made from it.)
4. Ask the students to read about Pakistan's trading partnerships with China and the European Union on page 122. Ask:
  - Which country imports marble from Pakistan? (China imports marble from Pakistan.)
  - Which trading partner imports rice from Pakistan? (the European Union)
  - Which trading partner imports seafood from Pakistan? (China)
5. The students can then complete the exercise on page 122.

### **Skills Book steps (Page 61 Pakistan's exports)**

1. Ask the class to read the introduction to this page. Tell them that they will find the answers in this unit in the Pupil's Book.
2. Help them to match the first picture to the trading partners that Pakistan exports leather to, i.e., China and the European Union. They should draw lines to link the picture of leather to China and Europe. Tell them that they will get this information from the Pupil's Book on page 122. Ask them to find out to which countries Pakistan exports textiles and to draw lines to join Pakistan to those places.
3. The students can then complete the exercise.
4. Ask them to add arrowheads to the lines to show the direction in which the goods are transported (away from Pakistan).

### **Skills Book steps (Page 62 Pakistan's imports)**

1. Ask the class to read the introduction to this page and tell them that they can find the answers in this unit in the Pupil's Book.
2. Help them to match the first picture to the trading partner that Pakistan imports aircraft from, namely China. They should draw lines to link the picture of the plane to China. Ask them to look for this information in the Pupil's Book page 122. Ask them to find out where Pakistan imports machinery from and to draw lines to join Pakistan to these places.
3. They can then complete the exercise.
4. Ask the students to add arrowheads to the lines to show the direction in which the goods are transported (towards Pakistan).

### **Answers to Pupil's Book page 122**

- A. 1. any three European countries marked on the map: France, Germany, Ireland, Italy, Portugal, the Netherlands, Norway, Spain, Sweden, United Kingdom
2. Yes. Chile is one of Pakistan's export partners.
3. any three African countries that are marked on the map: Egypt, Ghana, Ivory Coast, Kenya, Mozambique, Nigeria, South Africa

4. any three Asian countries that are marked on the map: Afghanistan, Bahrain, Bangladesh, China, India, Indonesia, Japan, Kuwait, Malaysia, Oman, Qatar, Russia, Saudi Arabia, Sri Lanka, Iran, the Philippines, Thailand, Turkey, United Arab Emirates, Yemen
  5. Yes. There is a red marker on the map for Japan.
- B. In 2006, Pakistan and China signed a free trade agreement. They stopped charging taxes on imports and exports and made trade easier in other ways.

### Further activities

1. Take newspapers such as *Dawn* to school and help the students find any articles about overseas trade. They could make a class display of these.
2. Once you have a good collection of articles, write some questions on cards and display them with the newspaper articles. The students could read the articles to find the answers during some spare time when they finish a piece of work. Encourage them to read with a friend so that they can help one another.
3. Students should attempt the CD activity.

### Answers to Pupil's Book page 123

A.

Export		Regions
i	textiles	Punjab
ii	foods	Sindh, Khyber Pakhtunkhwa, Gilgit-Baltistan
iii	petroleum goods (also 'other goods'—not listed)	Sindh, Punjab

B.

	Trading partner	Exports	Imports
i	China	cotton fabric, cotton thread, mineral ores and ash, marble, chemicals, leather, fish, seafood	electrical equipment, machinery, military equipment and aircraft, iron and steel, fertilizers
ii	European Union	textiles, rice, leather, carpets, fruit	industrial machinery, power machinery, telecommunication and broadcasting equipment, chemicals, medicines, medical products, metal ores, scrap metal
iii	USA	clothing, household goods, sports goods, camping goods	raw cotton, tanks, weapons, ammunition, parts for military equipment, steel-making materials, civilian aircraft

- C. Pakistan produces raw cotton but has a very large textile industry and needs more cotton for this than produced. Pakistan then exports clothing and household goods made from cotton. Those made from other materials are also exported.
- D. Answers will vary.

## Instructions

1. Photocopy the Check-up test for Units 1 and 2—one for each student.
2. Explain that this test will help you to find out how much the students have understood. It is **important** that you stress the fact that it does not matter if they get some answers wrong.
3. The students should put the Pupil's and Skills Books in their bags so that they do not refer to them while solving the test.
4. Distribute a copy of the test to each student. They will need a pencil and colour pencils. Ensure that their names are written at the top of the sheet. Read the instructions aloud for each stage so that the students know what to do.
5. Ask them to attempt the test on their own and without helping each other. You may help them to read the words, but do not give the answers.
6. Do not pressurize them to finish within a set time limit. Let those who finish early draw a picture of their choice on the back (which you will not mark).
7. When the students have finished, take up their work and mark it out of ten.
8. Photocopy the record sheet. If there are more than thirty in the class, make two copies.
9. Record the students' marks so that you can see which ones are facing difficulties, and take steps to help them.
10. **PLEASE DO NOT TELL THE STUDENTS THEIR MARKS.** At this stage of their lives, they do not need to know as a low score will serve to demotivate them.
11. If you wish, you may share the marks with parents at the Parent(s)/Teacher meetings, but stress the fact that students who are slow in reading may not be able to document their understanding in the test; at this level, the situation changes rapidly.

### Note:

It is important to review these instructions before every Check-up Test.



# Check-up Test 1

## Grade 5, Units 1 and 2

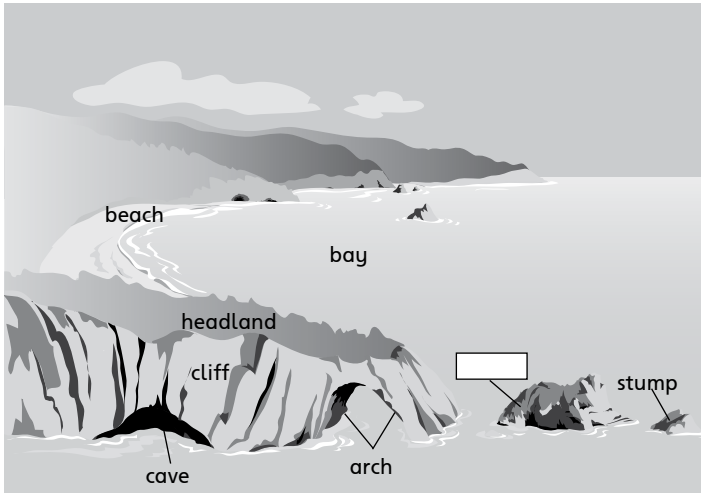
Name: \_\_\_\_\_

Tick the box for the correct answer.

1. Karachi is the largest city in Pakistan.

- a) false
- b) true

2. Look at this diagram of common features found on a coast. Add the missing label.



3. Tick the box that completes the statement correctly.

Exports are \_\_\_\_\_.

- a) goods and services that are sold to other countries.
- b) places that are no longer ports.
- c) goods and services bought from other countries.
- d) goods and services of the native country.

4. Tick all the services.

- a) food
- b) hospitals
- c) schools
- d) street cleaning

5. Sindh Province has a large desert. What is it called?

- a) Cholistan Desert
- b) Thal Desert
- c) Thar Desert
- d) Kharan Desert

6. Which province is the largest in Pakistan?
- a) Sindh
  - b) Punjab
  - c) Khyber Pakhtunkhwa
  - d) Balochistan
7. In what way is the climate in Balochistan different from the rest of Pakistan?
- a) It has more rain.
  - b) It is hotter.
  - c) It does not have a monsoon season.
  - d) It has more clouds.
8. Mining is very important in Balochistan. Tick **two** minerals that are mined here.
- a) opals
  - b) copper
  - c) diamonds
  - d) iron ore
9. An open-pit mine is \_\_\_\_\_.
- a) a place where minerals are dug out from the ground using tunnels.
  - b) a place where minerals are dug out of the ground by making a large opening in the ground.
  - c) a coal mine.
  - d) a gold mine.
10. Tick all the fossil fuels.
- a) coal
  - b) oil
  - c) wood
  - d) gas

Marks out of 10: \_\_\_\_\_

# Check-up Test 2

## Grade 5, Units 3 and 4

Name: \_\_\_\_\_

Tick the box for the correct answer.

1. What is a settlement?
  - a) a country
  - b) a map
  - c) a place where people live
  - d) a planet
  
2. Tick **two** boxes to say why people choose to settle in a place.
  - a) no fresh water
  - b) good soil
  - c) fresh water
  - d) poor soil
  
3. Tick the correct sentences.
  - a) Mountains are areas of high land.
  - b) Mountains are areas of low land.
  - c) Deserts are areas of little or no rainfall.
  - d) Deserts are areas of plenty of rainfall.
  
4. Gambia is the smallest country in Africa.
  - a) false
  - b) true
  
5. Tick **two** reasons why people move from the country to live in the city.
  - a) to find better work
  - b) to have a quieter life
  - c) to see more wildlife
  - d) to get a better education
  
6. Climate change means a change in the world's normal climate patterns.
  - a) true
  - b) false

7. Tick two things that might happen if the world's climate gets warmer.

- a) It will snow more.
- b) Sea levels will rise and this will cause flooding.
- c) More areas will become deserts.
- d) More plants will grow.

8. Tick **two** things that people can do to help stop global warming.

- a) less use of cars
- b) more use of cars
- c) plant some trees
- d) use more electricity

9. Solar power is \_\_\_\_\_

- a) electricity created by using water.
- b) food made with the help of the Sun's energy.
- c) electricity created by using plants.
- d) electricity created by using sunlight.

10. Which of these are renewable energy resources?

- a) oil, coal, and gas
- b) wind, the Sun, and water

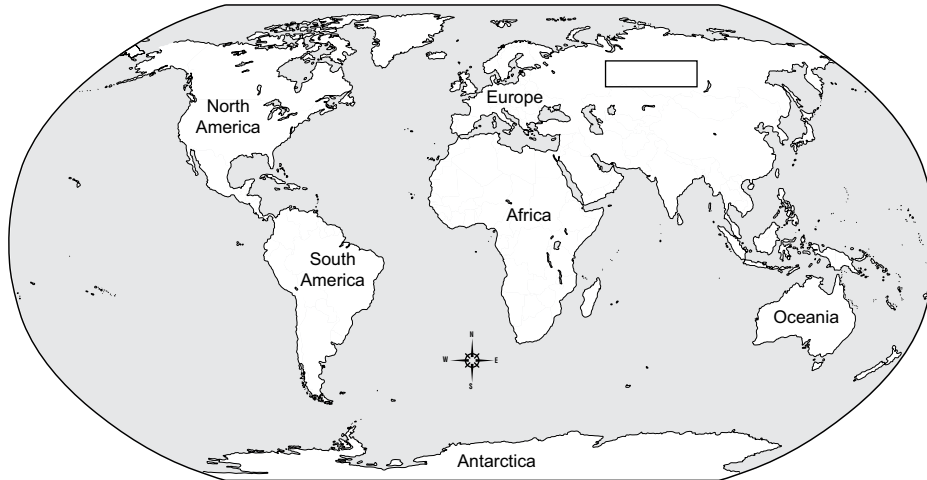
Marks out of 10: \_\_\_\_\_

# Check-up Test 3

Grade 5, Units 5 and 6

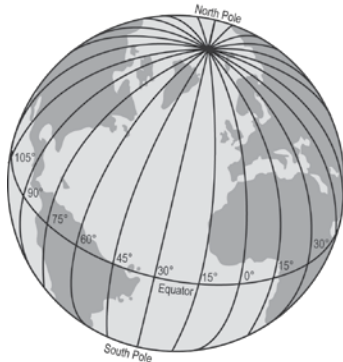
Name: \_\_\_\_\_

1. Look at this map of the world's continents. Name the missing continent.



2. What are the lines on this globe called?

- a) longitude
- b) latitude



3. What type of climate does Antarctica have?

- a) polar, very cold and dry all year
- b) mountains, very cold all year
- c) tropical, hot and wet all year
- d) arid, hot and dry all year

4. Where are the world's tropical rainforests found?

- a) near the North and South Poles
- b) in desert regions
- c) in cool, temperate regions
- d) near the Equator

5. What does this scale on a map mean?

1 cm = 200 km

- a) 1 cm is the same measurement as 200 km
- b) 1 cm measured on the map = 200 km on the ground

6. What currency is used in Pakistan?

- a) dollar
- b) euro
- c) rupee
- d) pound

7. Roshaneh Zafar is well known because she \_\_\_\_\_.

- a) borrowed money to run a shop in Lahore.
- b) set up the Kashf Foundation to help poor people by lending them money.

8. What does credit mean?

- a) buying something now and paying for it later
- b) taking money out of your bank account to buy something

9. Tick two ways in which banks can help us.

- a) They keep our money safe.
- b) They give us money whenever we need it.
- c) They can lend us money.
- d) They give our money away to the poor.

10. List five jobs people can do to earn money.

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Marks out of 10: \_\_\_\_\_

# Check-up Test 4

## Grade 5, Units 7 and 8

Name: \_\_\_\_\_

Tick the box for the correct answer.

- Which of these European countries did not have an East India Company with a trading post in the subcontinent in the 18<sup>th</sup> century?
  - Holland (The Netherlands)
  - Britain
  - Portugal
  - Italy
- Which kingdom did Hyder Ali rule?
  - Mughal
  - Mysore
  - Maratha
  - Durrani
- Which people did Hyder Ali think were the greatest danger to India? (He defeated them at the Battle of Pollilur.)
  - The British
  - The Portuguese
  - The Marathas
  - The French
- Who was known as the 'Tiger of Mysore'?
  - Hyder Ali
  - The Nizam of Hyderabad
  - Ranjit Singh
  - Tipu Sultan
- In 1799 Tipu Sultan died fighting in \_\_\_\_\_.
  - Chittoor.
  - Pollilur.
  - Seringapatam.
  - the third Battle of Panipat.

6. Which part of the subcontinent did the British capture in 1839, giving them an empire here?
- a) Bengal
  - b) Islamabad Capital Territory
  - c) Balochistan
  - d) Sindh
7. How did the British East India Company raise money to build roads, railways, and the electric telegraph and pay their army in the subcontinent?
- a) They made people here pay more taxes.
  - b) They sold gold.
  - c) They made people in Britain pay more taxes.
  - d) They held a lottery.
8. What did the Indian soldiers in the British army not like about the new guns they had to use?
- a) The cartridges were greased with animal fat.
  - b) The guns did not work properly.
  - c) No one showed them how to use the guns.
  - d) The guns were too heavy.
9. Where did the British officers punish the Indian soldiers who were not willing to use the new guns?
- a) Delhi
  - b) Seringapatam
  - c) Meerut
  - d) Karachi
10. Who led an army to fight the British at Gwalior and died in battle?
- a) Bahadur Shah Zafar
  - b) The Rani of Jhansi
  - c) Tatya Tope
  - c) Abdul Karim

Marks out of 10: \_\_\_\_\_



# Check-up Test 5

## Grade 5, Units 9 and 10

Name: \_\_\_\_\_

1. Draw lines to match the dates to the events:

the Amritsar massacre

All India Muslim League was founded.

The Indian National Congress was founded.

Pakistan became a new nation.

1947

1885

1906

1919

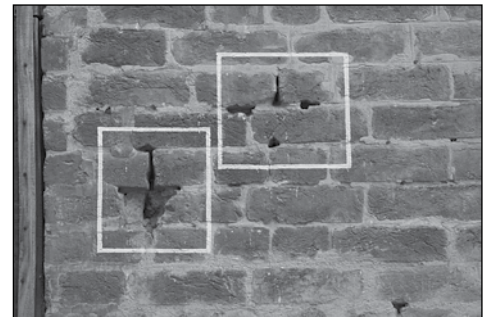
2-5. Write the correct caption and the name of the place under each picture.

Choose from:

conference about the government of the subcontinent

the killing of Muslim and Hindu families at a protest meeting by British soldiers

Aligarh Muslim University built by Syed Ahmed Khan



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

6. Who was the inventor of the electric light bulb?

- a) Alexander Graham Bell
- b) Thomas Edison
- c) Henry Ford
- d) George Eastman

7. The first car with a petrol engine was made in \_\_\_\_\_.

- a) the USA.
- b) Britain.
- c) France.
- d) Germany.

8. The Brownie was a \_\_\_\_\_.

- a) phone.
- b) car.
- c) train.
- d) camera.

9. The Wright brothers built the first \_\_\_\_\_ that worked.

- a) television
- b) plane
- c) computer
- d) phone

10. Colossus was a \_\_\_\_\_.

- a) computer.
- b) car.
- c) plane.
- d) camera.

Marks out of 10: \_\_\_\_\_

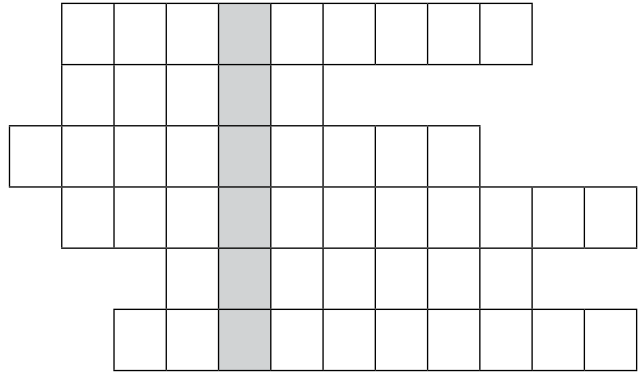
# Check-up Test 6

## Grade 5, Units 11 and 12

Name: \_\_\_\_\_

Complete this puzzle about the media. The shaded squares spell the name of something that helps to make railways safe.

1. Quaid-i-Azam Muhammad Ali Jinnah founded a \_\_\_\_\_ named *Dawn*.
2. People used to call it the 'wireless'.
3. The electric \_\_\_\_\_ sent messages along wires in code.
4. This sends out television or radio programmes.
5. He built the radio broadcasting transmitter at Peshawar and gave it to the radio station there.
6. John Logie Baird invented it.



Write the missing words:

1. Trade means b\_\_\_\_\_ and s\_\_\_\_\_.
2. A place where people trade is called a m\_\_\_\_\_.
3. People buy g\_\_\_\_\_ and s\_\_\_\_\_.
4. Pakistan exports goods to other countries. Pakistan's main export is t\_\_\_\_\_.
5. Pakistan imports goods from other countries. Its main import is p\_\_\_\_\_ goods.
6. Countries we buy from or sell to are called our t\_\_\_\_\_ p\_\_\_\_\_.

Marks out of 10: \_\_\_\_\_

# Answers for Check-up Tests

## Units 1 and 2

1. b) true
2. stack
3. a) goods and services that are sold to other countries.
4. b) hospitals                      c) schools                      d) street cleaning
5. c) Thar Desert
6. d) Balochistan
7. d) It does not have a monsoon season.
8. b) copper                      d) iron ore
9. b) a place where minerals are dug out of the ground by making a large opening in the ground.
10. a) coal                      b) oil                      d) gas

## Units 3 and 4

1. c) a place where people live
2. b) good soil                      c) fresh water
3. a) Mountains are areas of high land.  
c) Deserts are areas of low or no rainfall.
4. b) true
5. a) to find better work    d) to get a better education
6. a) true
7. b) Sea levels will rise and this will cause flooding.  
c) More areas will become deserts.
8. a) less use of cars                      c) plant some trees
9. d) electricity created by using sunlight.
10. b) wind, the Sun, and water

## Units 5 and 6

1. Asia
2. a) longitude
3. a) polar: very cold and dry all year
4. d) near the Equator
5. b) 1 cm measured on the map = 200 km on the ground
6. c) rupee
7. b) set up the Kashf Foundation to help poor people by lending them money.
8. a) buying something now and paying for it later
9. a) They keep our money safe.                      c) They can lend us money.
10. Check that each answer is a job that can earn money.

## Units 7 and 8

1. d) Italy
2. b) Mysore
3. a) The British
4. d) Tipu Sultan
5. c) Seringapatam.
6. d) Sindh
7. a) They made people here pay more taxes.
8. a) The cartridges were greased with animal fat.
9. c) Meerut
10. b) The Rani of Jhansi

# Answers for Check-up Tests

## Units 9 and 10

1.

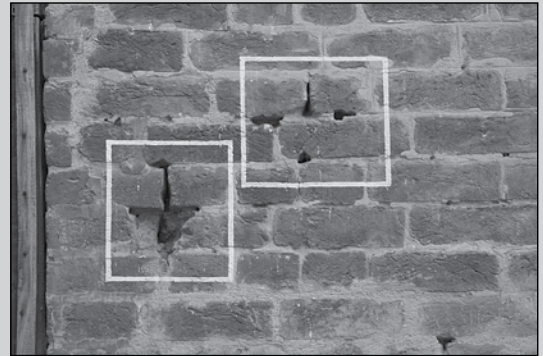
- The Amritsar massacre
- All India Muslim League was founded.
- The Indian National Congress was founded.
- Pakistan became a new nation.
- The Lucknow Pact meeting

- 1947
- 1916
- 1885
- 1906
- 1919

2-4.



Aligarh Muslim University built by Syed Ahmed Khan



the killing of Muslim and Hindu families at a protest meeting by British soldiers



conference about the government of the subcontinent

# Answers for Check-up Tests

6. b) Thomas Edison
7. d) Germany.
8. d) camera.
9. b) plane
10. a) computer.

## Units 11 and 12

1. Quaid-i-Azam Muhammad Ali Jinnah founded a \_\_\_\_\_ named *Dawn*.
2. People used to call it the 'wireless'.
3. The electric \_\_\_\_\_ sent messages along wires in code.
4. This sends out television or radio programmes.
5. He built the radio broadcasting transmitter at Peshawar and gave it to the radio station there.
6. John Logie Baird invented it.

	N	E	W	S	P	A	P	E	R			
	R	A	D	I	O							
T	E	L	E	G	R	A	P	H				
	T	R	A	N	S	M	I	T	T	E	R	
			M	A	R	C	O	N	I			
			T	E	L	E	V	I	S	I	O	N

1. Trade means **buying** and **selling**.
2. A place where people trade is called a **market**.
3. People buy **goods** and **services**.
4. Pakistan exports goods to other countries. Pakistan's main export is **textiles**.
5. Pakistan imports goods from other countries. Its main import is **petroleum** goods.
6. Countries we buy from or sell to are called our **trade partners**.

# Record of Assessments

Grade \_\_\_\_\_ Year \_\_\_\_\_ Teacher: \_\_\_\_\_

	Name of student	Test 1 Date:	Test 2 Date:	Test 3 Date:	Test 4 Date:	Test 5 Date:	Test 6 Date:
1.							
2.							
3.							
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11.							
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Name of student	Test 1 Date:	Test 2 Date:	Test 3 Date:	Test 4 Date:	Test 5 Date:	Test 6 Date:
16.						
17.						
18.						
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