

## Book 3A, Unit 4 Soil and Rocks

### Lesson 2 Rocks

#### Science Objectives

By the end of this lesson, students will be able to:

- Sort stones and rocks into groups.
- Describe the common features of stones and rocks.
- Understand the many ways that stones and rocks are used.

#### Language Objectives

In this lesson, students will have the opportunity to use:

- Words relating to soil, stones and rocks: **rock, rough, smooth, speckled, striped**
- The sentence structure: "These stones are (round/sharp)." to describe the common features of some stones.

#### Materials

<b>Review Activity</b> <ul style="list-style-type: none"><li>- an image of soil</li></ul>	<b>Stimulus Activity</b> Images of different mountain ranges (e.g. Himalayas, Dolomites, Andes)
<b>Key Words and Activity 1</b> <i>per group:</i> <ul style="list-style-type: none"><li>- A selection of different types of rocks, with different colours, shapes, textures and sizes (if possible, include <i>rough, smooth, grey, speckled</i> and <i>striped</i>)</li></ul>	<b>Activity 2</b> <i>per group:</i> <ul style="list-style-type: none"><li>- a bag or other container</li><li>- a large plastic sheet</li></ul>

#### Review Activity

##### Books closed!

##### Review kinds of soil

- Display an image of some soil on the board. Ask: **What is it?** (It is) **soil**. **What can you see in soil?** (students' own answers)
- Ask: **There are different kinds of soil**. **How are they different?** (students' own answers)

#### Stimulus Activity

##### Open your books

- Open the SB at p46. Draw students' attention to the picture and read the question: **Look at the mountains. What are they made of?** (The mountains are made of) **rock**.
- Encourage students to discuss how mountains are made of different kinds of rock by asking questions such as: **Are all mountains the same? How are they different? Why are they different?**

Students may mention that mountains are different because they are gradually reshaped over a long period of time by the weather. To guide their thinking, you could also display images of different mountain ranges from around the world, such as the Himalayas, Dolomites and Andes.

- Say: **Today, we are going to find out about rocks.**

## Key Words

### Teacher Tips

In this lesson, *Key Words* and *Activity 1* could be combined; or, you may do *Activity 1* with the class before *Key Words*.

### Open your books

- Open the SB at p46 and draw students' attention to the key word.
- Write the key word on the board: **rock, rough, smooth, speckled, striped**, with *rock* at the centre and the others around it.
- Read or play the recording of the key word and ask students to repeat.
- Use the rocks you prepared to help students understand their meanings, or draw under the words on the board to show what they mean, e.g. *speckled* and *striped*.

## Activity 1

### Books closed!

- Put a selection of different rocks on a table at the front of the classroom. Tell students to take it in turns to look at and feel each rock.
- When students are sitting down again, ask: **How do the rocks look? How do the rocks feel?** (*students' own answers*) Allow students to answer in Chinese.

### Open your books

- Open the SB at p47 and draw students' attention to the list of descriptive words.
- Nominate a student to find a rock that is rough. Check their chosen rock, write *rough* on the board and say: **It feels rough**. Pass the rock around for other students to feel.
- Repeat the previous step for the other descriptive words: *smooth, grey, speckled, striped*.
- Tell students to complete the activity by drawing lines.
- Check answers as a class.

## Extension

Ask students whether rocks make sounds. Encourage students to share ideas, then display images showing situations where sound can be made with rocks:

- someone walking on a pebble beach
- rocks tumbling down the side of a quarry
- small stones in a bottle being used as a percussion instrument (打击乐器, e.g. a shaker).

## Activity 2

### Books closed!

- Put students into groups and take them outside to collect some stones and rocks.

- In the classroom, tell students to put their stones and rocks on a table.
- Ask: **How do the rocks look? How do the rocks feel?** Give students time to discuss in their groups.
- Nominate a few groups to share their ideas, encouraging them to think about how they might group their rocks together by asking questions such as: **Which rocks are the same colour? Do you have more than one smooth rock? What shapes are your rocks?**

### Open your books

- Open the SB at p48 and draw students' attention to the picture. Ask: **How do you group your rocks together?** Give students time to discuss in their groups.
- Nominate a few groups to share their ideas.
- Tell students to complete the activity by drawing their results.

### Activity 3

#### Open your books

- Open the SB at p49 and draw students' attention to the pictures. Encourage students to discuss how we use stones and rocks by asking questions such as: **What is in the picture? What is it made of? How was it made?**
- Tell students to think of other ways we use stones and rocks and to complete the activity by drawing their ideas (e.g. to build roads, to make jewellery, to make tools).

### Now I Know ...

- Ask: **How do rocks look and feel?** (students' own answers)
- Ask: **How do we use rocks?** (students' own answers)
- Read and/or listen to the recording and ask students to repeat: *There are many different kinds of rocks. Rocks have many uses.*

### Find Out More!

- Open the SB at p50. Draw students' attention to the picture and ask: **How do these stones look? Where can you see them?** (students' own answers) Students may mention the different colours of the stones, and the way they sparkle as the light shines through them.

### Extension

Set students the challenge of finding at least five different rocks or stones in and around their homes. If possible, they can bring them to the next class or take photos to show their classmates. How many different kinds of rock and stone do the students find between them?