

## Unit 5 Clouds and rainfall

### 1. Whole class instruction

**Objective:** Students will understand how cumulus clouds form, and explore some different types of clouds. Students will learn techniques for measuring and charting rainfall, and why it is important to keep track of rainfall.



#### 1.1. Go to Textbook pages 18-19

**“There are three main kinds of cloud. You can tell the difference between them by how they look.”**

- ▶ Show students some photos of cumulus, stratus and cirrus clouds. You can use weather picture gallery picture 21 (cirrus), 39 (stratus) and 20 (cumulus), or pictures from pages 18-19 and 30-31 of the textbook. Point out the differences in the types of clouds.
- ▶ Discuss how cumulus clouds form when warm air rises up, carrying moisture (water vapour) with it. When the air reaches a certain height, the air cools and the moisture condenses to form bubbly cumulus clouds.

A selection of pictures from the weather picture gallery

Pictures from the weather picture gallery: 16 (London), 47 (Miami), 76 (Los Angeles) and 92 (Bombay)

#### 1.2. Go to Textbook pages 42-43

**“Why is it important to measure rainfall?”**

- ▶ Discuss some of the reasons why it is important to know how much rain has fallen. These include: to be able to predict and plan for droughts or floods; to know when is the best time to plant crops; to know if you need to start saving water, etc.
- ▶ Ask students to think up some ways to measure rainfall. When they suggest catching the rain in a container, encourage them to think up some problems with this method and how to solve them. These could include a need to hold the container down so it does not blow away or tip over, and the need for a scale.

- ▶ Show students the picture of a rain gauge on page 42 of the textbook and discuss what makes this a good rain gauge.
- ▶ Show students the rainfall charts on page 43 of the textbook. Point out that this is simply a way to record the amount of rainfall over a whole year.

## 2a. Group exploration

### 2.1. Raingauge



- ▶ Students can construct a simple raingauge using milk or yogurt cartons. They should place the cartons at various locations around the school grounds. After it rains, students can bring the cartons in and pour the water into a beaker, graduated cylinder or measuring cup to determine how many millilitres of rain fell at each location. Students can then compare how much rain fell at each location and what may have affected the amount of rain collected.

(include sheltered locations such as by a school wall, so they can see how important it is to have an open location).

## 2b. Literacy activity

### Unit 5: Floods Comprehension workbook

- ▶ This workbook describes a flood in Bangkok, and how this affects ordinary people. You may like to point out to students that Bangkok has wet and dry seasons, so this flood occurred in the wet season.

### Comprehension workbook 5 Flood

## 3. Plenary session

- ▶ Review the types of clouds. You may like to show students photos of clouds and ask them what types they are. Review how clouds are formed. You may like to use the illustration on page 18, but with the words removed. Ask students to describe what is happening in the illustration.

## 4. Further work/homework

- ▶ Students can look at the Creative Topic: Pakistan Floods. You may then like to ask them questions about the book and photos, such as: What caused the floods?; What kind of damage was done?; and What did people do when the floodwaters rose? You may also want students to write answers to these questions as a writing activity.

Creative Topic book  
Pakistan floods