



## Conserving Water in the Desert

### Background

Animals that live in dry environments need to conserve water, because it is essential to their survival. Such animals have adaptations, such as specially adapted body parts or instinctive actions, that assist them in preventing water loss. Use the following activity to devise ways to prevent a desert animal from losing water.

### What you need:

- Small sponges and plastic plates
- A balance or scale
- A supply of water.

### What to do:

- Working in small groups, each group will be provided with a saturated sponge on a plate. Record the weight of the sponge and plate.
- Think about what may cause the sponge to lose water. What could be done to stop the sponge from losing water? Manage your sponge for 24 hours as if the sponge were an animal needing to conserve its water. Your 'animal' must remain outdoors for at least four hours to feed.
- Plan a water conservation strategy and write down what you think will happen. Make regular observations during the 24-hour period of the experiment.
- At the end of 24 hours weigh the sponge and plate. Compare this weight with the original weight and comment on the results as if the sponge were a real animal.
- A control sponge and plate will be left outdoors. Compare your results with it.
- As a class we will discuss your methods and results, and talk about how the experiment relates to adaptations for desert survival in animals and plants.

### Questions to answer

- Which animal (sponge) lost the most/least water over the 24-hour period? Why?
- What are some ways that animals lose water (through sweating, panting, faeces, urine)?
- Why do we sweat and how does sweating make us cooler?
- What are ways in which animals can conserve water?

