Differentiation
Group activity
Support children by giving them prompts such as: *How does the animal feed/move/defend itself?* Challenge children with a brain-teaser: *Which animal is responsible for the greatest number of human deaths on Earth?* Perhaps they will be surprised when you tell them that it is the mosquito. *What special features does it have?* Leave them to find this out, using reference books or a CD-ROM, such as Encarta.

and ask them to suggest what features make it suited to a life in the desert. Write the suggestions as a brainstorm around the word 'Cactus'. Ideas might include: no true leaves (the leaves of cacti have changed to become spines which reduces water loss); a thick fleshy stem for storing water; long roots that can reach down to water trapped in the rocks; furrows in the stem to channel water and hold the tiny breathing pores; spines to ward off grazing animals. Tell the children that all the special features that they have mentioned are called adaptations and these help a plant or animal to survive in its habitat. Write the word 'Adaptations' under the cactus brainstorm.

Now suggest a seal as another example of an organism that is suited to its environment. Ask the children to tell you what special adaptations the seal displays (see Background for ideas.)

GROUP ACTIVITY

The children should work in pairs to choose an animal or plant from the resource cards. On a sheet of A3 or sugar paper, they should draw a picture (or cut out and stick pictures from an old book or magazine) of the animal or plant they have chosen. Make this more fun by including dangerous animals such as a great white shark, a piranha fish, a golden eagle or a Portuguese man o' war. Among the plants, include a Venus fly-trap or another 'carnivorous' plant – if you have specimens available, so much the better! Around each drawing, the children should label the special adaptations.

ASSESSMENT

You may want to ask each pair to present their chosen example to the group. Check that they can name appropriate adaptations and explain how these help the organism to survive.

PLENARY

Ask the class: *Humans are relatively defenceless as they lack claws and sharp teeth, so why have we been quite successful as hunters?* (Because of our behavioural adaptations: we can work and communicate in teams, and invent weapons. Our hands are physically suited to holding and using tools.)

Discuss how 'carnivorous' plants such as the Venus fly-trap, sundew and bladderwort are able to survive in nutrient-poor soils. They still make their own food by photosynthesis; but by snacking on small insects, they obtain the additional nitrates they need for healthy growth.

OUTCOME

- Recognise features of plant and animal species that help them to survive in their habitats.

LINKS

History: early humans.

ENRICHMENT

Lesson 16 Surveying techniques

Objective
- To use simple environmental surveying techniques.

Vocabulary
quadrat, line transect, abundance, distribution, vegetation, estimate

RESOURCES

Main activity: Samples of the leaves of the most common plant species found in your study area; a quadrat frame (see Background); photocopiable page 48 (also 'Surveying techniques' (red) available on the CD-ROM).
Group activity: Quadrat frames (one per pair, ideally 25cm × 25cm); record sheets (one per pair) with six 5 × 5 squares drawn on squared paper; long tape measures; field identification guides for wild flowers; squared paper; clipboards.