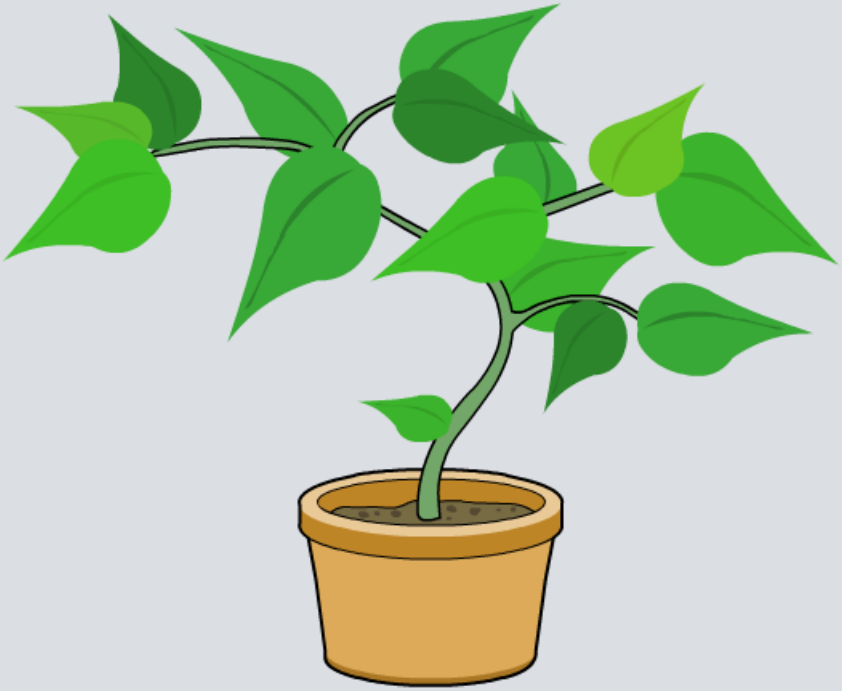
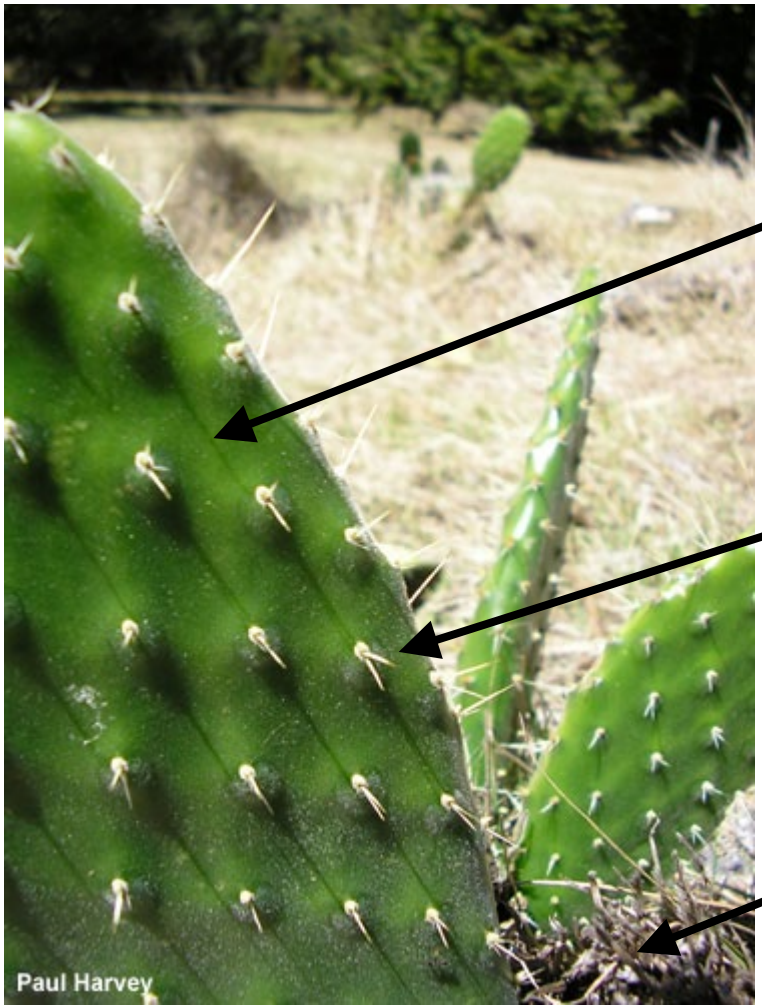
Plant Adaptations



How is a cactus adapted?

How is a cactus adapted to life in a very hot, dry climate?



water stored in a **fleshy stem**, and a **thick, waxy surface** reduces water loss

leaves are **narrow spines** to reduce water loss and protect from predators

roots are either **very deep**, or **shallow and widespread** to catch surface water

What do flowers do?

Flowers enable plants to reproduce sexually. For this to happen, pollen from one flower must be carried to another flower – either on the same plant or on a different plant. This is called **pollination**.

In what ways can pollination take place?

- Pollen is carried by insects from one flower to another.
- Pollen is blown by wind from one flower to another.

Adaptations for insect pollination

How are flowers adapted for pollination by insects such as bees and butterflies?

nectar, a source of food for insects, is deep within the flower

stiff anthers and stigmas are positioned where insects must brush past them

colorful, scented petals attract insects

large, sticky pollen grains become attached to the insect's body

Adaptations for wind pollination

How are flowers adapted for pollination by the wind?

small, dull-colored petals

huge numbers of light, tiny pollen grains

anthers hang loosely outside flower so wind can blow pollen

long, feathery stigma hanging outside flower so pollen can be trapped

Unusual plant adaptations

Plants can live in acid or waterlogged soils where there is little nitrate. Some plants have evolved a rather cunning adaptation to obtain the nutrients they need.

Pitcher plants have a large hollow filled with fluid that traps insects or other small organisms that may fall in.

Hairs on the slippery inside of the plant are angled down to ensure that the victim cannot escape!

The plant **digests** its victims to absorb the nitrates it needs!

Leaf adaptations