ADAPTATIONS FACTSHEET

Animals have developed adaptations that allow them to live in all sorts of strange and difficult environments. These adaptations have evolved over thousands of years and have usually occurred alongside other animals, meaning these animals have formed relationships that are critical to their survival. Furthermore, many animals have evolved alongside plant species and the climate, meaning that their survival is also dependent upon many the factors in their local environment.

In order to adapt to their particular environments, both animals and plants have had to evolve different features. Below you will find examples of some of the ways animals and plants have adapted to their environments. Not all characteristics of a species are adaptions. The key driver is that there is a particular advantage, so this is passed down to the next generation.

ADAPTATION DEFINITION – ADAPTATION IS THE EVOLUTIONARY PROCESS WHEREBY AN ORGANISM BECOMES BETTER ABLE TO LIVE IN ITS HABITAT OR HABITATS.

ANIMAL ADAPTATIONS

- Lizards have short legs so that their stomachs can rest on the ground, helping them to stay warm, and so they can get into small holes in the ground. They have scales to help defend against predators.
- Birds have wings to fly so they can live in trees. Other animals often eat birds that live on the ground; living in trees makes it harder for them to be caught.
- Fish have gills so they can breathe underwater. They have scales to allow them to move from side to side whilst also protecting their bodies. They have fins to help them swim.
- Kangaroos use their long, strong tails for balance and bouncing. They use their pouches for carrying their young. They have fur to keep them warm in winter and cool in summer.
- Echidnas have backwards facing hind legs to push dirt out of the way while burrowing.
- Crabs have big claws to catch their prey. They also have a hard shell to protect them from predators.
- Goannas are the only lizards with forked tongues. This adaptation allows them to sense fine odours and track their prey, similar to how a snake would.
- Bees have wings so they can fly from flower to flower to get their food. They have a strong 'shell' (called an exoskeleton) to protect their bodies.
- A snail lives in its shell. They can hide in their shells when there are predators close by. Snails make a slimy trail to help them slide along the ground and to stick to the surface when they climb up high.

ADAPTATIONS FACTSHEET

PLANT ADAPTATIONS

- In very dry conditions, some plants - such as succulents - store water in their leaves. Some other plants that live in very dry conditions will only grow leaves or reproduce when it rains. Others have hairy leaves that help to shade the plant and reduce water loss.
- In fire prone areas, some trees (such as some eucalypts) have bark that covers their trunks in order to protect the tree from the worst of the heat of the fire. Other plants need fire to reproduce: the high temperatures of fires cause seed pods to burst open while the burning of all the undergrowth means that these seeds can germinate with little competition.
- Some grasses have extensive root systems that prevent them from being pulled out of the ground by grazing animals.
- Grasslands are often windy places because they don't have tall trees to create a buffer against the wind. Many grasses make the most of these windy conditions by relying on the wind to disperse their seeds.
- In rainforests, very little light can make it to the understorey so some plants grow or climb on other, taller plants. In addition, many plants have smooth, waxy bark, leaves or flowers to speed up the run-off of water.
- In underwater environments, some plants will produce seeds that float. Some plants will also have air spaces in their stems to help them stay upright, and may have flexible stems or leaves to help them move in the water.
- In very cold climates - like the Tundra - many plants will have dark or red foliage to help them absorb solar heat. Some plants have hair to help them keep warm, and most plants in these environments are small; this keeps them closer to the ground which helps prevent freezing.

SOURCES

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