

A photograph of three kangaroos resting on a sandy surface. The kangaroos are light brown and are lying down, with their heads turned in various directions. The kangaroo in the foreground is lying on its side, looking towards the left. The two kangaroos behind it are also resting, with one looking towards the left and the other towards the right. The background is a vast, flat, sandy area under bright light.

How have animals adapted to the climatic conditions found in Australia?

How do animals survive in arid environments in Australia?



Most animals are active at night when it is cooler. They seek the protection of cracks and crevices during the day. Many burrow under the ground to escape the heat of the day.

Conserving Energy

A great proportion of Australia experiences hot dry conditions. More moisture is lost from the body during activity in hot conditions. This is why many native animals avoid the heat of the day. They conserve water by being active at night and resting during the day.

Animals can be categorised by the time of day they are active:

Diurnal

Animals that are active during the day and sleep at night.
(Example: birds such as the cockatoo.)

Crepuscular

Animals that rest during the day and are active during dusk and dawn.
(Example: kangaroos.)

Nocturnal

Animals that are active at night and sleep during the day.
(Example: Marsupials such as possums.)



How do mammals survive in the coldest environments in Australia?



Small mammals are able to burrow tunnels under the snow, called subnivean spaces, to get from place to place.

How do mammals survive in harsh environments?

It takes a lot of energy to keep your body active. Animals need to eat a lot of food to keep their bodies going. When food is scarce this can be a challenge.

Some animals will slow down and rest to save energy, especially during colder months. Their bodies enter a state of **torpor**. During this time their metabolic rate slows down. Their body temperature lowers and their breathing and heart rates slow down. This means that the body doesn't use as much energy so it isn't necessary for the animals to eat.

Some mammals that live in cold, mountainous regions and arid regions of Australia use torpor to help them survive their harsh environments. Echidnas, insect and meat eating marsupials, bats, pygmy possums and rodents all use torpor as a means of survival.

Some Australian animals may enter a state of torpor daily, others will only experience short periods of torpor. When animals enter a state of extended torpor, it is called **hibernation**. Most warm blooded animals in Australia will not hibernate. Echidnas and pygmy-possums are the exceptions.



Many animals hibernate in the northern hemisphere. This is a picture of a doormouse hibernating in a nest. Few native Australian animals hibernate but many use torpor as a means of survival in harsh environments.

How do animals find food and avoid becoming someone else's dinner?



Eyesight, Hearing and Body Markings

Many Australian animals are nocturnal. They have adapted excellent night vision and hearing to help them sense danger and locate food.

Some animals with poor eyesight have a heightened sense of smell. Some, like the echidna, are able to sense the electrical impulses of their prey.

Many Australian animals use camouflage as a means of protecting themselves against danger. Camouflage also increases a predator's chances of catching prey.

Spiky or hard leathery skin provides animals with protection from the sun as well as predators. Body markings also help the animal blend in with its surroundings.



Camouflage helps animals blend in with their surroundings.
Spiky skin coverings ward off predators.

