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**Created and produced by**  
Rachel Coombs, Nicholas Harris, Sarah Hartley,  
Elizabeth Havercroft and Erica Simms, Orpheus Books Ltd.

**Text** Olivia Brookes

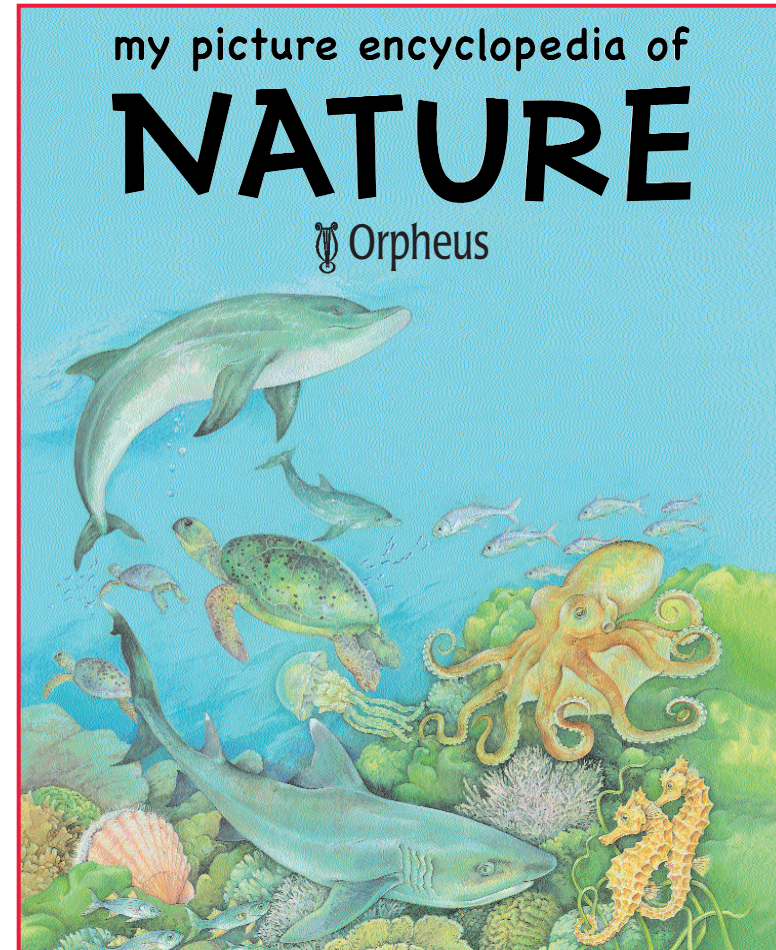
**Illustrated by** Nicki Palin

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IN THIS ENCYCLOPEDIA, you will find out about animals and where they live. Some animals live in the steamy rainforest, while others are suited for life at the icy poles. Some animals survive the dry heat of the desert, while others are only found in the water.

There are lots of things to see in the main illustration that accompanies each subject

Each subject is presented with an introductory text to explain what it is about.

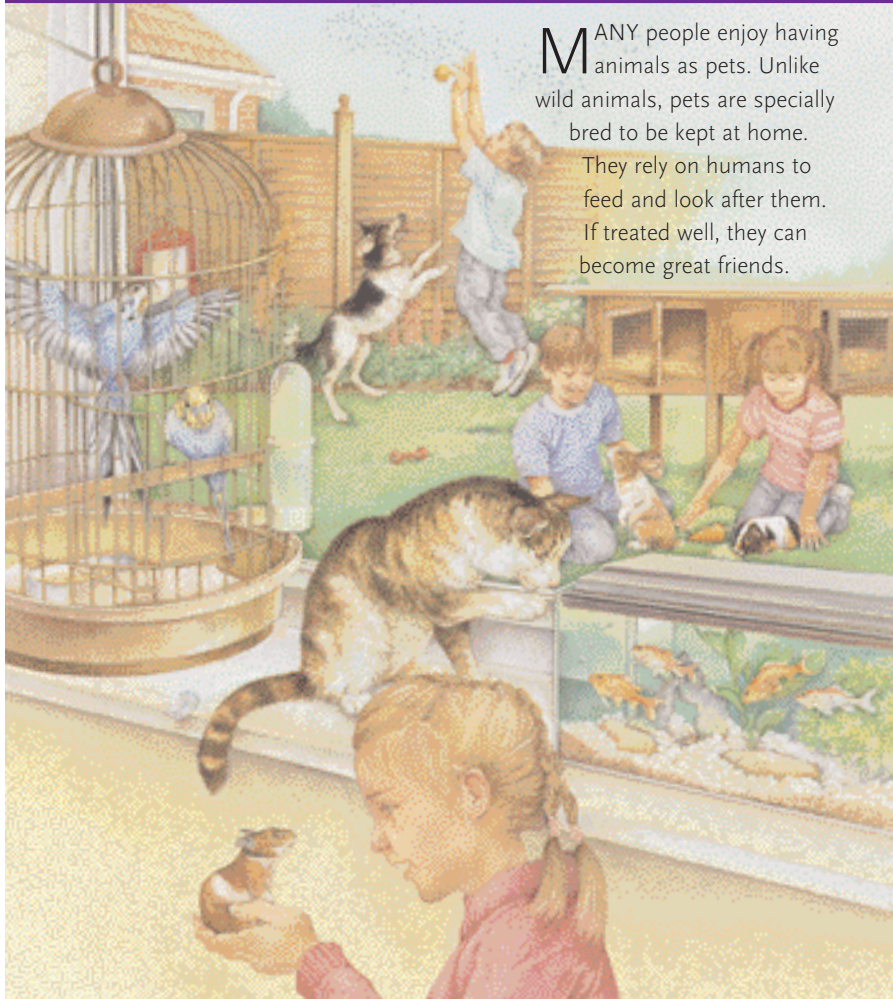
The text that accompanies each item explains what it is and provides more information about it.

Most (but not all) of the items pictured can be found somewhere in the main illustration.

Rainforest animals		ENVIRONMENTAL ANIMALS	
<p><b>Snake</b> Some snakes slither through the ground or through trees. Some trees, some all their prey by eating insects and catching the life out of it.</p>	<p><b>Macaw</b> Macaws are colorful birds that live in the rainforest. They are very smart and can talk. They are also very strong and can fly for long distances.</p>	<p><b>Slack</b> Slacks are good at climbing trees. They can climb up to 100 feet in the air. They are also very strong and can fly for long distances.</p>	<p><b>Monkey</b> Monkeys are very smart and can talk. They are also very strong and can fly for long distances.</p>
<p><b>Jaguar</b> Jaguars are big cats. They are very strong and can fly for long distances.</p>	<p><b>Tapir</b> Tapirs are very strong and can fly for long distances.</p>	<p><b>Hummingbird</b> Hummingbirds are very small birds. They are very smart and can talk. They are also very strong and can fly for long distances.</p>	<p><b>Crocodile</b> Crocodiles are very strong and can fly for long distances.</p>



If you look very carefully, you will find a tiny gold ring in each of the main illustrations in this book. Turn to page 31 to find out where they are hidden.



**M**ANY people enjoy having animals as pets. Unlike wild animals, pets are specially bred to be kept at home. They rely on humans to feed and look after them. If treated well, they can become great friends.

**Rabbit**

Rabbits are easy to recognize with their long ears, large teeth and fluffy tails. Their ears help them listen out for danger. Some rabbits have ears that point straight up, while others flop down. They use their strong teeth to gnaw through vegetables like carrots.



**Budgerigar**

Budgerigars are members of the parrot family. They originally come from Australia. They come in several different colours and can be taught to speak and whistle.



**Cat**

Cats spend most of their time grooming themselves or sleeping. They have very good night vision, and excellent hearing and smell. This helps them to hunt at night.



**Hamster**

Hamsters sleep during the day. They wake up in the evening to eat and play. They will spend hours running inside an exercise wheel.



**Dog**

There are many different breeds of dog, ranging in size from a tiny chihuahua to a huge great dane. Dogs usually live to about 13-14 years old.



**Goldfish**

Goldfish were first kept as pets in ancient China and are the most popular fish today. They live in cold water so can be kept in a pond or in a tank. In good conditions they can live for 20 years. They learn to tell the difference between people.



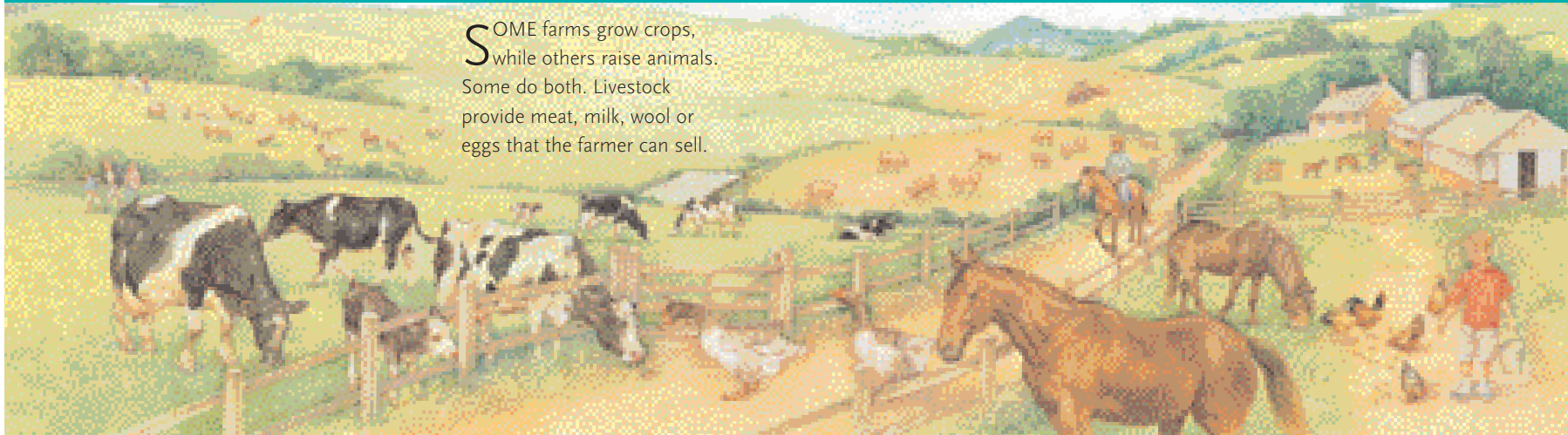
**Guinea pig**

Guinea pigs are not actually pigs, but rodents like hamsters. They originally come from South America. They are very nervous animals and will dart for cover when alarmed. Grass is their natural food.





## Farm animals



**S**OME farms grow crops, while others raise animals. Some do both. Livestock provide meat, milk, wool or eggs that the farmer can sell.

### Sheep

Sheep graze in grassy pastures or on open moorland. They are raised for their wool, which is sheared every year, and their meat, which is called lamb or mutton.



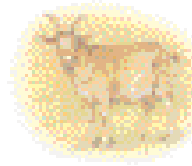
### Cattle

Cattle usually graze on lowland pasture. Female cattle, the cows, are a good source of milk. They are also raised for their meat, beef, or veal in young cows and calves. The skin of cattle can be used for leather goods.



### Goat

Goats can graze anywhere, including steep mountain slopes. They are kept for their wool, milk and meat. Baby goats are called kids.



### Chicken

Chickens are kept for their eggs and their meat. When allowed to range freely, they scratch at the ground for insects, insect grubs and seeds to eat.



### Pig

Pigs dig in the ground with their sensitive snouts. They sniff out all kinds of food, including insects, worms, fruit, bark and other small animals. Pigs are kept for their meat: pork, ham and bacon.



### Goose

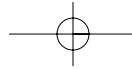
Geese are a little larger than ducks. They are kept on farms for their eggs, their meat and also for their soft feathers. Geese usually mate for life.



### Horse

Horses used to be work animals on the farm. They pulled ploughs and carts. Today, this work is done by tractors. Horses are now used for riding. A horse's height is measured in the number of hands from the floor to its shoulder.





**A**N INSECT is a creature with six legs, whose body is protected by a hard case. All insects have three main body parts: the head, the thorax and the abdomen. The soil is full of insects, along with spiders, worms, snails and other “creepy-crawlies”.

**Beetle**

There are more kinds of beetle than any other insect. They come in many different shapes and colours. Most beetles can fly. Their wings are folded inside hard cases.



**Worm**

Worms have no legs, eyes or ears. They have soft, slimy bodies. Earthworms live in soil. If an earthworm loses a bit of its tail to a hungry bird, it is able to grow it back.



**Ant**

Ants live in large groups and work together to build nests and raise their young. The queen lays the eggs. Worker ants look after the eggs and find food.

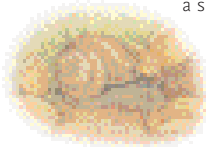


**Butterfly**

Butterflies lay eggs that hatch out into worm-like caterpillars. These later turn into adult butterflies. Butterfly wings often have colourful patterns on them.

**Snail**

Snails slither along by alternately shortening then stretching their bodies. They leave trails of a slimy substance called mucus. Snails will withdraw into their coiled shell if they are attacked.

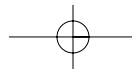


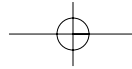
**Bee**

Like ants, bees also live together in large numbers in nests. They feed on nectar and pollen which they get from flowers. Honeybees make honey from the nectar and store it as food. The queen bee lays her eggs inside small six-sided cells made of wax, called honeycomb.

**Spider**

Spiders are not insects. They have eight legs. Many spiders eat insects, trapping them in their webs. Spiders spin their webs using silk fibres that they make inside their body.





12  **Woodland animals** WOODLAND ANIMALS  13



**W**OODLAND trees provide good cover for animals to hide or to hunt. There are also plenty of fruits and nuts for food. Fallen leaves are good places to build winter shelters for insects, worms and small mammals.



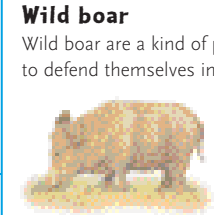
**Woodpecker**  
Woodpeckers cling to tree trunks with their sharp claws. They use their sharp, pointed beaks to punch holes in the wood. They feed on insects behind the bark.



**Owl**  
Owls sleep inside holes in trees during the day. They come out at night to hunt for voles, mice and frogs. Spotting its prey using its excellent night vision, the owl plucks it from the ground with its talons (claws).



**Squirrel**  
Squirrels are often seen scurrying through the trees. They eat fruits and nuts and store what they do not eat for the winter.



**Wild boar**  
Wild boar are a kind of pig. Males have tusks to defend themselves in fights. Boars use their keen sense of smell and their long snout to find mice, worms, plants, and frogs to eat.

**Fox**  
Foxes have orange-red fur and a brush-like tail. They will eat anything, including small mammals, birds, insects and fruit. You can also see foxes in cities searching through rubbish bins for food.



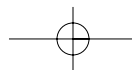
**Hedgehog**  
Hedgehogs' spines are actually stiff hairs. They hibernate (go to sleep) during the winter when food is scarce.



**Deer**  
Male deer, called stags, have antlers made of bone. Female deer are called hinds or does. Young deer, called fawns, are born with white spots on their fur, which they lose as they grow. Deer feed on leaves, grass and shoots.



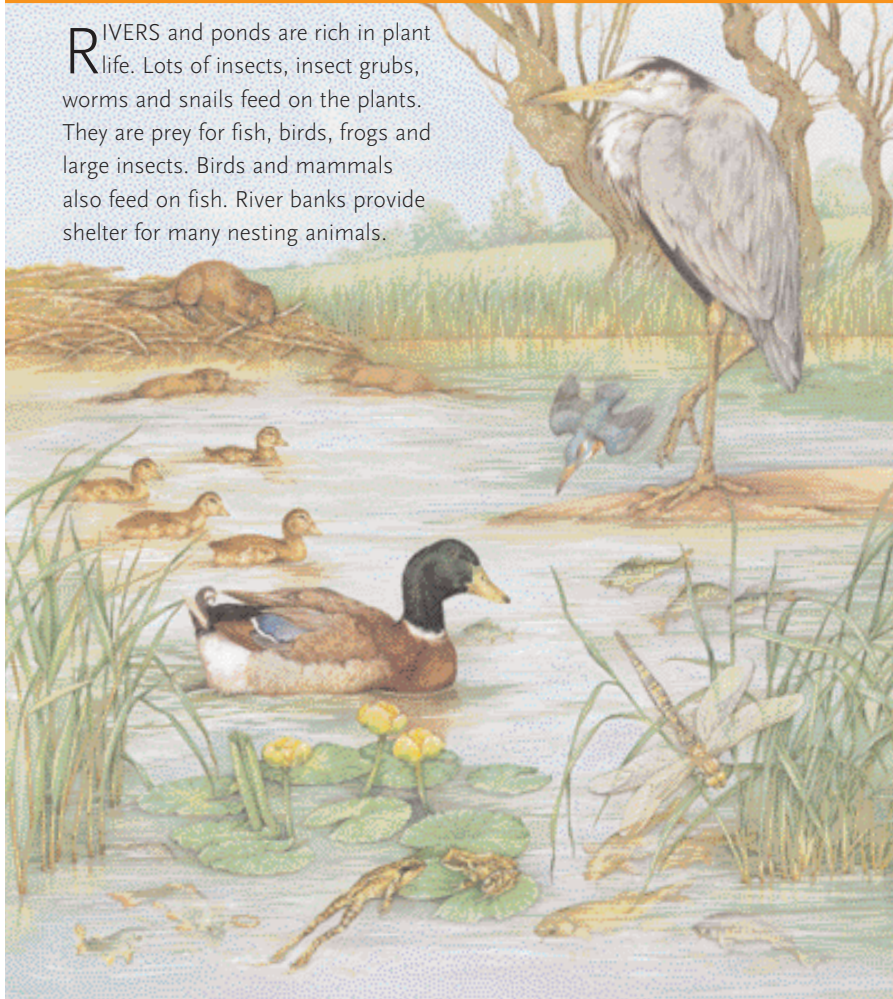
**Badger**  
Badgers hunt alone at night, searching for small mammals, fruit and worms to eat. By day they sleep in underground burrows.





## River animals

RIVERS and ponds are rich in plant life. Lots of insects, insect grubs, worms and snails feed on the plants. They are prey for fish, birds, frogs and large insects. Birds and mammals also feed on fish. River banks provide shelter for many nesting animals.



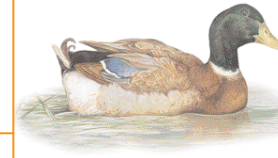
### Beaver

Beavers have strong teeth. They use them to gnaw through and bring down tree trunks. The trunks then block, or dam, rivers. This allows beavers to build homes out of reach from predators.



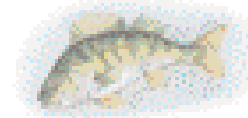
### Duck

Ducks are water birds with short legs and flat beaks. They duck their head below the surface to find food such as grasses, insects and small fish. Male ducks, known as drakes, often have colourful plumage.



### Fish

Fish spend all their time in the water. They do not have lungs to breathe air. Instead they take in oxygen from the water using gills.



### Frog

Frogs live on land, but they lay their eggs, called spawn, in the water. These hatch out into tadpoles, which later grow into frogs.



### Kingfisher

Kingfishers sit on branches just above the water, watching for their prey. Then they quickly dive into the water to grab a fish in their long beak.



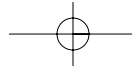
### Dragonfly

Dragonflies can fly at high speeds, hover and even fly backwards. They feed on other flying insects around rivers and ponds. They chase them in the air or pluck them off plants with their legs.

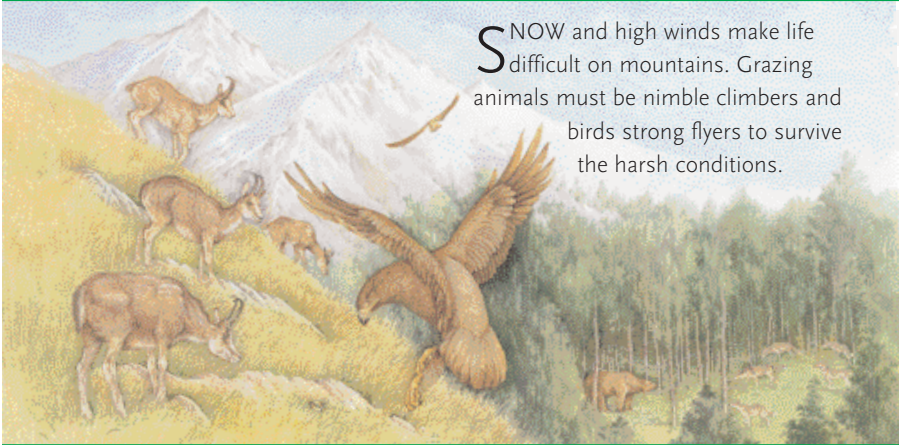
### Heron

Herons are birds with long legs. They wade through the water to catch fish and frogs in their long beak.

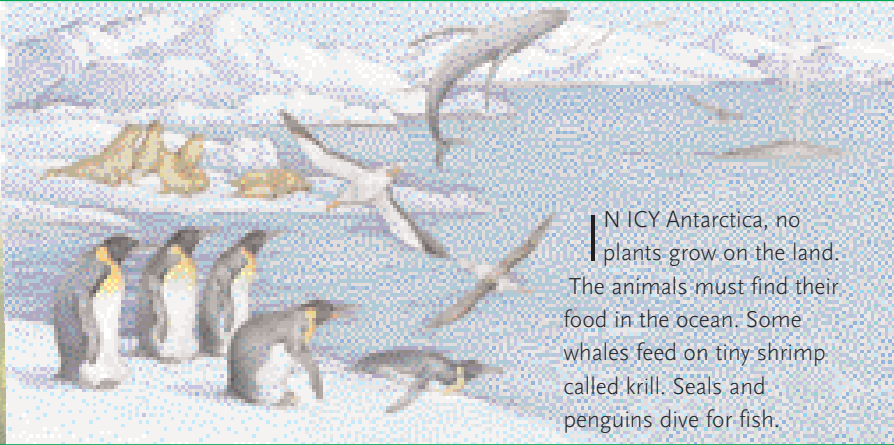




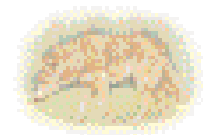
16		<b>Mountain animals</b>		<b>Polar animals</b>		17
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**S**NOW and high winds make life difficult on mountains. Grazing animals must be nimble climbers and birds strong flyers to survive the harsh conditions.



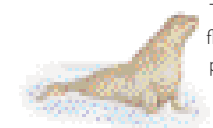
**I**N ICY Antarctica, no plants grow on the land. The animals must find their food in the ocean. Some whales feed on tiny shrimp called krill. Seals and penguins dive for fish.



**Wolf**  
Wolves have thick coats of fur to keep them warm. They live in groups called packs and call to each other by howling. Wolves work together to hunt down large prey.



**Chamois**  
Chamois are goat-like animals that graze on the short mountain grasses. They are excellent climbers. Females and their kids live in herds.



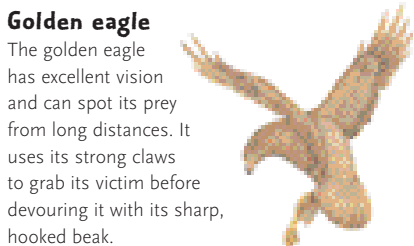
**Seal**  
Seals spend most of their lives in the sea feeding on fish and squid. They use their flippers to power themselves through the water.



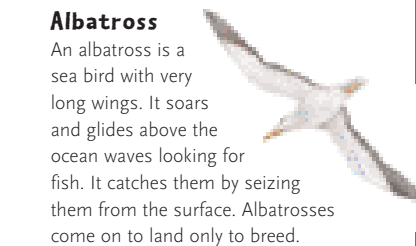
**Penguin**  
Penguins cannot fly. They use their wings to swim underwater. They have a thick coat of feathers, which forms a waterproof layer. Emperor penguins keep their eggs warm by carrying them on their feet.



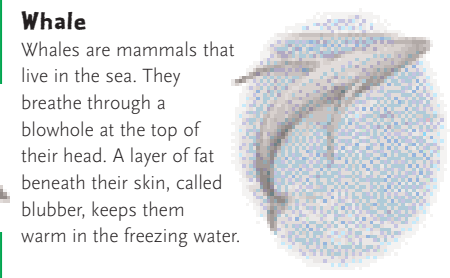
**Brown bear**  
Brown bears are mostly plant-eaters, but will also feed on fish and small animals. They may eat the kills of other animals. Bears spend winter asleep in caves or dens dug into the snow.



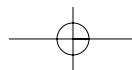
**Golden eagle**  
The golden eagle has excellent vision and can spot its prey from long distances. It uses its strong claws to grab its victim before devouring it with its sharp, hooked beak.



**Albatross**  
An albatross is a sea bird with very long wings. It soars and glides above the ocean waves looking for fish. It catches them by seizing them from the surface. Albatrosses come on to land only to breed.

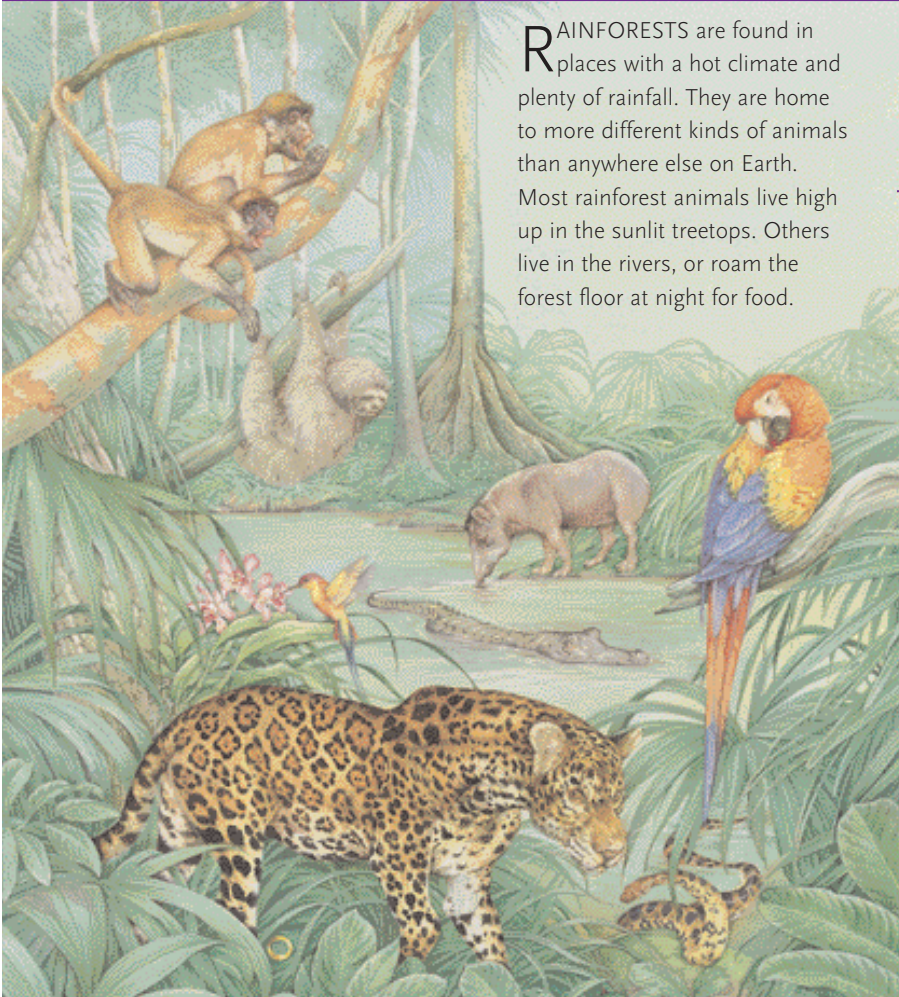


**Whale**  
Whales are mammals that live in the sea. They breathe through a blowhole at the top of their head. A layer of fat beneath their skin, called blubber, keeps them warm in the freezing water.





18  **Rainforest animals** RAINFOREST ANIMALS  19



**R**AINFORESTS are found in places with a hot climate and plenty of rainfall. They are home to more different kinds of animals than anywhere else on Earth. Most rainforest animals live high up in the sunlit treetops. Others live in the rivers, or roam the forest floor at night for food.

**Snake**  
Snakes slither along the ground or through rainforest trees. Some kill their prey by coiling round it and squeezing the life out of it.



**Jaguar**  
Jaguars are large cats. They are lone hunters. Their markings help them hide in trees, where they lurk ready to leap down on to their prey. Jaguars are good climbers and swimmers.



**Macaw**  
Including their tail feathers, macaws may measure up to one metre in length. They have strong, curved beaks which they use to crack open hard seeds. They make loud, low-pitched squawks as they fly.



**Sloth**  
Sloths spend most of their time hanging upside down from trees. They can sleep for up to 18 hours a day. Sloths feed on leaves.



**Tapir**  
Tapirs use their short trunk to pull up leaves, shoots and fruits to eat. They come out at night to feed, always on the lookout for jaguars. They stay close to rivers. Baby tapirs have stripes and spots to camouflage them.



**Hummingbird**  
Hummingbirds are the tiniest of all birds. They hover when feeding from flowers by flapping their wings very fast. Their very long, thin beak reaches deep into the flower for its nectar.

**Monkey**  
Monkeys swing through trees in the rainforest. They use their long tails to grasp the branches.



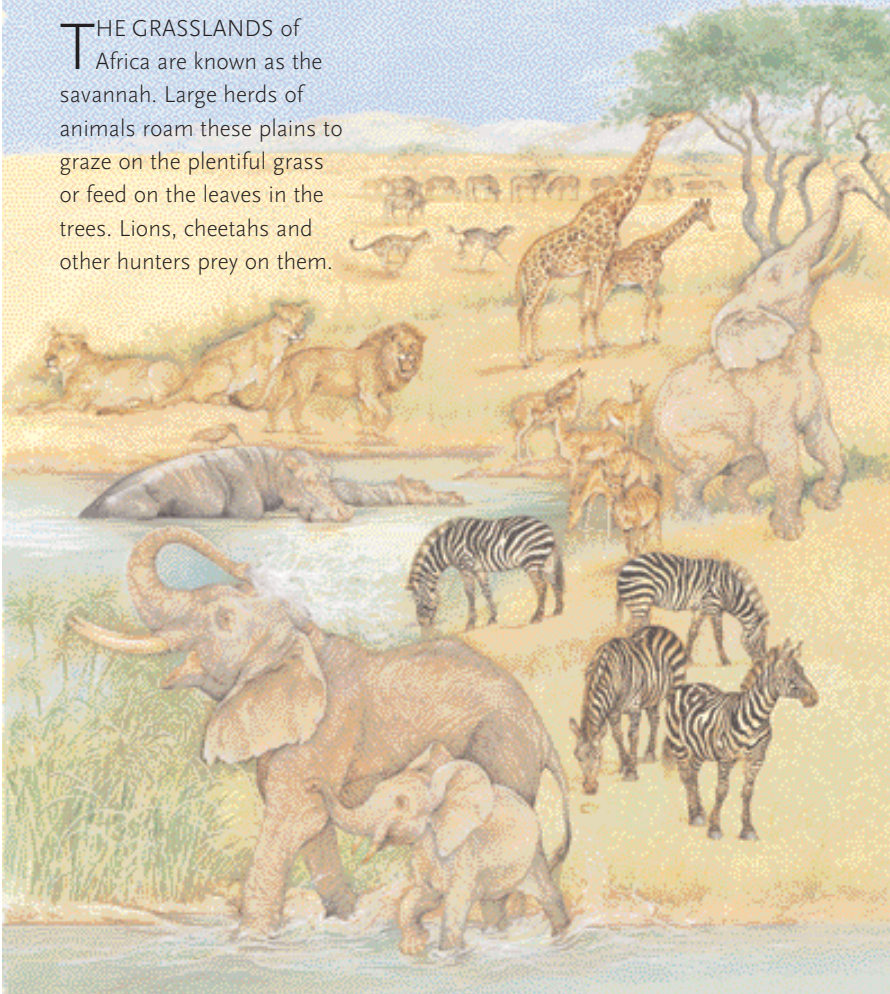
**Crocodile**  
Crocodiles often lurk in shallow water. They are waiting for animals that come to the water's edge to drink. They seize them in their huge jaws.





## African grassland animals

**T**HE GRASSLANDS of Africa are known as the savannah. Large herds of animals roam these plains to graze on the plentiful grass or feed on the leaves in the trees. Lions, cheetahs and other hunters prey on them.



### Lion

The lion is a large, wild cat. Lions live together in groups, called prides. Lionesses, the female lions, do the hunting. The male defends the pride.



### Elephant

The African elephant is one of two kinds of elephant. The other is the Asian elephant. The African is larger, and has a straighter back, larger ears and longer tusks. Its trunk is strong enough to pull up trees. It uses it to suck up water and grasp food to place in its mouth.

### Hippopotamus

The hippo lives in rivers and lakes. Its skin dries out quickly in the hot sunshine, so it spends the day lazing in the cool water and mud. Nearly all its body is submerged, with just its eyes, ears and nose sticking out. At night, it comes out to graze on grass.



### Cheetah

A cheetah is another kind of wild cat. It hunts its prey, a young zebra or antelope, by chasing after it at high speed. With its long legs and lean body, it can outrun any other animal. It is the fastest land animal in the world. When it catches up with its victim, it fells it with a bite to the throat.

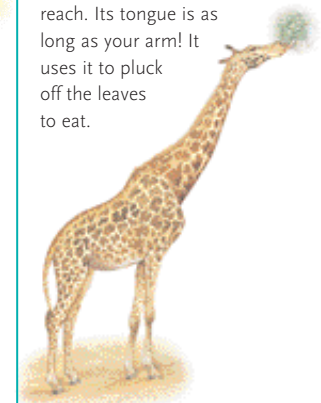
### Zebra

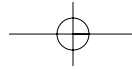
A zebra is a kind of horse. Every zebra has a slightly different pattern of black and white stripes. Zebras gather in herds to graze on the plains.



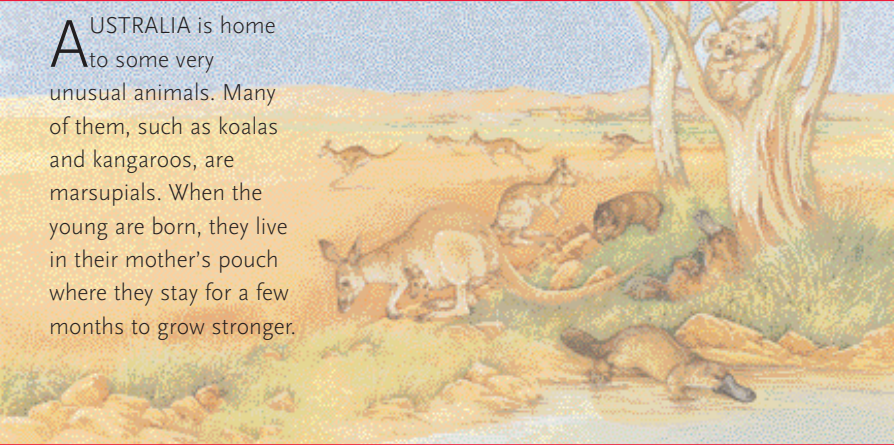
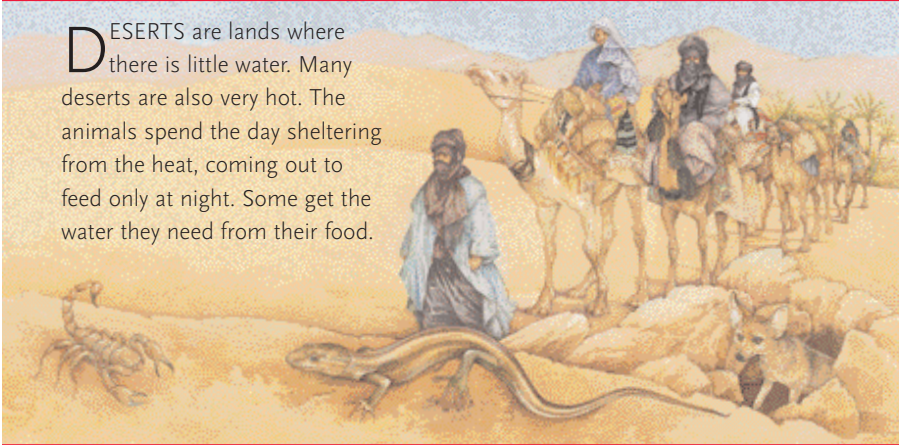
### Giraffe

The giraffe is the tallest animal in the world. It has long legs, a sloping back and an extremely long neck. This means it can feed on leaves from trees higher up than any other animal can reach. Its tongue is as long as your arm! It uses it to pluck off the leaves to eat.





22  **Desert animals** **Australian animals**  23

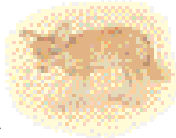


**D**ESERTS are lands where there is little water. Many deserts are also very hot. The animals spend the day sheltering from the heat, coming out to feed only at night. Some get the water they need from their food.

**A**USTRALIA is home to some very unusual animals. Many of them, such as koalas and kangaroos, are marsupials. When the young are born, they live in their mother's pouch where they stay for a few months to grow stronger.

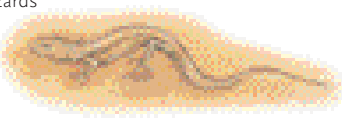
**Fennec fox**

The fennec fox is a small fox with very large ears. Its ears help keep it cool. It has thick fur on its feet to protect them from the hot sand.



**Lizard**

Lizards are reptiles. They bask in the sun in the mornings or evenings to give them energy to move about. Some lizards can break off their own tails to escape from their attackers.



**Platypus**

Unlike most mammals, the platypus lays eggs. It has a duck-like beak and webbed feet. It lives in and around water, using its beak to find tiny river animals.



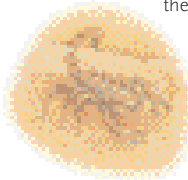
**Koala**

Koalas eat only eucalyptus leaves. They live in trees, which they climb expertly using their sharp claws. They spend their days asleep, stirring only at night.



**Scorpion**

Scorpions are related to spiders. They also have eight legs. Scorpions have large pincers on their front limbs to grasp their prey. They also have a tail with a sting at its tip. They use it to kill their victims or ward off attackers.



**Camel**

Camels may not drink for months. When they do find water, they gulp down huge amounts! Their humps store fat which can be used as food when they need it.



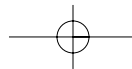
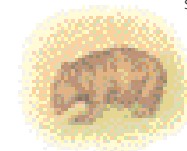
**Kangaroo**

Kangaroos bound around on their very powerful back legs. Their long tails keep them balanced as they go, often extremely quickly. A baby kangaroo, called a joey, is born hairless and blind, the size of a bean. It lives in its mother's pouch for about a year.



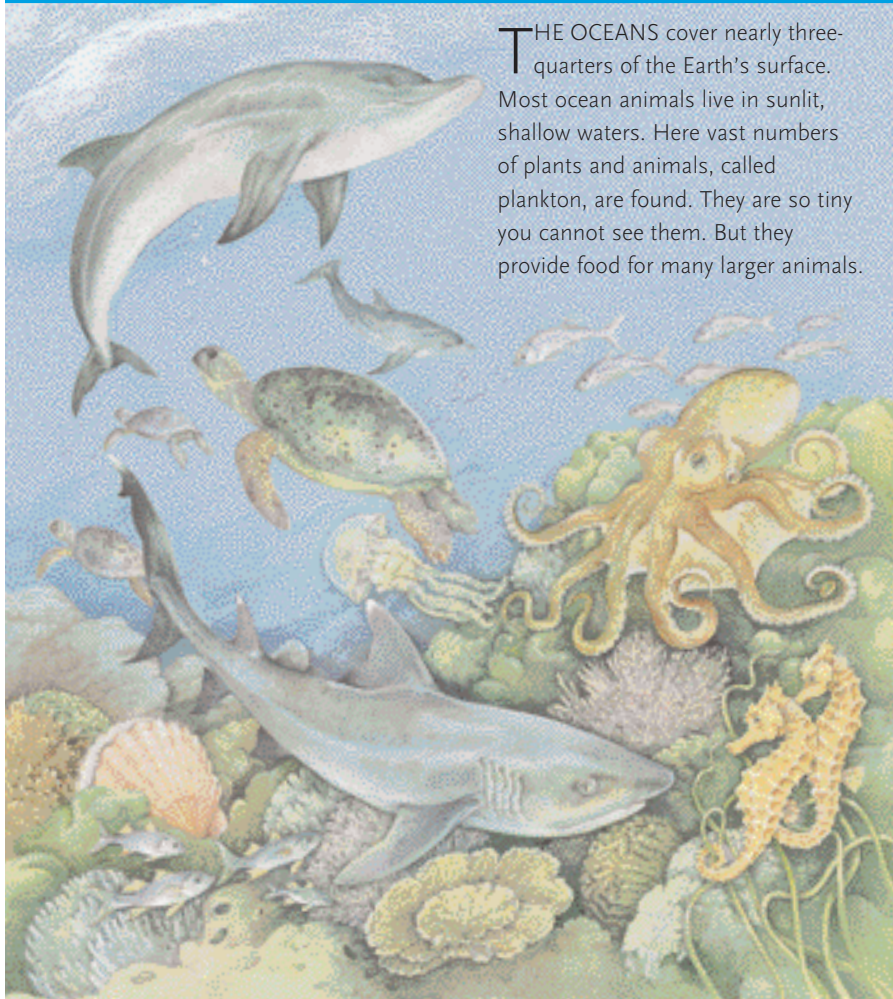
**Wombat**

Wombats sleep in burrows during the day. They come out at night to feed on grass. They are usually very slow, shy animals, but if attacked, a wombat can run away quickly.





## Ocean animals



**T**HE OCEANS cover nearly three-quarters of the Earth's surface. Most ocean animals live in sunlit, shallow waters. Here vast numbers of plants and animals, called plankton, are found. They are so tiny you cannot see them. But they provide food for many larger animals.



### Turtle

Turtles are reptiles with beak-like mouths and hard shells. They lay their eggs in sandy pits on the same beaches every year.



### Jellyfish

Jellyfish have no bones. They are made of a jelly-like substance. They feed on small fish and plankton that get caught in their stinging tentacles as they drift along.

### Shark

Sharks are a type of fish. Some can grow very large and have many sharp teeth. They have excellent senses of smell and hearing to locate their victims underwater from a long way away. Although they are dangerous predators, only some sharks, such as the tiger shark or the great white, would attack people.



### Seahorse

Seahorses are upright-swimming fish, with a head shaped like a horse's. Their curly tails cling on to sea grasses to stop them being swept away in currents. The male carries the female's eggs in a special pouch, and gives birth to their young.



### Dolphin

Dolphins are mammals, closely related to whales. They are intelligent animals with excellent eyesight and hearing. Dolphins find their way through the water by sending out high-pitched sounds and listening for their echoes. They track down fish and squid in this way.

### Octopus

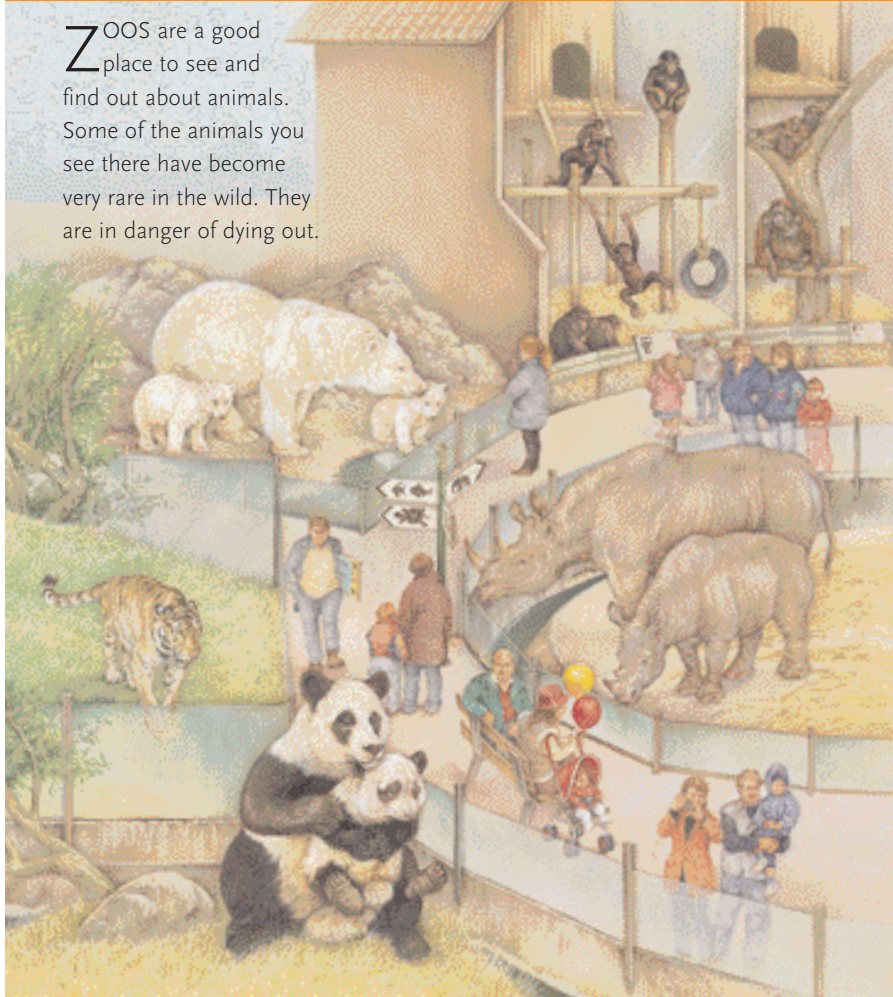
Octopuses have eight arms. Each arm is covered in suction cups to help it cling to rocks on the sea bed. If an octopus is attacked, it ejects clouds of black ink. It then makes its escape while its attacker cannot see it.





## Animals in danger

ZOOS are a good place to see and find out about animals. Some of the animals you see there have become very rare in the wild. They are in danger of dying out.



### Giant panda

Giant pandas are a type of bear. They live in the forests of China. Their main food is bamboo, but many bamboo forests have been cut down.

### Polar bear

Polar bears live in the Arctic. Their thick fur protects them from the cold. Polar bears are at risk from global warming. As the planet warms up, the ice that is their home may melt.



### Orang-utan

Orang-utans are a kind of ape. They have long arms which they use to swing through rainforest trees in southeast Asia. Orang-utans are losing their homes as people cut down rainforests to make room for farmland and quarries.

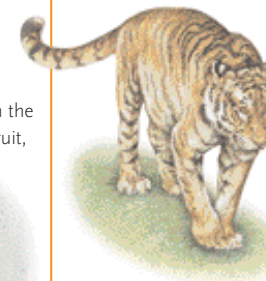
### Rhinoceros

Rhinoceroses are thick-skinned grazing animals. They are hunted for their horns which are made into medicines.



### Chimpanzee

Chimpanzees live together in groups in the forests of Africa. They share food, play and groom one another. They feed on the ground and in the trees, eating fruit, insects and fruit. Sometimes they hunt other animals. Chimps are under threat as their forest homes are cut down.

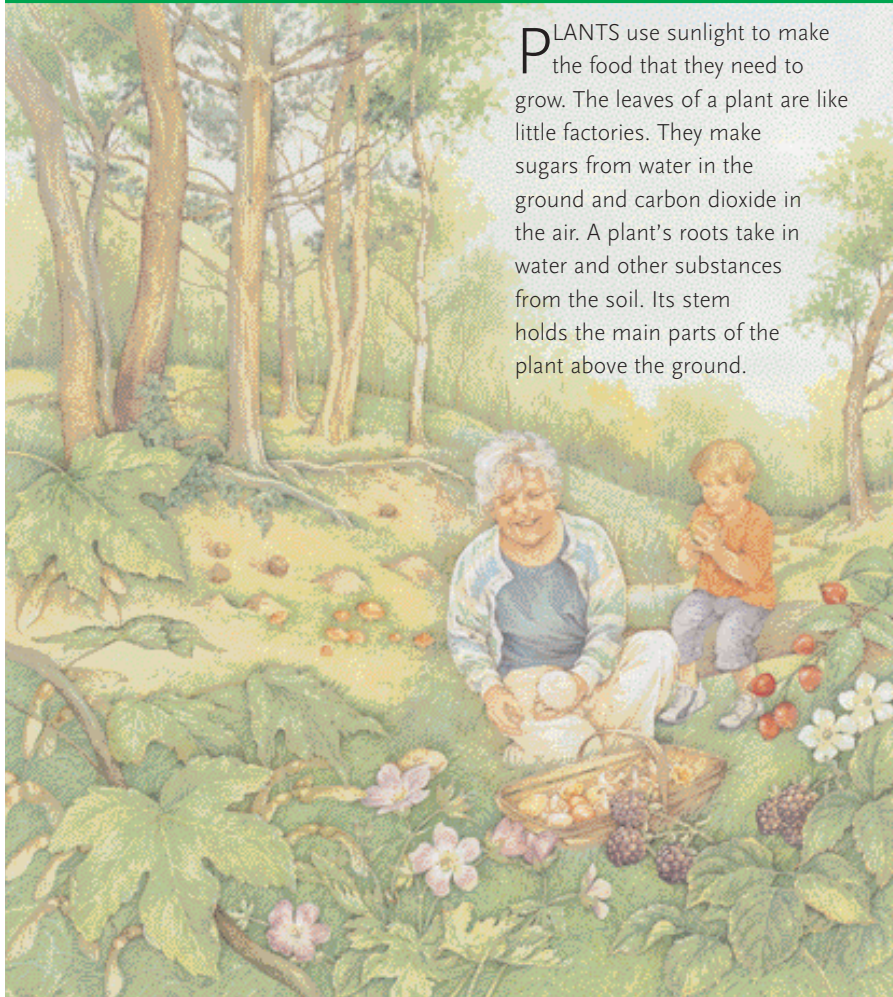


### Tiger

The tiger is the largest of all cats. The stripes on its coat help it to blend in with its surroundings. Hidden in the tall grass, it can creep up close to its prey before suddenly leaping into the attack. Tigers roam the woodlands and swamplands of south and east Asia. Their numbers have fallen drastically in recent years. This is because of hunting and the disappearance of their native forests.



# Plants



**P**LANTS use sunlight to make the food that they need to grow. The leaves of a plant are like little factories. They make sugars from water in the ground and carbon dioxide in the air. A plant's roots take in water and other substances from the soil. Its stem holds the main parts of the plant above the ground.



### Seeds

Seeds are made by plants so that other new plants may grow. Some seeds are in fruits, like the pips in an apple. They are scattered by the wind or carried by animals. A seed may grow if it reaches damp soil.

### Fruit

Fruits are the case around the seed. Some fruits are very light, like the parachutes of a dandelion. Others, like nuts, have very hard outer cases. Many fruits have juicy, tasty flesh. These attract animals to eat them. The seeds pass through the animals and are spread to distant places to grow.



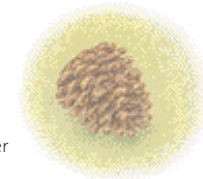
### Flower

Flowers have male parts and female parts. The male parts, called stamens, make tiny, dust-like grains called pollen. Flowers attract insects, who come to feed on their sweet nectar. The pollen brushes on to them and is carried to the female parts (carpels) of another flower. The flower can now make seeds.



### Pine cone

Conifer trees, such as pines, bear cones instead of fruit. The scales open in dry weather to release seeds.



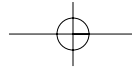
### Mushroom

Mushrooms and toadstools are types of fungi. We recognize them by their umbrella-shaped bodies. These produce dust-like particles called spores from which new fungi grow. But underneath the mushroom is a mass of threads. These take goodness from soil or dead wood.

### Tree

A tree is a large plant with a woody trunk covered with bark. They have branches bearing leaves. There are two kinds of tree. Broadleaf trees, the first kind, lose their leaves in autumn. Conifers, the second kind, are usually evergreen. They have needle-like leaves all year round.





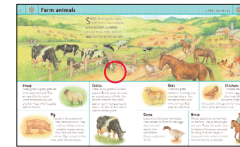
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The red circles show exactly where the ring can be found on each of the main illustrations in this book.



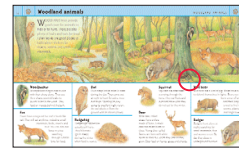
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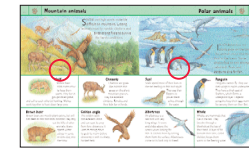
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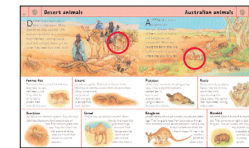
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