

# Adaptation

## Teacher notes

A habitat is the environment an animal lives in such as a forest, ocean or desert. Habitats provide things that are needed for survival such as; food, water, materials to build shelter and places to hide in. However the habitat alone is not enough to ensure survival. Animals (and plants) have adaptations (features of their bodies) that are designed to increase the chances of survival and are matched to the habitat an animal lives. There are 3 types of adaptations: physical, behavioural and structural. The type of adaptation an animal has depends on the habitat it comes from.

**Structural** - the particular body parts of the animal such as wings, large claws, sharp beak and teeth, gills, lungs, patterns on the fur (camouflage), size of ears and eyes.

- The star nosed mole has fleshy tentacles on the end of its snout which it uses to feel for food underground where it spends most of its life.
- Tarsiers have sucker like disk pads on their toes to help them grip on to trees and branches.

**Behavioural** – the way an animal behaves that enables survival.

- Hunting dogs will hunt in big packs maximising the chances of a kill.
- Antelope and impala will travel in large groups and stay close together when a predator is near.
- Many monkeys will allow other closely related monkeys to help rear their young. This increases the chance of the young's survival.

**Physiological**- certain biochemical functions and processes that the animal can perform such as producing venom, secreting slime, changing colour and being able to achieve a constant body temperature. Other examples are the processes of reproduction, breathing and digestion.

- A skunk produces a foul smelling substance that it sprays when scared or angry.
- Some frogs can produce poisons that are secreted through their skin to avoid being eaten.
- Ruminant animals such as cows have a multi chambered rumen (stomach) that contains microorganisms which break down and extract maximal nutrients from grass.
- Fish have gills which enable them to extract oxygen from the water and breathe.
- Humans have lungs which enable them to extract oxygen from the air and breathe on land.



# Resource 1: Adaptations + Adaptations = survival

**Instructions:** Using the table below identify which habitat the following animals live in. List two different types of adaptations for each animal. For each adaptation explain how it helps the animal survive in their habitat.

<b>Animal</b>	<b>Habitat it lives in</b>	<b>Adaptations</b>	<b>How adaptations help them survive in the wild</b>
<b>Rhino</b>	<b>Savannah</b>	<b>Large horn (structural) Wallow in mud (behavioural)</b>	<b>Used for protection Protects skin from sun</b>
<b>Kea</b>			
<b>Chimp</b>			
<b>Spider Monkey</b>			
<b>Zebra</b>			
<b>Tiger</b>			
<b>Hunting Dog</b>			



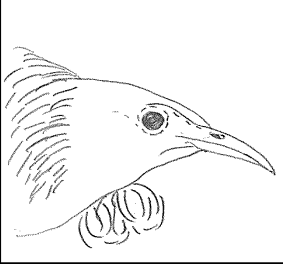
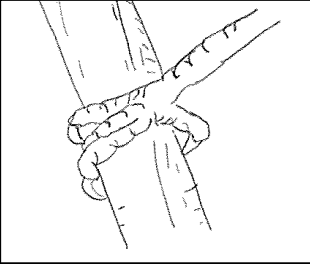
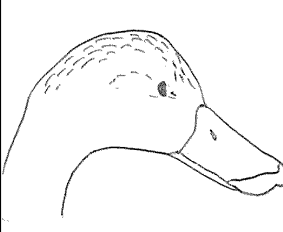
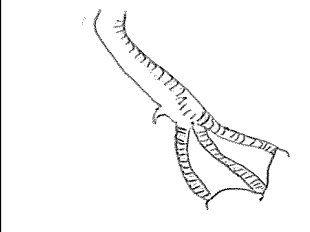
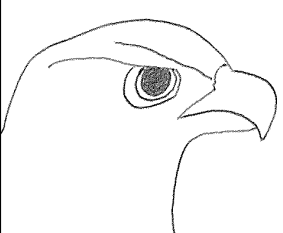
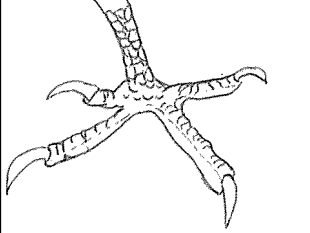

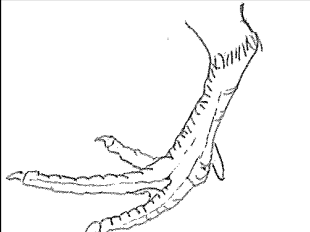
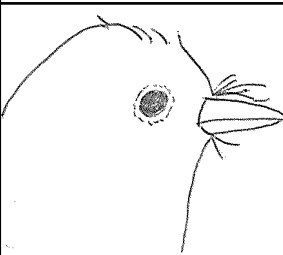
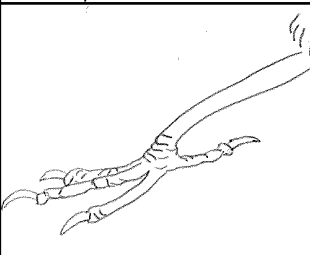
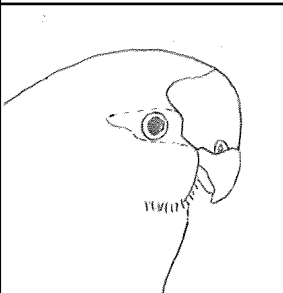
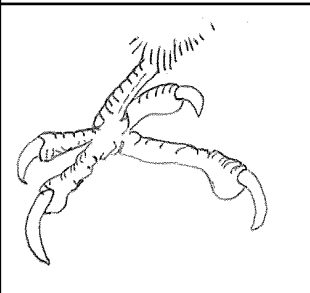
# Adaptations and birds

## Teacher notes:

### Beaks and Feet

The beaks and feet of birds are adapted to the habitat they live in, the type of food they eat and where they have to get their food from.

The following table can be used as a teaching resource. The pictures and descriptions can be cut out, coloured in and then matched up. Additional information on birds can be found in our bird teacher notes resource.

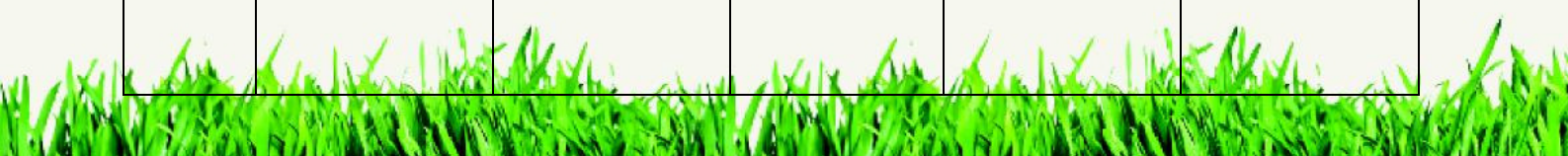
Beak	Feet	How beak is used	How feet are used
		Tui Probes into flowers to get nectar	Tui Long slender, flexible claws for perching  Curved slender beak
		Blue Duck Scrapes insects off rocks	Blue Duck Webbed toes with claws helps it to swim and hold on to rocks
		Falcon Pointed large strong beak Beak used for tearing prey apart e.g small birds	Falcon Sharp talons for hunting and holding on to prey
		Kiwi Long beak with nostril on the end Eats insects and worms in forest leaf litter and soil	Kiwi Feet are large, thick and strong, ideal for walking
		Fantail Eats insects	Fantail Long flexible claws for perching
		Parakeet Gathers and crushes large hard-shelled insects and seeds	Parakeet Feet with two toes forward and two toes back for gripping and climbing



## Bird beaks and feet

Draw the following birds' beak and feet and describe how they help the bird catch and eat its food

<b>Bird</b>	<b>Describe the habitat the bird comes from</b>	<b>Diet. What does this bird eat in the wild</b>	<b>Beak</b>	<b>Feet</b>	<b>How do the beak and feet help the bird to catch and eat its food</b>
<b>Kiwi</b>					
<b>Blue Duck</b>					
<b>Parakeet</b>					
<b>Falcon</b>					
<b>Tui</b>					





# Adaptations

**Instructions:** list and describe an example of structural, functional or behavioural adaptations for the following animals.

<b>Animal</b>	<b>Structural</b>	<b>Behavioural</b>	<b>Physiological</b>
Chimp			
Capuchin			
Kea			
Hunting Dog			
Rhino			
Tuatara			
Hochstetters frog			
Blue Duck			



# Designer adaptations

In the box below design an animal with the most outrageous adaptations. Then design the habitat it lives in. Remember your animals adaptations must match and be suited to the habitat you have created. Now describe how your animal will survive in its habitat using its new adaptations.

Draw your animal here, label all adaptations

Draw your habitat here

Describe how your animal will survive in its habitat using its new adaptations