Marwell Wildlife

KS1 Animal Habitats

Scheme of Learning

KS1 Animal Habitats Scheme of Learning

This scheme of learning has been put together by Marwell Wildlife for teachers to use with their KS1 pupils. It is a complete set of lessons designed to meet the 2014 National Curriculum links for Living Things and their Habitats.

Marwell Wildlife is a registered conservation charity and education is one of our key outputs. We are involved in a range of conservation projects both in the UK and in Africa, including habitat restoration.

Our vision is to connect people with nature. This scheme of learning is for that purpose. There are a variety of fun activities, many of which get the pupils outside where they can best learn about habitats and wildlife.

Curriculum Links

SCIENCE

Working scientifically

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions

Year 1 Plants

- identify and name a variety of common wild and garden plants, including deciduous and evergreen trees

Year 1 Animals, including humans

- identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals

Year 2 Living things and their habitats

- identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other
- identify and name a variety of plants and animals in their habitats, including micro-habitats

Year 2 Animals, including humans

- find out about and describe the basic needs of animals, including humans, for survival (water, food, air)

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Lesson	Learning objective	Summary of activity	Resources needed
1. What is a habitat?	To know what a habitat is and to be able to name a variety of plants and animals in their habitats.	A look at some familiar habitats to see what animals and plants need from them. Includes a walk to find some micro-habitats on the school site.	• Pictures of habitats (Appendix 1) • Marwell KS1 Habitats game (Appendix 2)
2. Exotic habitats	To find out about some exotic animals and their habitats.	Trip to Marwell Zoo and taking the Animal Habitats workshop. Also, a closer look at one exotic animal at the zoo.	• Marwell log book page 1 (Appendix 3)
3. Native habitats	To find out about some native animals and their habitats.	Research into a native animal species. Also, a comparison between the exotic and native animals they have found out about.	• Marwell animal logbook page 2 (Appendix 4) • Marwell animal logbook page 3 (Appendix 5)
4. Different animals in different habitats	To explore how the conditions in a habitat can affect what plants and animals can live there.	An investigation comparing the number of animals and plants found in different micro-habitats.	• Before the lesson you will need to locate 3 micro-habitats • Comparison table (Appendix
5. How are animals suited to their habitats?	To understand that living things live in habitats to which they are suited.	Looking at how animals are adapted to their habitats and how adaptations help animals to survive.	• Close-up pictures of animal adaptations (Appendix 7) • Marwell KS1 Habitats game (Appendix 2)
6. How do animals and plants depend on each other?	To know how animals and plants can depend on each other.	Looking at how animals and plants can provide food, how plants can provide shelter and also oxygen, using a kinaesthetic	• Interdependence pictures (Appendix 8)

Lesson 1: What is a habitat?

Learning objective:
To know what a habitat is and to be able to name a variety of plants and animals in their habitats.

Vocabulary:
Habitat, water, food, air

Activity:
Show some familiar habitats and ask what the pictures show. Explain that a habitat is the natural type of place an animal lives in. Give out a picture of a habitat to small groups (Appendix 1). Ask them to think in their group about what animals and plants need from their habitats. Work out that they need air, food and water.

Explain that some habitats can be very small and are called micro-habitats. Take them for a walk around the school site to see if they can spot any micro-habitats. (E.g. flower beds, hedges, plant troughs, grass, pond, tree, leaf litter, under stones). Get them to record what animals and plants are living there.

Plenary:
Let them play the Marwell KS1 Habitats game (Appendix 2) where they match animals to their habitat.

Key questions:
What is a habitat?
What does the habitat provide for the animals and plants?
What is a micro-habitat?

Assessment indicators:
Emerging: Can name a habitat and match some animals that live there
Expected: Can name several habitats and name some animals and plants that live there
Exceeding: Can name several habitats and describe some animals and plants that live there

Differentiation suggestions for G&T:
More variety of habitats to find out about.
Habitats also provide shelter for animals.
Let them play the Marwell KS1 Habitats game and discuss the animal adaptations also.

Extra optional cross-curricular activities:
Art and design: paint/draw/model habitats

Resources:
Pictures of habitats (Appendix 1)
Marwell KS1 Habitats game (Appendix 2)

Lesson 2: Exotic habitats

Learning objective:
To find out about some exotic animals and their habitats.

Vocabulary:
Exotic, habitat, sea, mountain, rainforest, desert

Activity:
Take the children to Marwell Zoo for a school trip and book the KS1 Animal Habitats workshop. (Please go to www.marwell.org.uk for current workshop details, prices and availability).

During the KS1 Animal Habitats workshop, the children will explore up to 4 exotic habitats. They will consider what props would be appropriate to take according to the conditions in the habitat and what animals they might expect to see there. This includes meeting up to 2 live animals.

While in the zoo, get the children to also complete the Marwell log book page 1 (Appendix 3) for an exotic animal species. This can be planned in advance or you could allow them to choose from a selection, e.g. giraffe, snow leopard, zebra, camel, cheetah, monkey.

Plenary:
On the coach drive home you could do a quick verbal quiz to find out what they remember about the animals they have seen.

Key questions:
What equipment would people need to take to each habitat?
What do animals have to help them survive in these habitats?

Assessment indicators:
Emerging: Can name an exotic habitat
Expected: Can describe the conditions of an exotic habitat
Exceeding: Can describe some adaptations of an exotic animal to its habitat

Differentiation for SEN:
Adult guidance when completing the log book page 1.

Differentiation for G&T:
Let them choose which exotic animal to record data for.

Extra optional cross-curricular activities:
Art and design: design a zoo enclosure that is similar to the animal's habitat

Resources:
Marwell log book page 1 (Appendix 3)

Lesson 3: Native habitats

Learning objective:
To find out about some native animals and their habitats.

Vocabulary:
Native, habitat

Activity:
Show some pictures of habitats (Appendix 1). Ask which habitats they might see here in England. Explain that these are called native habitats and animals that live in them are called native as they live in our country.

Children are asked to choose a native animal to find out more about and to be the subject of another log book page (Appendix 4). They could be given a selection to choose from, e.g. badger, fox, deer, hedgehog, sand lizard, bumblebee, seahorse, snail. Alternatively they could be allowed to research any native animal of their choice.

They could research their chosen animal using school library books or the internet. The children could then be encouraged to share their findings with each other through discussion or a presentation.

Plenary:
The children complete logbook page 3 (Appendix 5) to compare the exotic animal they researched at Marwell Zoo to the native animal they just researched.

Key questions:
What does your animal eat?
What does it look like?
What do its footprints look like?
What habitat does it live in?

Assessment indicators:
Emerging: Can name a native habitat
Expected: Can describe the conditions of a native habitat
Exceeding: Can describe some adaptations of a native animal to its habitat

Differentiation for SEN:
Adult guidance when completing the log book pages.
Could be given printouts of native animals to help with research.

Differentiation for G&T:
You could ask these children to research more unusual animals.

Extra optional cross-curricular activities:
Computing: use the internet to find out about some native animals.

Resources:
Marwell animal logbook page 2 (Appendix 4)
Marwell animal logbook page 3 (Appendix 5)
Useful websites for animal research: www.arkive.org; www.bbc.co.uk/nature/animals/

Lesson 4: Different animals in different habitats

Learning objective:
To explore how the conditions in a habitat can affect what plants and animals can live there.

Vocabulary:
Micro-habitat, conditions

Activity:
Remind children about micro-habitats and ask for some examples of ones they might have in the school grounds. Give out the comparing micro-habitats sheet (Appendix 6) and get them to fill in 3 micro-habitats, e.g. stony path/brick wall, under a log, on a wet leaf, on the lawn, under a hedge, etc. that you have chosen before this lesson. Take the children into the school grounds and locate the three different micro-habitats so they can record the conditions of each one.

Also give them a small card frame to put down at each micro-habitat. Ask the children, carefully and without disturbing the species, to count the number of different types of plants and animals within the frame at each micro-habitat.

Plenary:
Back in the classroom, ask them which micro-habitat had the most plants and animals. Ask them why that might be and have a discussion about the differences in the conditions of each micro-habitat and how this would affect the type of animals that might live there. Ask if they can name some examples of animals they saw at each micro-habitat. Can some animals live in more than one micro-habitat?

Key questions:
What are the conditions like in some micro-habitats?
How do the conditions in habitats affect the type of animals that live there?

Assessment indicators:
Emerging: Can describe the conditions of a micro-habitat
Expected: Can explain that different habitats can have different plants and animals in them
Exceeding: Can explain why animals may be more suited to conditions of certain habitats

Differentiation for G&T:
You could explore more micro-habitats.
They could do more accurate counting of animals and plants using quadrats.
They could measure the plants found in the micro-habitats as well as count them.

Resources:
Before the lesson you will need to locate 3 micro-habitats that you would be able to look at with the children.
Comparing micro-habitats (Appendix 6).

Lesson 5: How are animals suited to their habitats?

Learning objective:
To understand that living things live in habitats to which they are suited.

Vocabulary:
Adaptations

Activity:
Re-cap previous lesson where they found out that different types of animals live in different habitats. Explain that they are adapted to the conditions of the habitat, just like the animals in the Marwell KS1 Animal Habitats session. Remind them about the explorer props for people as they are not adapted for those habitats but animals already have these props as adaptations. E.g. turtles have flippers to swim but people would need to buy flippers as props to help them swim better.

Refer them to their work on the native and exotic animals they recorded in their log book pages. Ask them to explain to a friend how these animals are adapted to their habitats.

Show them some close-up pictures of animal adaptations (Appendix 7) and ask them to annotate how these might be useful to the animal. You could also let them draw their own pictures to annotate.

Plenary:
Play the Marwell KS1 Habitats board game (Appendix 2) and focus on the animal adaptations to reinforce the idea that the animals are adapted to their habitats.

Key questions:
How are these animals adapted to their habitats?
How do their adaptations help them to survive?

Assessment indicators:
Emerging: Can name some animal adaptations
Expected: Can describe how an animal is suited to its habitat
Exceeding: Can explain how adaptations are useful to the animals

Resources:
Close-up pictures of animal adaptations (Appendix 7)
Marwell KS1 Habitats game (Appendix 2)

Lesson 6: How do animals and plants depend on each other?

Learning objective:
To know how animals and plants can depend on each other.

Vocabulary:
Depend, trees, oxygen

Activity:
Explain that animals and plants in the same habitat depend on each other. Ask them to look at the animals in their logbooks and see what they eat. Ask them where do the animals get their food from? Their food source will be an animal or plant in the same habitat as their chosen animals.

Ask the children "why do we need trees?" Explain that we need them for things like wood to make furniture, to make paper from, to get fruit from and also for oxygen. Explain that plants, including trees, make oxygen, which goes into the air for us to breathe. Without this, we would not be able to live. Then play a fun game to demonstrate the effects of too much deforestation.

In an open space, ask 8 children to be trees and spread themselves out into spaces. They could put their hands up like branches. The rest of the children can be different animals that live in the forest habitat. Ask them to hop/run/crawl, etc around the forest. When they are next to a tree they can breathe normally. In between trees they need to hold their breath. After a few moments, get them to stop. Say you need to cut down some trees to build a house with. Get 2 of the trees to sit down. The animals can't breathe when they are next to these trees any more. Continue with the game, cutting down 2 more trees every few moments. When there are only 2 trees left the children should be aware of how much more difficult it is to breathe with so few trees. Stop them and ask if you should cut down the last 2 trees? Hopefully they will realise you shouldn't!

Ask them to choose a picture from Appendix 9, which shows an example of how animals depend on other plants and animals. Ask them to have a go at making up a poem or story using one of the pictures as inspiration.

Plenary:
Ask the children to share their poem or story with one of their classmates. Get them to feedback to each other what they thought about it.

Key questions:
Why do we need trees?
How do animals depend on plants and other animals?

Assessment indicators:
Emerging: Can name one way that animals need plants
Expected: Can explain that we need trees to live
Exceeding: Can describe several ways that animals depend on other plants and animals

Differentiation for G&T:
You could also discuss how to avoid running out of trees in future, maybe by planting more.

Resources:
Interdependence pictures (Appendix 9)

Pictures of habitats

Antarctic

Desert

Forest

Savannah

Mountain

Rainforest

Sea

River

Marwell KS1 Habitats game

This game is designed for up to 4 players.

Aim
To match the animals to the correct habitat.

How to play
Set up: You will need to colour in the pictures and cut out the animal cards before playing.

Option 1

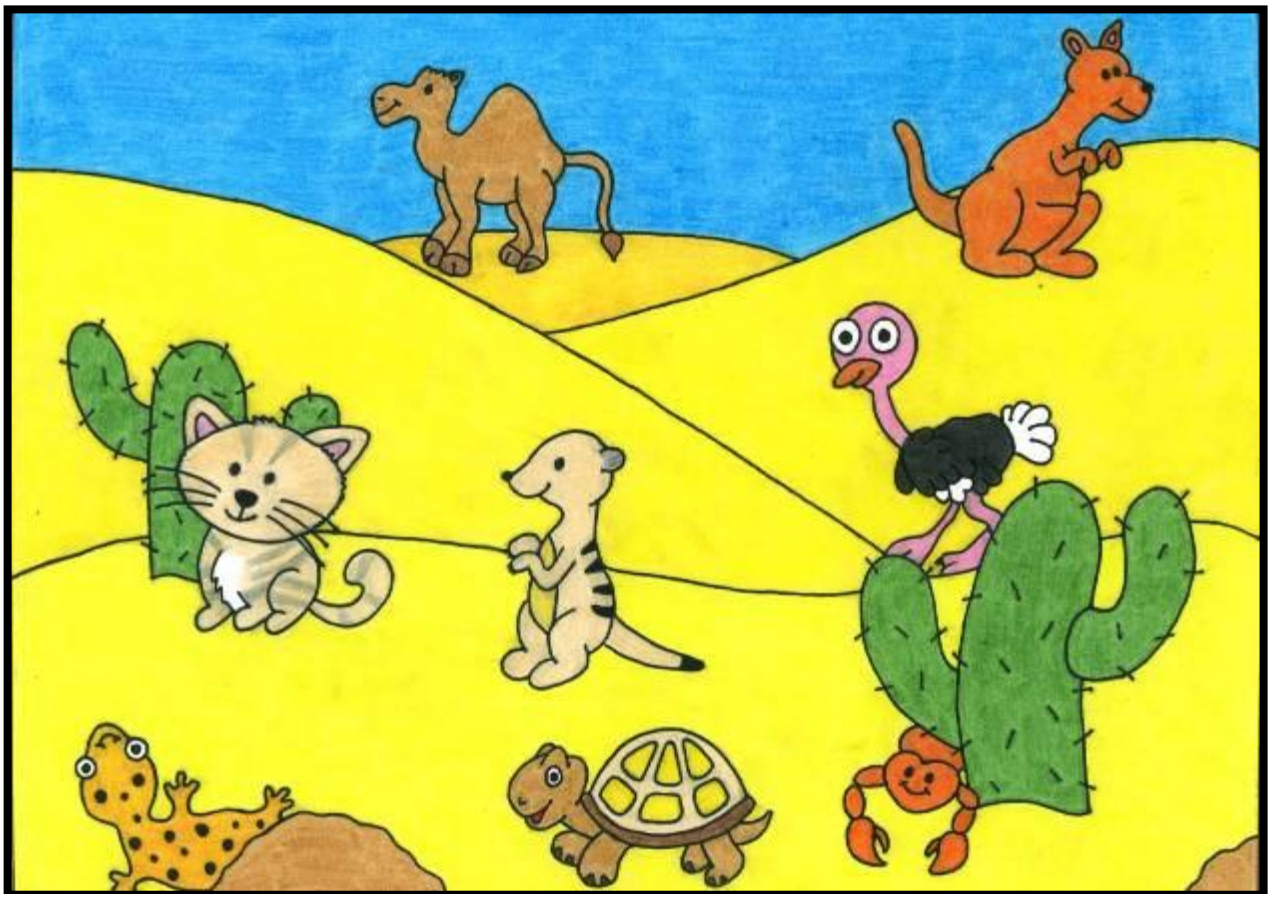
- This game uses the singular habitat boards (1 habitat per board).
- Each player chooses a habitat board (Desert, Rainforest, Arctic or Ocean).
- The cards are shuffled and placed face down in a pile in the centre of the playing area.
- The youngest player picks up the first card from the top of the pile. They say the name of the animal out loud (eg. Tiger!) and show the picture to the other players. If one of the other players has the habitat that animal lives in they shout out the name of their habitat (eg. Rainforest!) and collect the card (either by placing it under their board or on top of the animal in their habitat). The player who won the card picks up the next card and the process repeats.

Note: When less than 4 players are playing and therefore not all the habitat boards are being used, any animals picked up that don't belong to any of the habitats in play should be placed in a discard pile. The player who picked that animal up then picks up another card and the game continues as usual.

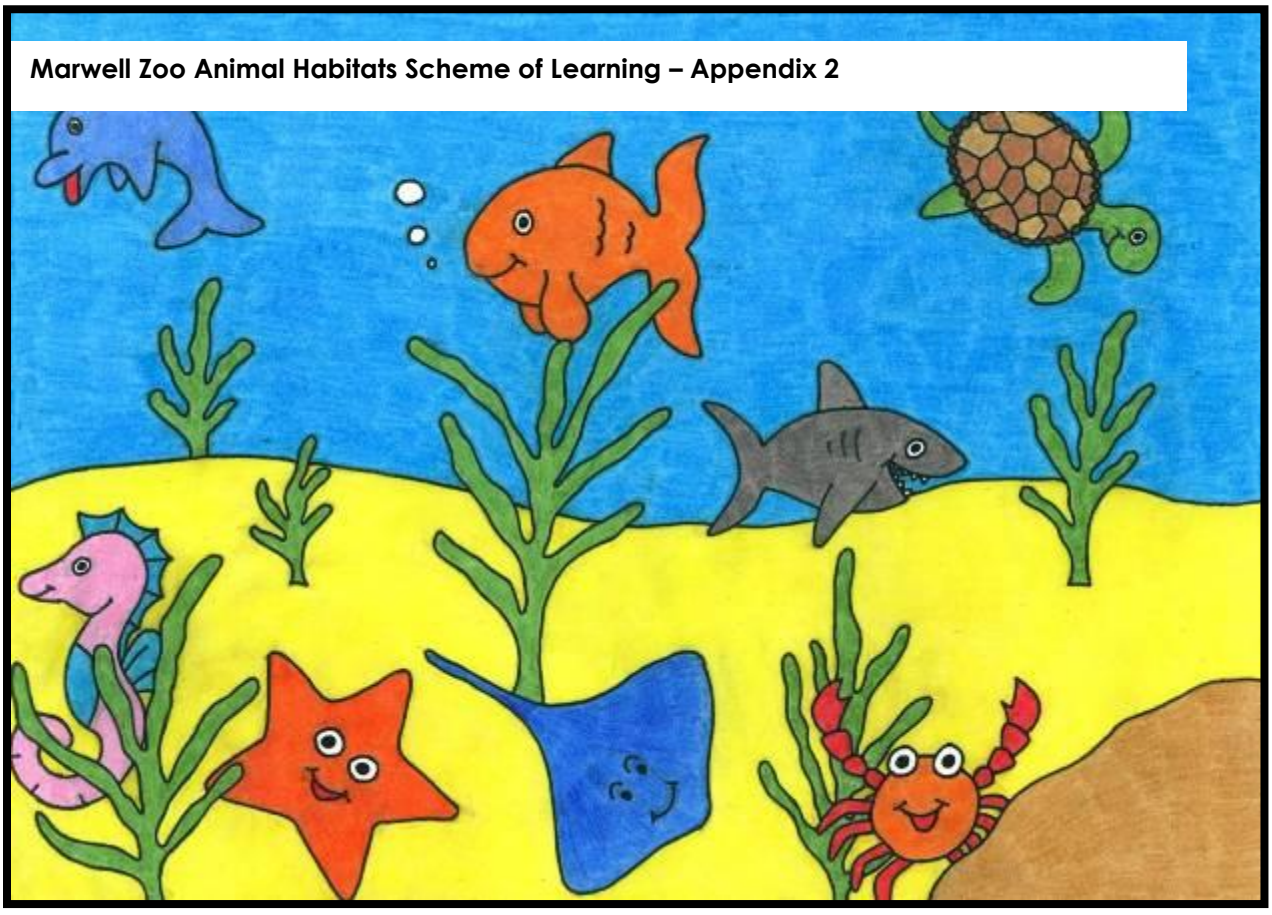
- The first player to collect all 8 of their animals hidden in their habitats is the winner and on winning should shout out 'HABITAT!'
- Each animal card contains an adaptation that animal has and this could also be read out and discussed amongst more able players.

Option 2

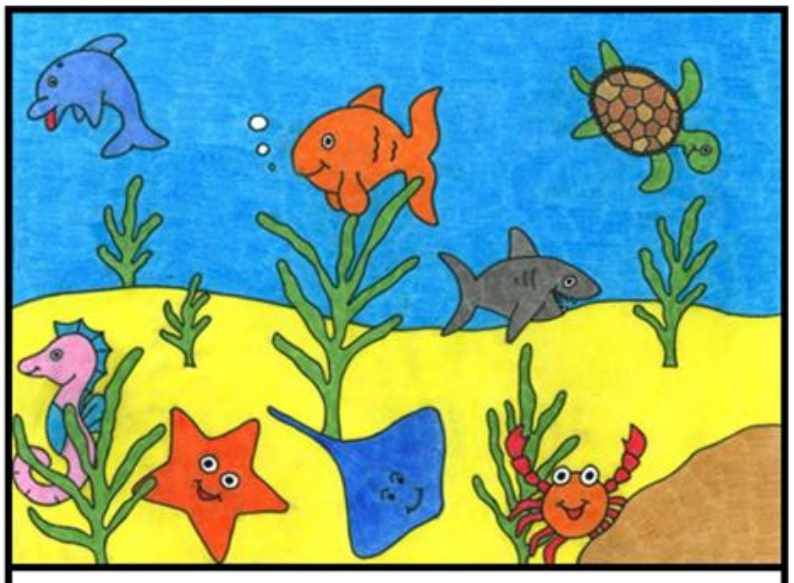
- This game uses the multiple habitat boards (4 habitats per board).
- Each player is given a multiple habitat board.
- The cards are shuffled and placed face down in a pile in the centre of the playing area.
- The youngest player turns over the first card and places it with the picture facing up next to the pile. The first player to call out the correct habitat for that animal wins the card. This player is then the next one to turn a card over. The process repeats until all the cards have gone.
- The winner is the player with the most cards at the end of the game!



Marwell Zoo Animal Habitats Scheme of Learning – Appendix 2

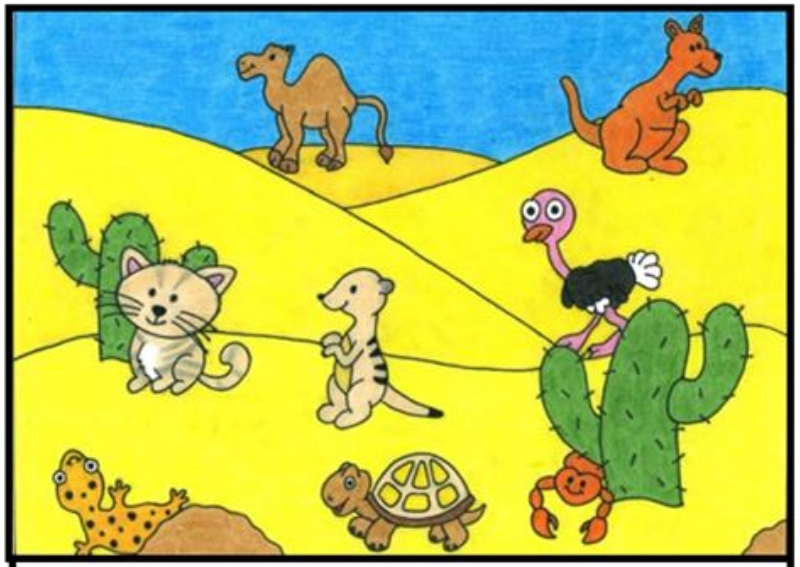


Rainforest

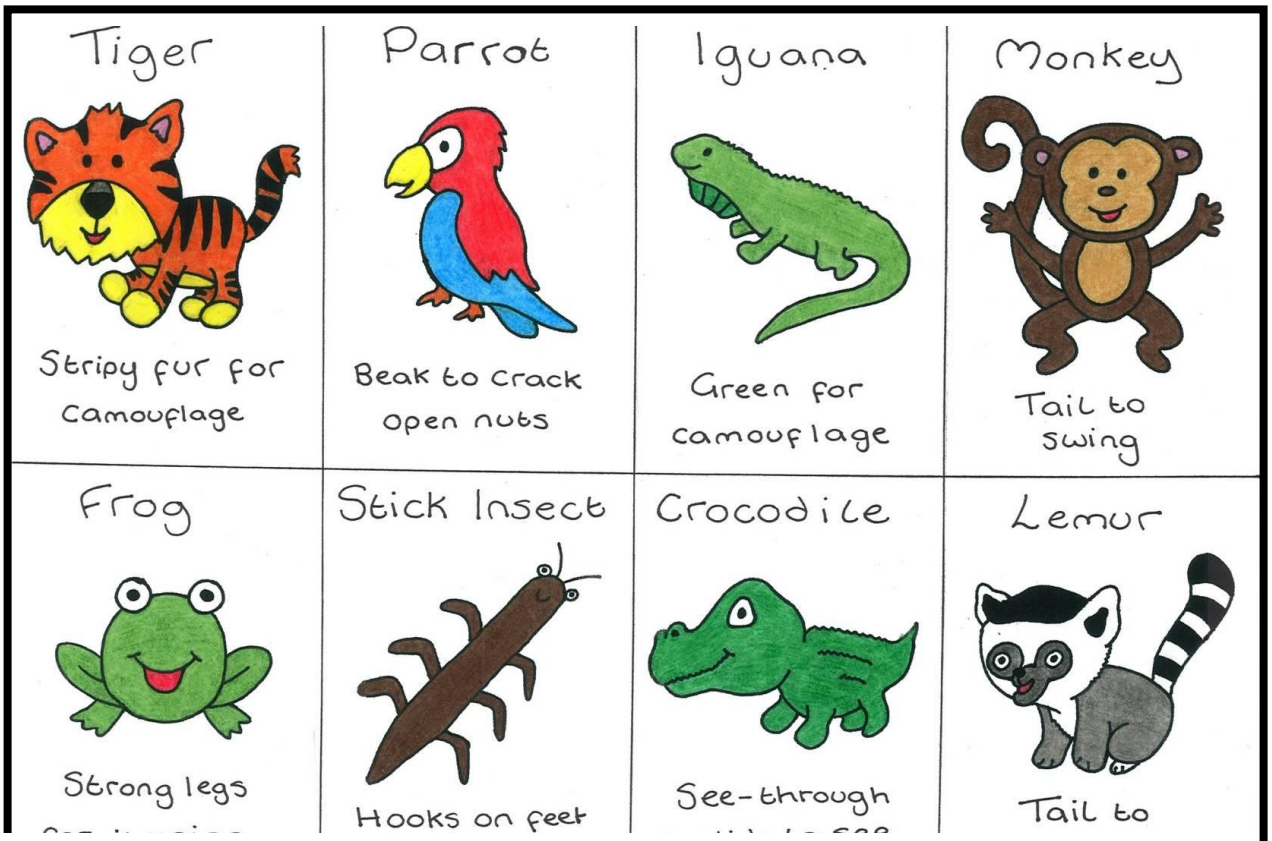


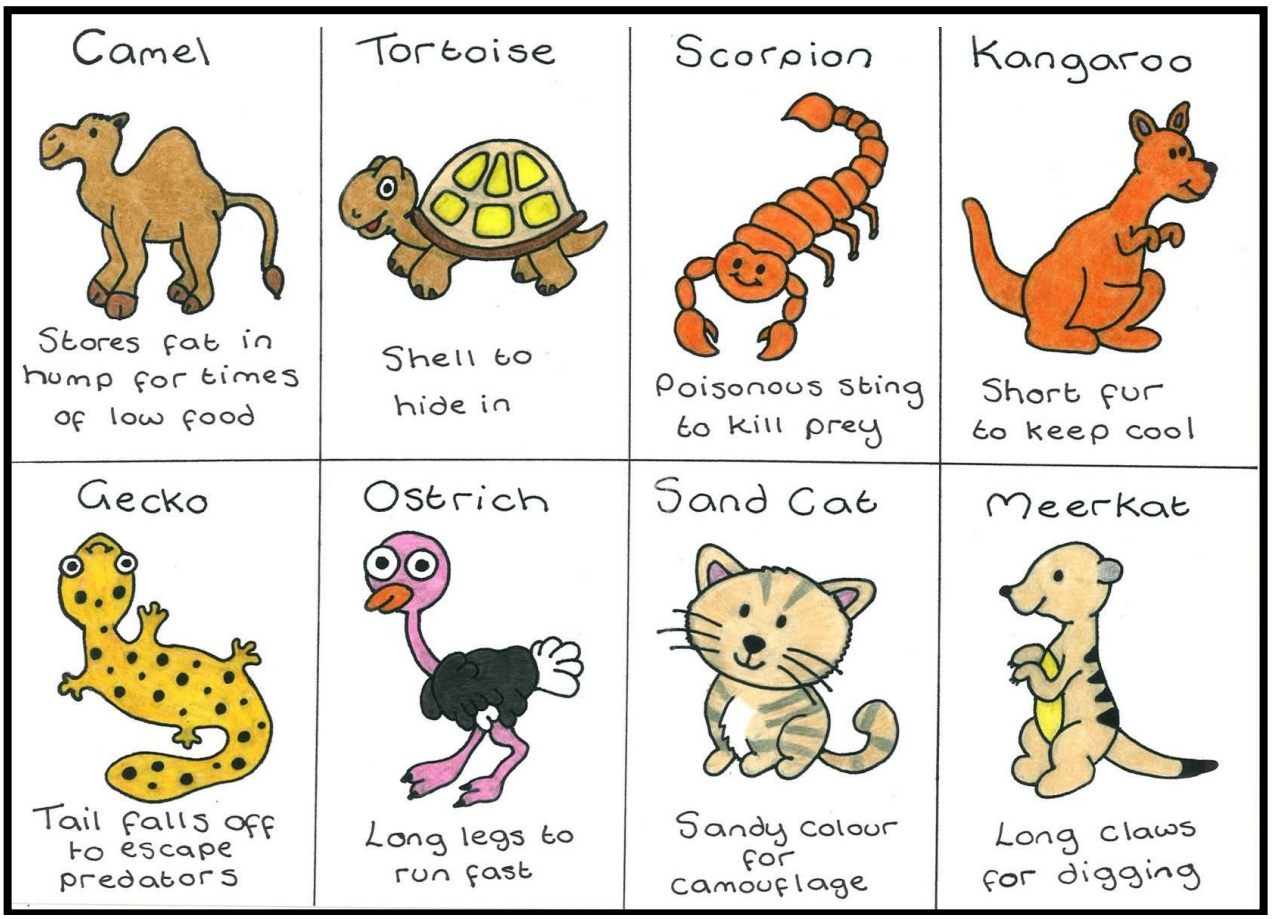
Ocean

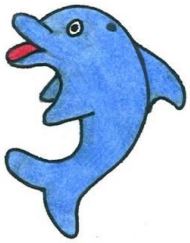
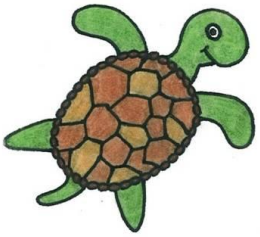
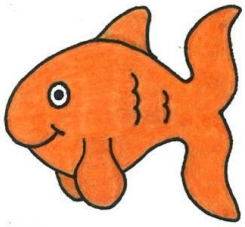
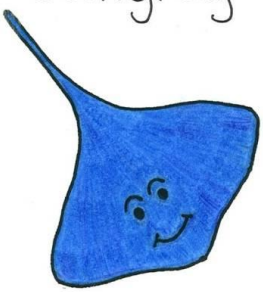
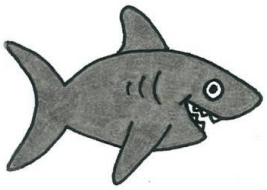
Arctic

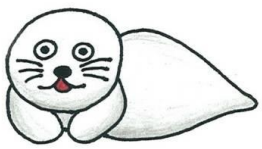
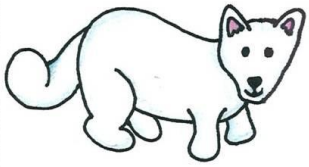
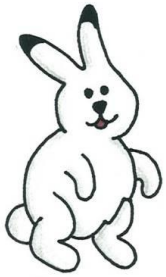
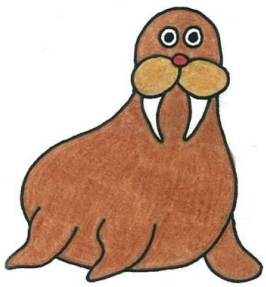
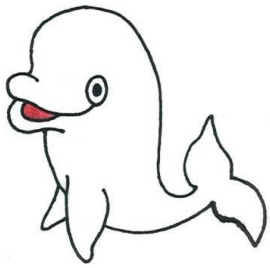


Desert


Tiger
Stripy fur for camouflage
Parrot
Beak to crack open nuts
Iguana
Green for camouflage
Monkey
Tail to swing
Frog
Strong legs
Stick Insect
Hooks on feet
Crocodile
See-through
Lemur
Tail to


Camel
Stores fat in hump for times of low food
Tortoise
Shell to hide in
Scorpion
Poisonous sting to kill prey
Kangaroo
Short fur to keep cool
Gecko
Tail falls off to escape predators
Ostrich
Long legs to run fast
Sand Cat
Sandy colour for camouflage
Meerkat
Long claws for digging

Dolphin  Blowhole for breathing	Turtle  Flippers to swim	Fish  Gills to breathe underwater	Seahorse  Long snout to find food
Starfish  Suckers to grip onto rocks	Stingray  Flat to glide along seafloor	Shark  Sharp teeth to catch and eat prey	Crab  Hard shell for protection

Polar Bear  White fur for Camouflage	Snowy Owl  Thick feathers for warmth	Seal  Flippers for Swimming	Arctic Fox  Thick fur for warmth
Arctic Hare  Short ears to reduce heat loss	Puffin  Large beak to catch fish	Walrus  Tusks to drag themselves across the ice	Beluga Whale  Thick layer of fat to keep warm

Marwell log book page 1

Every good explorer keeps a logbook of all the amazing new animals they discover. Choose an animal you have seen at Marwell Zoo and fill in as much information as you can on your logbook page:

Animal's name:_____

Picture of the animal:

What does it like to eat?

MEAT ☐

PLANTS ☐

Draw what its footprint would look like:

Draw any interesting patterns it has:

Which habitat can you find it in?

GRASSLAND ☐

MOUNTAIN ☐

RAINFOREST ☐

DESERT ☐

Marwell log book page 2

Every good explorer keeps a logbook of all the amazing new animals they discover. Choose a local animal you have seen and fill in as much information as you can on your logbook page:

Animal's name:_____

Picture of the animal:

What does it like to eat?

MEAT ☐

PLANTS ☐

Draw what its footprint would look like:

Draw any interesting patterns it has:

Which habitat can you find it in?

WOODS ☐

RIVER ☐

FIELD ☐

SEA ☐

Marwell log book page 3

Look at the animals on your logbook pages 1 and 2.

Write down 3 things that are the same and 3 things that are different about your two animals:

Same:

_____

_____

_____

Different:

_____

_____

_____

Which animal lives in a hotter habitat?

_____

Which animal lives in a wetter habitat?

_____

Which is your favourite and why?

_____

_____

_____

Comparing micro-habitats

Micro-habitats are very small habitats. Some examples include brick walls, log piles, under hedges and leaves:

1. Choose 3 micro-habitats to explore
2. Write the names of the micro-habitats in the column headings
3. Tick what the conditions are like at each micro-habitat.
4. Record the number of plants and animals found at each micro-habitat

Conditions	Micro-habitat 1:	Micro-habitat 2:	Micro-habitat 3:
Wet			
Dry			
Dark			
Light			
Number of animals			
Number of plants			

Animal adaptation pictures

How are antennae useful to cockroaches?

How are whiskers useful to cats?

How are shells useful to snails?

How are webbed feet useful to ducks?

How are long arms useful to gibbons?

How are sharp teeth useful to crocodiles?

How is white fur useful to polar bears?

How are trunks useful to elephants?

How are beaks useful to parrots?

Interdependence

Weaver birds build nests out of grass and strips of leaves:

Interdependence

Black rhinos eat leaves:

Interdependence

Lions hunt and chase down prey, like this zebra:

Interdependence

To keep safe, clown fish live in stinging sea anemones as they do not get stung but other animals might:

Interdependence

Hermit crabs live in shells left over by other animals:

Interdependence

Cleaner fish eat tiny animals that build up on the eel's teeth. This keeps the eel's teeth clean:

Interdependence

Octopuses can hide in shells from other animals and have even been found in coconuts that have fallen into the sea!

Interdependence

Monkeys eat fruit that grow on the trees in their habitat: