Living Things and Their Habitats:
Classifying Conundrums

Aim:	**Success Criteria:**	**Resources:**
To give reasons for classifying plants and animals based on specific characteristics in the context of sorting and grouping animals for a zoo. I can give reasons for classifying animals based on their similarities and differences.	I can sort and group animals based on their features. I can give reasons for the way I have classified animals.	**Lesson Pack**
	Key/New Words: Classify, sort, group, similarities, differences, compare.	**Preparation:** **Zoo Animals List** - 1 per child **Zoo Classification Activity Sheet** - 1 per pair **Zoo Classification Example** - as required

Prior Learning: It will be helpful if children have learnt about classification and keys in the Year 4 Living Things and Their Habitats Unit.

Learning Sequence

	What is Classification? Explain classification using the **Lesson Presentation**.	
	Sorting and Grouping: Children discuss how to sort and group the snacks shown on the Lesson Presentation. Guide the children through splitting the snacks into smaller and smaller groups.	
	Classification Conundrum: Children act as taxonomists to classify animals for a new zoo, by sorting and grouping the animals on the differentiated **Zoo Animals List**, using the differentiated **Zoo Classification Activity Sheet** as a guide. Look for children who can think of ways to sort and group the animals based on their similarities and differences. Children classify 16 animals. Boxes for the first 6 groups are drawn for them. Children may wish to refer to the **Zoo Classification Example** as a guide. Children could cut out the pictures of the animals and physically sort them into smaller and smaller groups, noting down the titles of each group. Children classify 32 animals. Boxes for the first 2 groups are drawn for them. Children may wish to refer to the **Zoo Classification Example** as a guide. Children classify 32 animals. Boxes for the first 2 groups are drawn for them.	
	A Single Method? Children discuss how they classified the animals with the members of their group. Groups discuss whether and why taxonomists may use a single, standard method of classification.	

Task*it*

***Classify*it:** Children could group and sort a selection of sweets by splitting the sweets into two larger groups, then smaller and smaller groups.

***Sort*it:** Children sort the animals on this activity sheet according to whether they are mammals, reptiles, amphibians, fish, birds or insects.

***Design*it:** Children could design the layout for their zoo, making sure that similar animals are housed near to each other.

Science

Living Things and Their Habitats

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Aim

- I can give reasons for classifying animals based on their similarities and differences.

Success Criteria

- I can sort and group animals based on their features.
- I can give reasons for the way I have classified animals.

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What is Classification?

How many different species of living things are there on Earth?

Scientists believe that there could be as many as 10 million different species on Earth! It would be very hard to study the lives and behaviours of all these living things without grouping them together somehow.

Scientists sort and group living things according to their similarities and differences. This is called classification. Scientists who classify living things are called taxonomists.

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Sorting and Grouping

Taxonomists classify living things by comparing them. Let's look at an example of how this works.

Look at the snacks on this table. How could we group them? Taxonomists would start by splitting them into two large groups. Can you think of two groups to use to split up the snacks?

There are several ways you could split these snacks into two groups. Share your ideas with the class.

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Sorting and Grouping

Let's say you split them into 'Healthy' snacks and 'Unhealthy' snacks.

Now each group can be split into another two groups. Look at the 'Healthy' snacks. How could you split them into two smaller groups?

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Sorting and Grouping

Again, there are several ways you could split these snacks into two groups.

They could be grouped into ‘Fruits’ and ‘Vegetables’.

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Sorting and Grouping

Now, the ‘Vegetables’ group can be split up into two smaller groups.

They could be split into ‘Roots’ and ‘Florets’, or even ‘Carrots’ and ‘Broccoli’.

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Sorting and Grouping

This is how taxonomists classify living things. They group similar things together, then split the groups again and again so they become smaller and smaller. Each group allows scientists to observe and understand their similarities and differences more clearly.

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Classification Conundrum

Zoo Animals List

These animals are going to live in a new zoo. You need to classify the animals so that similar species can be housed near to each other. Use the Zoo Classification Activity Sheet to classify the animals.

lion	chameleon	tarantula	lobster
hissing cockroach	giraffe	poison dart frog	macaw
chimpanzee	octopus	giant snail	komodo dragon
Galapagos penguin	spectacled bear	meerkat	emu

Imagine that a new zoo is going to open in your local area. You have been asked to sort and group the animals that will live in the zoo, so that similar species can be housed in enclosures near one another.

You will act as a taxonomist, so it is up to you to decide how to classify the animals and give reasons for your classification.

Look at the animals on your Zoo Animals List and use the Zoo Classification Activity Sheet to sort and group the animals.

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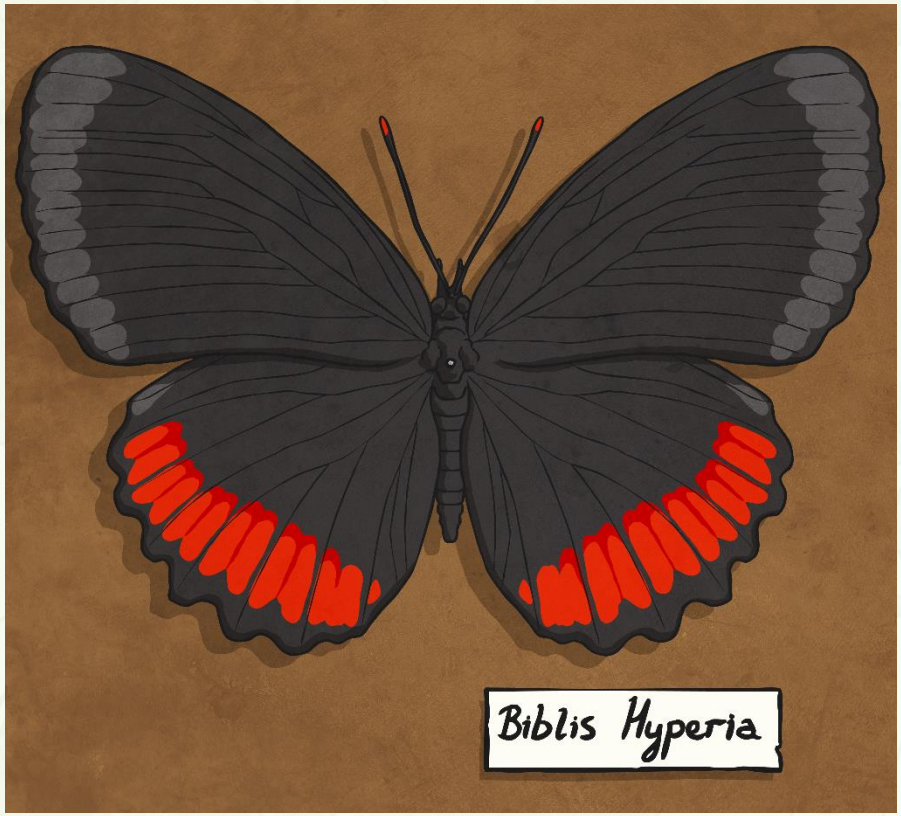
A Single Method?

Talk to other people in your group about how they classified the animals in their zoo. Did they sort and group the animals in the same way as you did?

Do you think taxonomists use different classification methods like you may have done? Is it important to use the same method of classification?

In your next lesson, you will find out about the standard method of classifying living things.



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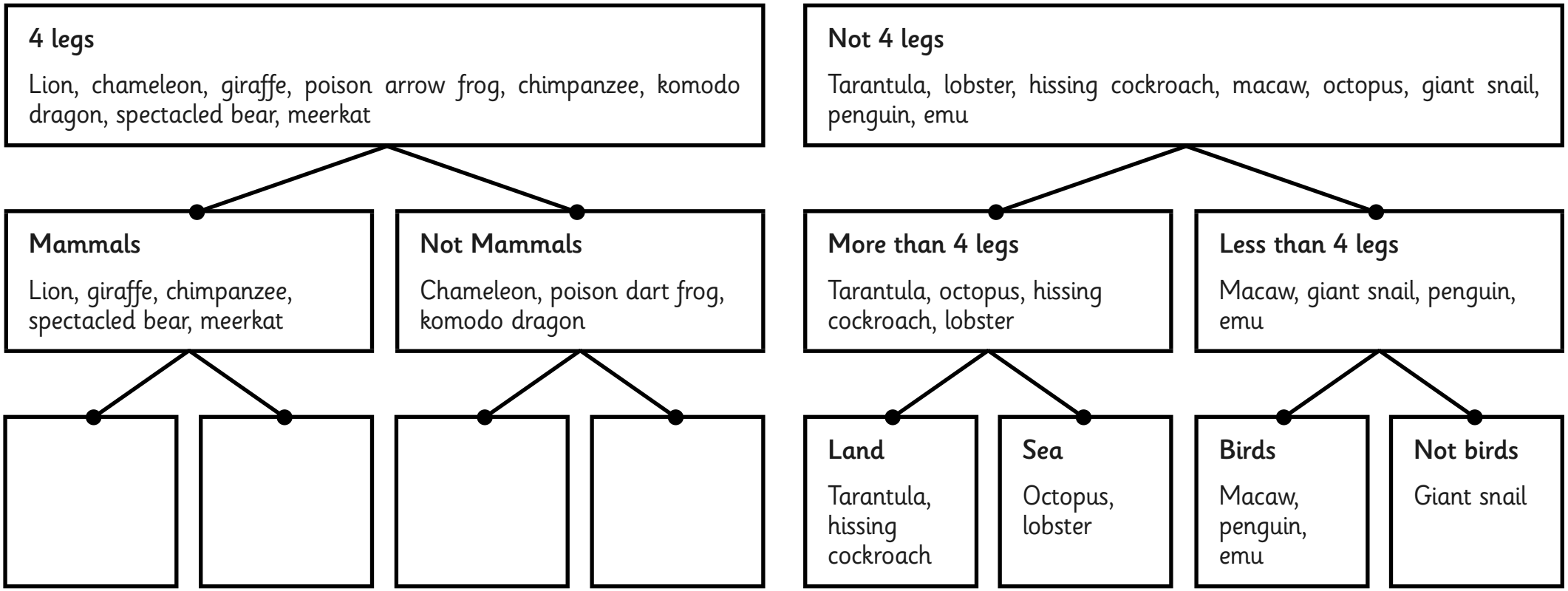
Zoo Classification Example

There are different ways to sort and group the animals. This is one example of how to get started. You may use it to help you classify the animals for your zoo.



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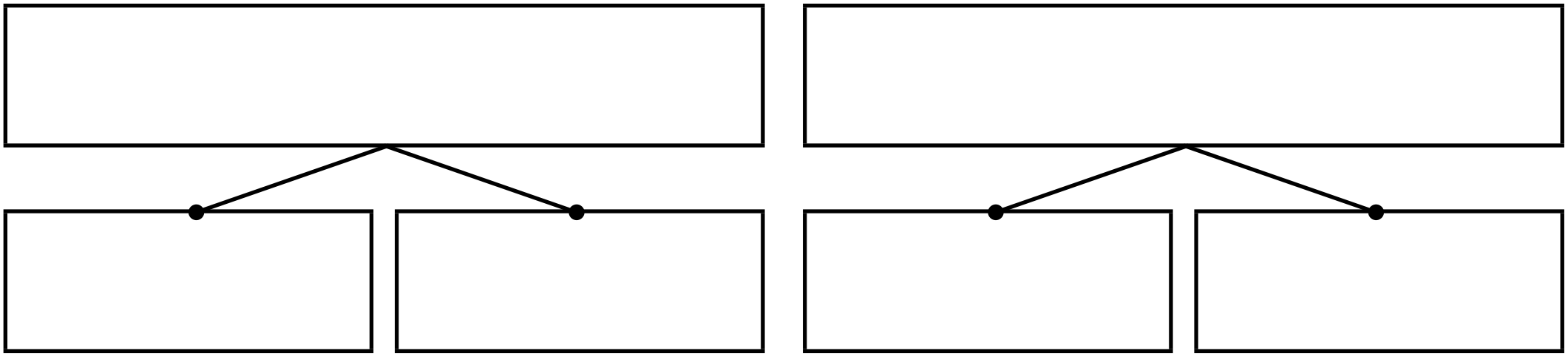
Zoo Classification

You have been asked to classify the animals on the Zoo Animals List. The animals will be housed in enclosures near to each other. Start by deciding on two groups to use to split up the animals, then split each group into two more groups. Carry on until you have classified the individual animals, or cannot think of a way to split the group up any more. The first few boxes have been drawn for you. Add a title for each group to show your reasons for classifying the animals in this way.



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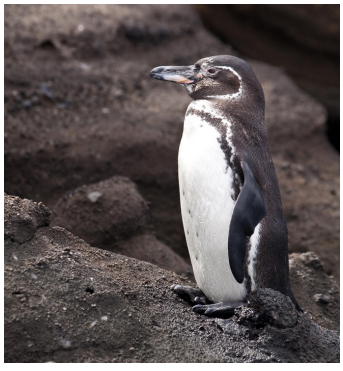
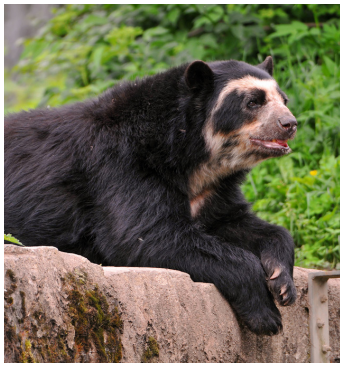
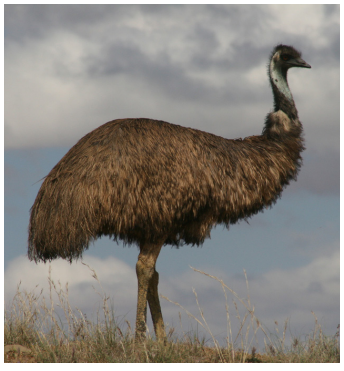
 Galapagos penguin	 spectacled bear	meerkat	 emu

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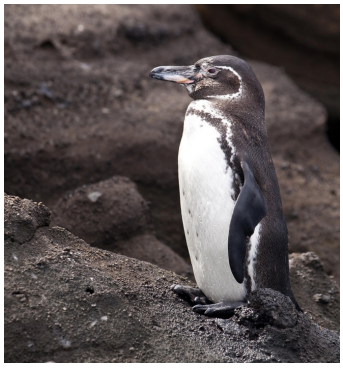
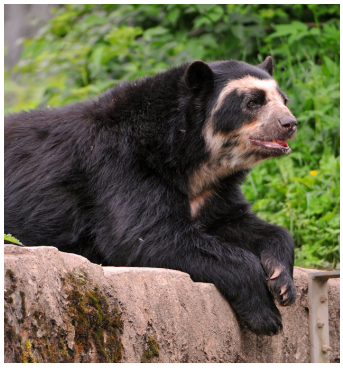
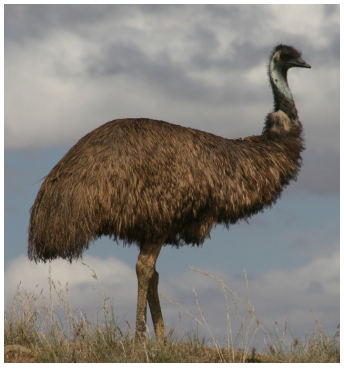
 Galapagos penguin	 spectacled bear	meerkat	 emu

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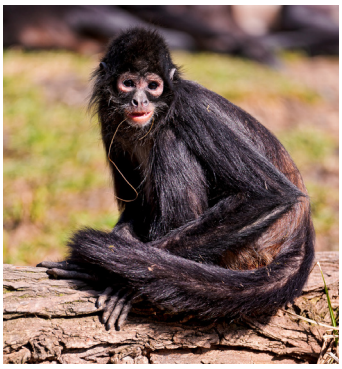
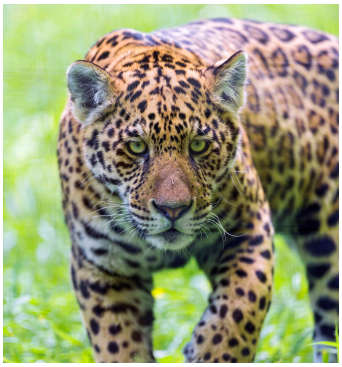
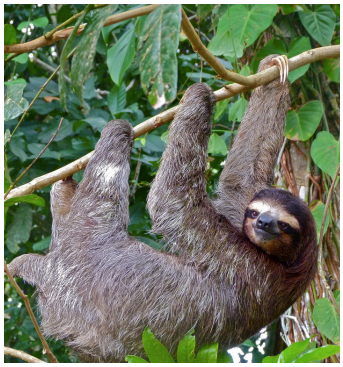
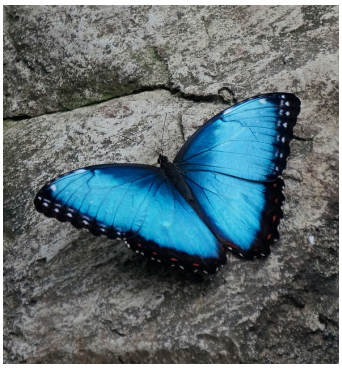
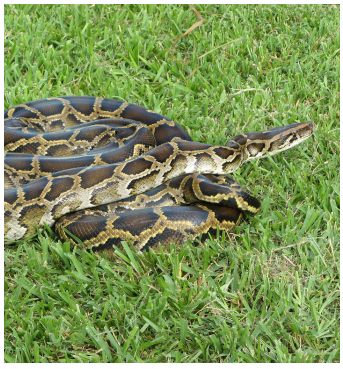
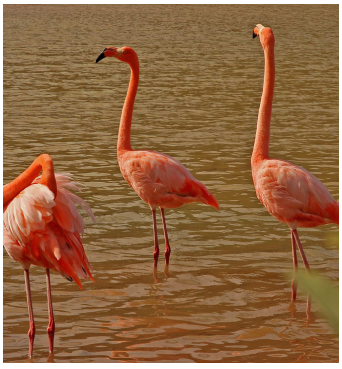
Zoo Animals List

tapir	tiger	 spider monkey	angelfish
piranha	otter	 jaguar	 sloth
terrapin	stick insect	 blue morpho butterfly	toad
 python	caiman	 flamingo	fruit bat

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