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Note to the teacher

Life on Earth is an integrated learning module that incorporates elements of both the Science and Social Studies learning area curriculums. It is *not* intended to be a complete curriculum. Rather it has been designed to supplement existing curriculums by providing relevant work sheets, limited content, and engaging student centered activities. While the activities vary between closed and open-ended tasks, they have all been designed to stimulate critical thinking, analysis, and analytical problem solving skills. While most of the activities can be completed in-class, a few require access to resources found outside the classroom and thus would be good homework or research activities. Some of the activities will involve a certain amount of teacher facilitation to be successful.

Happy teaching,

Activity 2

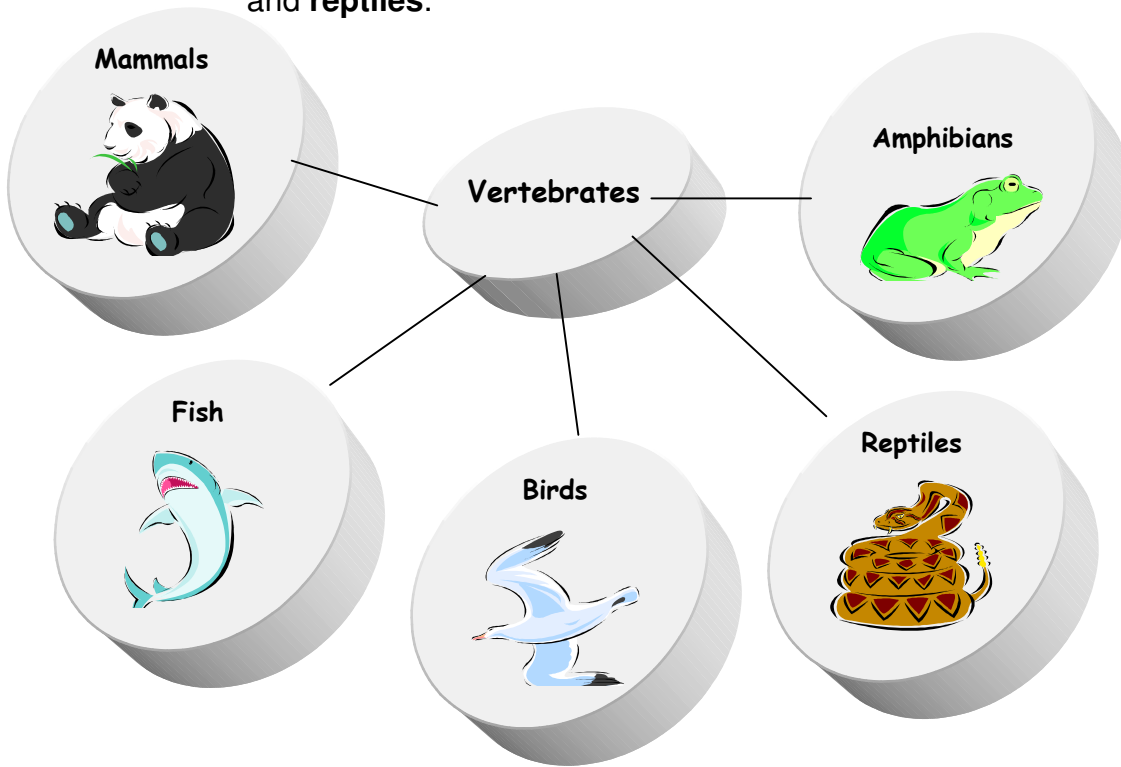
Let's see how much you know already about life. As best as you can, answer the following questions. Write down what you think. When you have finished compare your answers with your classmates. At the end your teacher will ask the class for answers to each question and as an entire class you will decide which answer is the best. Write these answers into the table below.

Questions	Your answer	Class answer
What do you think is the smallest life form on Earth?		
What is the largest creature?		
What is the fastest creature on land?		
What creature is the most populous (greatest number) living on Earth?		
What is the longest (in terms of age) living life form?		
What is the most useful creature to people? Give a reason.		
What is the most useful plant to people? Give a reason.		
What is the strangest creature you can think of? Explain why.		
What is the deadliest creature to people (one you shouldn't keep as a pet)? Give a reason for your choice.		

Animals with skeletons

When most of us think of animals we think of **vertebrates**. Vertebrates have internal skeletons that are very strong – this allows them to grow to large sizes. Vertebrates are the largest animals on the planet. Other features that many vertebrates share are a well-developed brain, two pairs of limbs (four in total), and red blood.

Vertebrates are again divided up into **mammals**, **birds**, **fish**, **amphibians** and **reptiles**.



Activity 5

Group the animals listed below into the categories to which you think they belong. You could do this as a library exercise.

shark	emu	seagull	stingray	crocodile	penguin
snake	alligator	tuna	frog	salamander	crab
turtle	kangaroo	koala	parrot	eagle	salmon
zebra	bat	gorilla	spider	tree	human
tadpole	elephant	chicken	lizard	seahorse	bacteria
MAMMALS (7)	FISH (5)	BIRDS (6)	REPTILES (5)	AMPHIBIANS (3)	OTHER (4)

Being vulnerable

Endangered species have a few characteristics that make them more **vulnerable** to becoming extinct than other species. These characteristics are:

- **Low birth rate** – Some animals give birth quickly and to large numbers of offspring, like rabbits and insects. Others, like the blue whale or the giant panda only give birth to one offspring at a time, and take a long time between births. These animals are unable to produce offspring quickly to replace those that die.
- **Large size** – animals that are large like the Bengal tiger, the lion or the elephant find it difficult to hide from human hunters. They also need large areas to roam over to find food. As habitats become smaller because of human development of land, they find it harder to survive.
- **Live in only one place** – animals that live in only one place, such as the elephant seal or the Tasmanian tiger, are vulnerable. If the habitat in that place is destroyed, the species is also destroyed.
- **One food source** – animals that live on only one type of food, such as the koala (certain eucalyptus leaves) are vulnerable if that food source is destroyed or limited.

When human activity destroys or damages a habitat or ecosystem where animals with these characteristics live, it is likely that these animals will be endangered, and likely in the long run that they will become extinct.

Activity 2

Read the following descriptions. Identify which of the above characteristics is contributing to the animal being endangered.

Monk Seal

The Mediterranean monk seal is highly endangered. There are less than 500 left. The disturbance caused by powerboats and airplanes has stopped them from breeding properly.

Characteristic is _____

Giant Panda

The giant panda lives in the bamboo forests of southwestern China. But much of the bamboo that they eat has been cut down and replaced with villages and rice fields.

Characteristic is _____

African elephant

The African elephant is the largest animal to walk the earth. Its numbers decreased rapidly the last century as humans hunted them for their ivory tusks. The ivory was used to make piano keys and ornamental carvings.

Characteristic is _____

Black-footed Ferret

In the US, ranchers and the government have killed 99% of prairie dogs because horses can break their legs stepping to their burrows. Because of this the black-footed ferret, which eats prairie dogs, is almost extinct.

Characteristic is _____