Jeavons Wood Primary School – Science Knowledge Organiser

Topic: Living things	Year:4	Strand: Biology

Big Question: How are living things classified?
Do habitats change? How can we help them?

What should I already know?

*Animals can be grouped into vertebrates (and then further into fish, reptiles, amphibians, birds and mammals) and invertebrates
*Animals can be grouped into carnivores, herbivores and omnivores
*The differences between the teeth of carnivores and herbivores.
*The names of some common wild and garden plants and deciduous and evergreen trees.
*Examples of habitats (including microhabitats) and the animals and plants that can be found there.
*Living things depend on each other to survive.
*How food chains and food webs work.
*How land use has changed over time and the effects this has on the environment (e.g. urban development)

What will I know by the end of the unit?

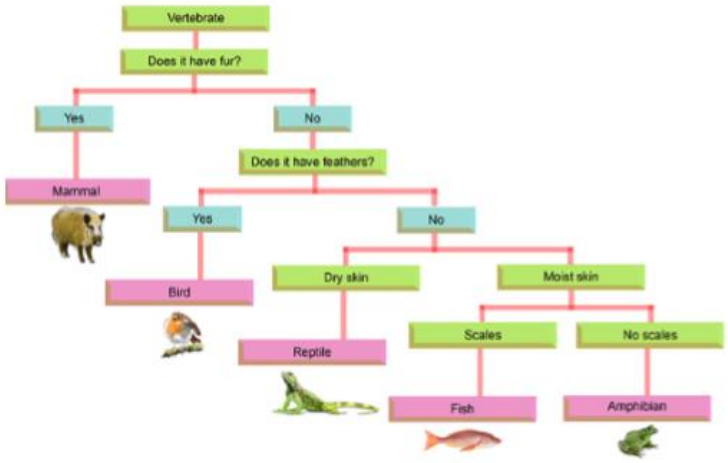
How can living things be grouped?

All living things, which can also be called organisms, have to do certain things to stay alive. These are the life processes: (MRS NERG)
*movement
*respiration
*sensitivity
*nutrition
*excretion
*reproduction
*growth

*Living things can be grouped according to different criteria (where they live, what type of organism they are, what features they have). For example, a camel can belong in a group of vertebrates, a group of animals that live in the desert, and a group of animals that have four legs.

What is a classification key?

A classification key is a tool that is used to group living things to help us identify them.



How can environments change?

*Habitats can change throughout the year and this can have an effect on the plants and animals that live there.
*Humans can have positive and negative effects on the environment:
*positive effects: nature reserves, ecological parks
*negative effects: litter, urban development

Vocabulary

biomes	a natural area of vegetation and animals
carnivore	an animal that eats meat
classification key	a system which divides things into groups or types
criteria	a factor on which something is judged
deciduous	trees that lose leaves in the autumn every year
environment	all the circumstances, people, things, and events around them that influence their life
evergreen	a tree or bush which has green leaves all the year round
food chain	a series of living things which are linked to each other because each thing feeds on the one next to it in the series
habitat	the natural environment in which an animal or plant normally lives or grows
herbivore	an animal that only eats plants
invertebrate	a creature that does not have a spine, for example an insect, a worm, or an octopus
Life processes	There are seven processes that tell us that living things are alive
microhabitat	a small part of the environment that supports a habitat, such as a fallen log in a forest
minibeast	a small invertebrate animal such as an insect or spider
nutrition	The process of taking food into the body and absorbing the nutrients in those foods
omnivore	process of taking food into the body and absorbing the nutrients in those foods
organism	a living thing
reproduction	when an animal or plant produces one or more individuals similar to itself
respiration	process of respiring; breathing ; inhaling and exhaling air
sensitivity	responding to the external environment
urban	belonging to, or relating to, a town or city
vegetation	plants, trees and flowers
vertebrate	a creature which has a spine

Where will my learning go next?

In Year 5 pupils will be taught:
To describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals.

In Year 6 pupils will be taught:
To describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. give reasons for classifying plants and animals based on specific characteristics.

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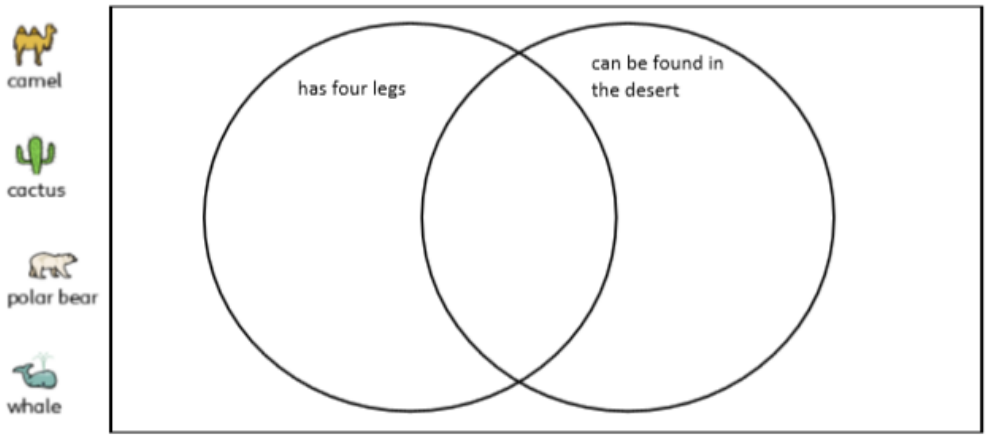
Question 1: Which of these is **not** a vertebrate?	Start of unit:	End of unit:
bird		
mammal		
reptile		
insect		
amphibian		

Question 2: A duck and a fish are similar because...(tick three)	Start of unit:	End of unit:
they are both vertebrates		
they both need food and water to survive		
they both breathe using gills		
they are both invertebrates		
they both lay eggs		

Question 3: Write the word of each living thing in the Venn diagram to show where they belong.

Start of unit:

End of unit:



Question 4: Write the word of each living thing in the Carroll diagram to show where they belong.

Start of unit:

End of unit:

	can fly	can not fly
lays eggs		
does not lay eggs		

Question 5: Complete the table by adding the name of the minibeast in the right place.	Start of unit:	End of unit:

fly

spider

worm

ants

name	legs	wings
	6	0
	0	0
	8	0
	6	2

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Question 6: Which three things do all animals do?	Start of unit:	End of unit:
move		
walk		
reproduce		
grow		

Question 7: What can we use to help us accurately identify living things?	Start of unit:	End of unit:
a food chain		
looking after the environment		
a classification key		
living processes		

Question 8: Name one thing that makes these animals similar and one thing that makes them different.

swan

owl

Start of unit:

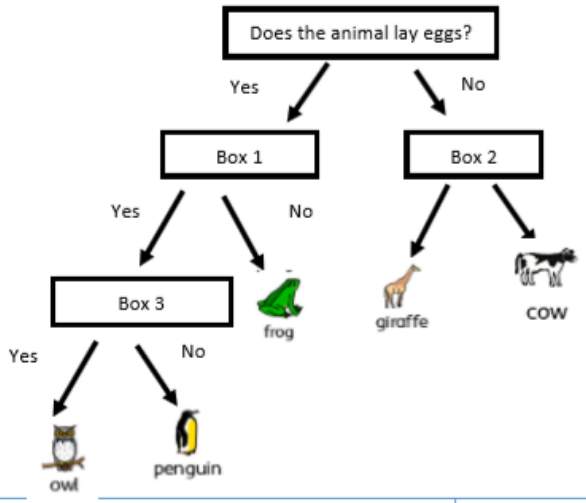
End of unit:

similar	different

Question 9: Look at the following classification key. Which question belongs in each box?

Start of unit:

End of unit:



Question	Box Number (1, 2 or 3)
Does the animal have a long neck?	
Is the animal a bird?	
Does the animal fly?	

Question 10: List one way in which we help the local environment.

Start of unit:

End of unit: