

19.1.21

LO: To describe how living things are classified into broad groups

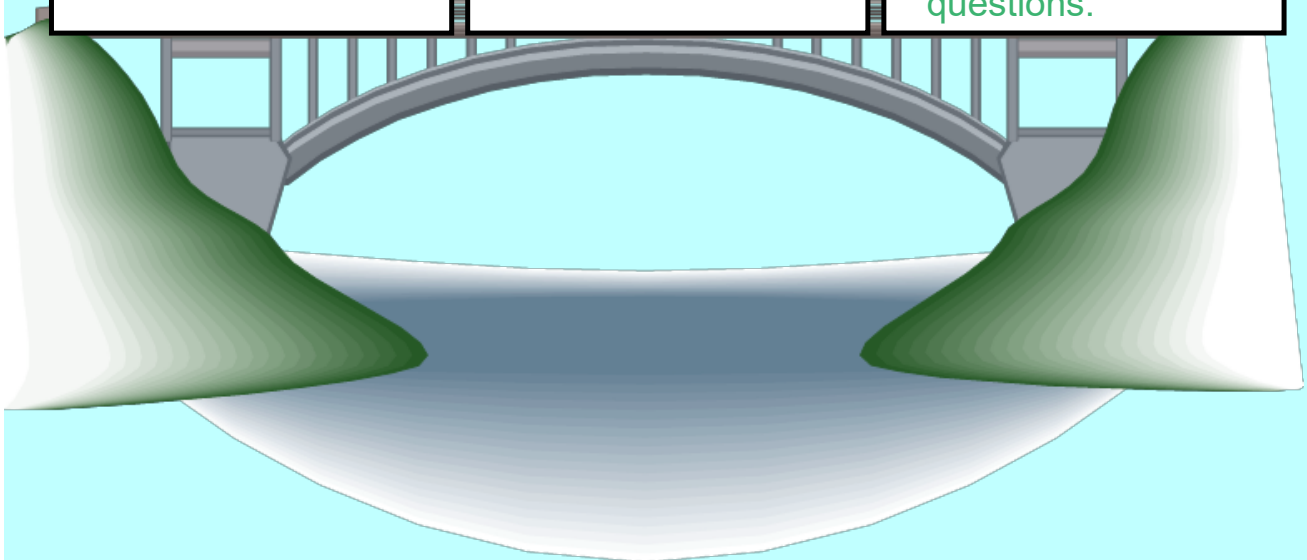


Success Criteria

1: I know how living things are classified according to common observable characteristics and based on similarities and differences.

2: I understand that there are 5 vertebrate groups.

3: I can use secondary resources to help research information and find answers to questions.



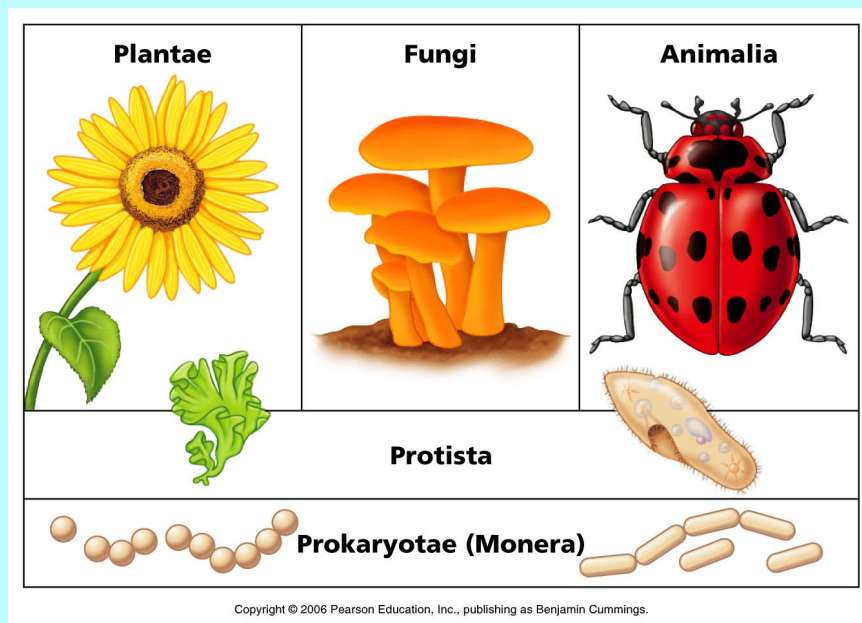
Reminder from last lesson: Why do we classify living things?

Classification is the grouping together of similar species of living things (plants, animals and other organisms). Classification means to group similar **species** together.

There are millions of different species living on our planet - different types of plants, animals, fungi, and bacteria. In order to learn more about them, it is necessary for scientists to sort them into groups. Related species can be compared by their **similarities** and **differences**.

It's easier to understand & study them if they're sorted into groups that have similar characteristics. You can be sure that scientists all over the world are talking about the same species.

Recap...what 5 kingdoms are living things divided into?








Carl Linnaeus (1707-1778) was a Swedish naturalist. He is famous for creating two scientific systems: the system for classifying plants and animals and the system for naming all living things.

Now read the fact file about this scientist (on the year6 home-learning page) and complete the RIC tasks.

Read the information sheet on Carl Linnaeus, on the Year6 home-learning page, and complete the RIC questions:

	<p>Look at paragraph beginning: '<i>He went on to study...</i>' Find and copy the word used to describe what he collected.</p>
	<p>Look at paragraph beginning: '<i>Linnaeus published over 25 books.....</i>' What word is used to show that he gathered together a lot of books.</p>
	<p>What impression does the reader get of Carl Linnaeus? Give two characteristics that describe Carl Linnaeus and provide evidence from the text to support your choices.</p>

Extension:

1. Look at the section with the subheading: *Binomial Classification*, find and copy one word that shows Linnaeus changed dramatically the way we name animals and plants.

2. '*Linnaeus's travels were commissioned by the Swedish government*

Tick one:

This means the travels were

Banned by the Swedish government

Assigned by the Swedish government

Misunderstood by the Swedish government

Animals can be classified as either **vertebrates** or **invertebrates**.

Vertebrates are animals that **have a backbone** inside their body. The major groups include fish, amphibians, reptiles, birds and mammals.

Invertebrates don't have a backbone. They either have a soft body, like worms and jellyfish, or a hard outer casing covering their body, like spiders and crabs.

Kingdom Animalia

- ~ 1.26 million animal species
- **Vertebrates and invertebrates**
- ~ 1.2 million are **invertebrates** (e.g. insects, crustaceans)
- ~ 60,000 are **vertebrates**



Monarch butterfly
INVERTEBRATE



Great white shark
VERTEBRATE

Classification

INVERTEBRATES

- No spinal column (also called backbone)
- No internal skeleton

VERTEBRATES

- Have a spinal column
- Have an internal skeleton

Vertebrates are divided into five groups:

- Fish
- Amphibians
- Reptiles
- Birds
- Mammals



Seven-spot ladybird
INVERTEBRATE



Purple frog
VERTEBRATE

TASK: Use the information on the next slides, and your own research, to find out the main characteristics of each vertebrate group and present in your science books.

- Use bullet points
- Draw or cut out pictures

Reptiles

Birds

Mammals

Fish

Amphibians

WAGOLL

Reptiles

- Cold-blooded
- Many believe that they come from the ancestors of amphibians
- Scaly body
- Come in different sizes

Birds

- Scaly feet
- Feathers
- Lay eggs
- Considered to be related to reptiles

Fish

- All have gills
- All lay eggs
- Some produce light
-

Mammals

- * Don't lay eggs *
- Breathe air
- Have fur

Amphibians

- Can breathe in and out of water
- Many eat insects
- Multi-coloured
- Many habitats
- Can have lungs or gills

Not completely true - see next slides.

Monotremes - an unusual group of mammals



echidna



duck-billed platypus

These mammals are unusual because they lay eggs rather than giving birth to live young. They are only found in Australia and New Guinea.

Visit this website, to find out more about the unusual duck-billed platypus

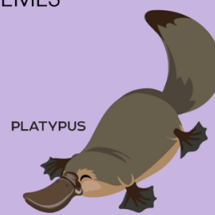
<https://www.nhm.ac.uk/discover/the-platypus-puzzle.html>

KNOW YOUR EGG-LAYING MAMMALS

MONOTREMES



SHORT-BEAKED ECHIDNA



PLATYPUS



WESTERN LONG-BEAKED ECHIDNA



EASTERN LONG-BEAKED ECHIDNA



ATTENBORROUGH'S LONG-BEAKED ECHIDNA



Fish: Characteristics

- Have a backbone
- Cold-blooded
- Breathe through gills
- Live in the water
- Mostly have scales
- Have fins
- Mostly lay eggs, some give birth to live young
- Examples: sharks, salmon, tuna, rays,

Reptiles: Characteristics

- Have a backbone
- Cold-blooded
- Dry scaly skin
- Breathe with lungs
- Most lay leathery eggs, some give live birth
- Most have 4 legs with clawed toes, but some don't have any legs
- Examples: turtle, snakes, alligators, lizards

Amphibians: Characteristics

- Has a backbone
- Cold-blooded: which means it can't maintain a constant body temperature on its own
- Breathe through gills (as babies), and lungs and their skin (as adults)
- Go through metamorphosis: don't look like their parents when they are born
- Lay eggs
- Soft, moist skin protected by a slimy layer of mucus
- Examples: frogs, toads, salamanders, and newts

Birds: Characteristics

- Have a backbone
- Warm-blooded- allowing them to live on every climate on earth
- Have feathers and wings
- Lay eggs with **hard, waterproof shells**
- Take care of their young
- Walk on 2 legs
- Breathe with lungs
- Have beaks or bills
- Hollow or partly hollow bones
- Examples: ducks, penguins, warblers, toucan, hawks

Mammals: Characteristics

- Have a backbone
- Warm Blooded- this means that they have a constant body temperature and can live anywhere on Earth
- Have hair or fur on their bodies
- Most give live birth
- Produce milk to feed their babies
- Breathe through lungs
- Have different types of teeth depending on what they eat
- Large well developed brains
- Examples: deer, kangaroos, humans, dolphins, camels

Attachments

scr_uks2_sc_y6_sa_living_things_and_their_habitats.pdf

12151-Classification - for 11-14 year olds - Guess Zoo Species Cards.ppt

Features of biography(1).doc

BiographyGraphicOrganizerElementary.pdf