CLASSIFICATION OF ANIMALS

- Learning Objectives: To explain how animals are classified into groups.
- Key Words:
• How do we identify living from non living?
There are seven essential life processes.

To remember these processes meet our little blue woman MS. R. NERG…

What do all the letters in her name stand for?
7A Signs of life

M = MOVEMENT
Living things are able to move about. Animals move from place to place. Plants move by responding to light.

S = SENSITIVITY
Living things notice and react to changes in their surroundings. They can respond to light, heat, sound, taste, sight or touch.

R = RESPIRATION
Living things need energy to carry out the functions that keep them alive.
N = NUTRITION
Living things need to take in food.

E = EXCRETION
Living things have to get rid of unwanted waste products.

R = REPRODUCTION
Living things produce offspring.

G = GROWTH
Living things grow, increasing in size and complexity.
• Look at the pictures of animals:
• Are they same/different
• How can you put them into groups.(5mins)
Classification is sorting out all organisms into groups according to the similarities between them. Organisms are divided into two main kingdoms: the animal kingdom and the plant kingdom.
All living things are classified into five main groups called kingdoms.

Most living things belong to the animal kingdom or the plant kingdom.
Classifying Animals

In the front of your book make a list of as many different animals as you can think of......you only have 1 minute!

Now, circle the vertebrates and underline the invertebrates.

Vertebrate | Invertebrate
---|---

Vertebrates – animals with a backbone.
Invertebrates – animals without a backbone.
Classifying Vertebrates

Mammals

Fish
Reptiles

Birds

Amphibians

Who correctly classified their vertebrate?
Vertebrates are classified into 5 groups. Complete the table of features for each type of vertebrate.

<table>
<thead>
<tr>
<th></th>
<th>mammals</th>
<th>birds</th>
<th>reptiles</th>
<th>amphibians</th>
<th>fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>body covering</td>
<td>hairy or furry skin</td>
<td>feathers</td>
<td>tough skin with scales</td>
<td>soft, moist skin (no scales)</td>
<td>scales</td>
</tr>
<tr>
<td>how it breathes</td>
<td>lungs</td>
<td>lungs</td>
<td>lungs</td>
<td>lungs</td>
<td>gills</td>
</tr>
<tr>
<td>where it lives</td>
<td>mostly on land</td>
<td>on land</td>
<td>mostly on land</td>
<td>on land and in water</td>
<td>in water</td>
</tr>
<tr>
<td>how offspring are produced</td>
<td>most young born alive</td>
<td>lay eggs</td>
<td>lay eggs</td>
<td>lay eggs (in water)</td>
<td>lay eggs</td>
</tr>
</tbody>
</table>
Confidence Check

Show from 1-5 on how confident you are on each success criteria.

1 is not at all confident, 5 is super confident

Success criteria
1. I can state what is meant by the term classification.
2. I can describe the difference between invertebrates and vertebrates and their subdivisions using examples.
All ___________ are put into one of five ___________. The ___________ and ________ kingdoms are divided into ___________.

The ___________ kingdom is divided into ___________ (which all have backbones) and ___________ (animals without backbones).

The ___________ group is divided into ________ more groups.

Mammals have ________, give birth to live ___________ and produce ________.

Birds have ___________ and lay eggs with _________.

Reptiles have ___________ and lay eggs with _________.

Amphibians have ___________ and lay eggs in water.

Fish have ___________ and lay eggs in water.

Examples

Invertebrates include:

- ____________________
- ____________________
- ____________________
- ____________________
- ____________________

Vertebrates include:

- ____________________ (a mammal)
- ____________________ (a bird)
- ____________________ (a reptile)
- ____________________ (an amphibian)
- ____________________ (a fish)

animal  dry scales  feathers  five  frog  goldfish  groups

guinea pig  hair  hard shells  invertebrates  jelly shells  jellyfish

kingsdoms  leathery shells  milk  moist skin  offspring

organisms  parrot  plant  snails  snake  spiders  starfish

vertebrate  vertebrates  wet scales  worms
Organisms

- Animals: Jellyfish, worms, arthropods, molluscs, echinoderms, amphibians, fish, reptiles, birds and mammals.
- Plants: Seed bearing plants and non-seed bearing plants
- Prokaryotes: Bacteria and primitive algae
- Protists: Single-celled organisms
- Fungi: Moulds, mushrooms and toadstools
Vertebrates

- Have body hair or fur
- Have mammary glands that produce milk
- Warm blooded

Mammals
Vertebrates

- Live in water
- Breathe with gills
- Streamlined bodies
- Have cartilage or bony skeleton
- Cold blooded
- Mostly lay eggs
Vertebrates

- Have dry, scaly skins
- Egg laying
- Breathe with lungs
- Cold blooded

Reptiles
Vertebrates

- Moist skin
- Lay their eggs in water
- Larvae have gills and live in water
- Adults have lungs and live on land
- Cold blooded

Amphibians
Vertebrates

- Have feathers and wings
- Lay eggs with hard shells
- Breathe with lungs
- Warm blooded
• Complete worksheet (10mins)
All ____________ are put into one of five ______________. The 
______________ and ________ kingdoms are divided into _______________.

The ________________ kingdom is divided into ____________________ (which all have backbones) and ____________________ (animals without backbones).

The ________________ group is divided into ________ more groups.

Mammals have ________, give birth to live __________________ and produce ________.

Birds have ________________ and lay eggs with ____________________.

Reptiles have ________________ and lay eggs with ____________________.

Amphibians have ____________________ and lay eggs in water.

Fish have ____________________ and lay eggs in water.

Examples

Invertebrates include:

- ________________
- ________________
- ________________
- ________________
- ________________

Vertebrates include:

- ________________ (a mammal)
- ________________ (a bird)
- ________________ (a reptile)
- ________________ (an amphibian)
- ________________ (a fish)

animal dry scales feathers five frog goldfish groups
guinea pig hair hard shells invertebrates jelly shells jellyfish
kingdoms leathery shells milk moist skin offspring
organisms parrot plant snails snake spiders starfish
vertebrate vertebrates wet scales worms
Animals

Vertebrates

Invertebrates
Invertebrates

Cnidarians

- Hollow bodied
- Mouth is the only body opening and is surrounded by tentacles
- Uses sting cells to paralyse prey
Invertebrates

Flatworms

- Flat thin bodies
- Digestive system has only one opening
- Animals are both male and females
- Mostly parasites
Invertebrates

True Worms

- Rounded bodied
- Bodies made of segments
Invertebrates

Molluscs

- Not segmented
- Body in three continuous parts with head, body and foot
- Have one or two shells
Invertebrates

Echinoderms
- Spiny skinned
- Body in five parts
- Central mouth with respiratory gills
Invertebrates

- Hard exo-sekeleton on outside of body
- Has eyes and mouth
- Body divided into more than one segment

**Arthropods**

**Crustaceans**

**Arachnids**

**Insects**

**Centipedes & Millipedes**
1 Tick the correct box. Animals that do not have a backbone are called:

☐ vertebrates.  ☐ invertebrates.

2 Draw lines to match the pictures with their descriptions.

- echinoderms
- arthropods
- molluscs
- roundworms
- annelids
- cnidarians
- sponges
- flatworms

- crawl on a single fleshy pad
- have bodies divided into five parts
- have jointed legs, a hard covering and their bodies are divided into sections
- have round worm-like bodies with segments
- have long thin round worm-like bodies with no segments
- have flat worm-like bodies
- have thin sack-like bodies with tentacles
- have bodies made of loosely joined cells
The Animal Kingdom

ANIMALS WITHOUT BACKBONES (Invertebrates)

ANIMALS WITH BACKBONES (Vertebrates)

- Mammal
- Bird
- Reptile
- Insect
- Crab
- Amphibian
- Fish
- Gill
- Starfish
- Snail
- Clam
- Sponge
- Spider
- Mollusk
• Quiz –
• 1] Animals with a backbone are called ____
• 2] Animals that can live on land and in water ____
• 3] ____ have wings and can fly.
• 4] Butterfly is an example of an ______
• 5] ______ have shells
• 6]____ is sorting organisms into groups.
• 7] Living things are called ____
• 8] A animal which can’t control its internal body temperature is __________ __________
• 9] _________ have body divided into five parts.
• 10] The basic unit of classification is ______.