

OJAB SCIENCE



NEWSLETTER AUTUMN TERM 2023

Welcome to our first Science Newsletter for 2023-2024! Included are details of the science that your child has been involved in over the half term. In addition, there is information on a 'mini investigation' which you may wish to try out at home... Enjoy!

YEAR 3

Year 3 have learnt about different animals and what they need in order to survive in their 'Animals Including Humans' topic. As well as this, they have studied a range of skeletons and made comparisons between them.



ANIMALS INCLUDING HUMANS



ANIMALS (INCLUDING HUMANS) NEEDS



FOOD GROUPS



- What are the basic needs of a lion?
- What are the basic needs of an orca?
- What do both a lion and an orca have in common?

SAMPLES OF WORK YEAR 3 & 4

	African Lion	Orca Whales
food	An African lion can eat mice and giraffes.	They can eat fish or squid.
water	They can drink but they can't swim.	They extract from their prey.
air	They can breathe a lot so they have a lot of air.	They can breathe through a blowhole.
shelter	They can live in a cave or under a tree.	They use the bottom of the sea as their shelter.
sleep	They can sleep for 20 hours a day.	They sleep for 10 hours a day.
space	They need a lot of space to roam.	They need a lot of space to roam.

Carnivore
eat meat, sharp teeth, claws, hunt

Herbivore
eat plants, flat teeth, hooves, graze

Omnivore
eat both, sharp and flat teeth, hooves, hunt and graze

Sharp canine teeth to rip and tear meat.

All types of teeth, incisors slice, canines tear, molars chew & grind.

Incisors like Molars to grind grass/plants

Water comes at 0°C. Water boils at 100°C.

Then it is ice water.

Solid (Ice) → Liquid (Water) → Gas (Water Vapor)

Condensed (Rain) → Evaporated (Steam)

Solid (Ice)
When it is cold, the water turns into ice. It is a solid. It is hard and has a fixed shape.

Liquid (Water)
When it is warm, the water turns into liquid. It is a liquid. It is runny and has no fixed shape.

Gas (Water Vapor)
When it is very hot, the water turns into gas. It is a gas. It is invisible and has no fixed shape.



Evaporation: Water turns into gas.

Condensation: Gas turns into liquid.

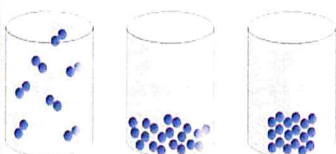
Precipitation: Liquid falls as rain or snow.

STATES OF MATTER



WATER CHANGES

SOLIDS, LIQUIDS & GASES



SOLID

LIQUID

GAS

- Name the three states of matter.
- Name some solids that can be poured.
- Give some examples of solids, liquids and gases.

- What happens to water when it is cooled?
- What happens to water when it is heated?
- What happens to the molecules when water is cooled or heated?

YEAR 4

Year 4 have been busy exploring 'States of Matter' in their topic. They have worked as scientists doing practical work (making predictions, observing and measuring, collecting results and drawing conclusions).

YEAR 5

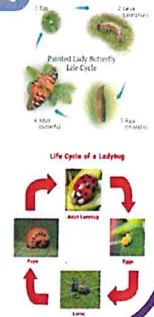
Year 5 have learnt about the life cycles of various living organisms in their 'Living Things in Their Habitats' topic. Also, they have researched David Attenborough and Jane Goodall to learn about the work they do to educate people about the world of animals and our natural environment.

LIVING THINGS IN THEIR HABITATS

LIFE CYCLES



- What are David Attenborough/Jane Goodall's area of expertise?
- What are David Attenborough/Jane Goodall best known for?
- What has the impact of their work been?



Life Cycles

Observe the local environment to observe butterflies in a variety of living things and animals.

Observe the local environment and begin to explain the diversity of an insect.

Observe the local environment and explain the life cycle of an insect.

The Life Cycle of a Ladybird

Egg: Ladybirds start out as yellow eggs. A couple of days later they hatch.

Adult: They start to shed their skin and get black spots. They start to shed their skin and get black spots for the ladybird.

Larva: In the stage, they start to grow their wings.

Pupa: A ladybird has four stages in its life cycle. These are: egg, larva, pupa, and adult.

Asexual Reproduction	Picture	Explanation
Herbivores		Herbivores are animals that feed on plants. They have long, sharp teeth to help them chew up the food.
Autotrophs		Autotrophs are organisms that can make their own food. They use sunlight and water to create energy through photosynthesis.
Producers		Producers are organisms that can make their own food. They use sunlight and water to create energy through photosynthesis.

Carl Linnaeus

Carl was born in 1707 in Sweden. He studied at the University of Uppsala. He is famous for his classification system, the Linnaean Taxonomy. He started using the word 'taxonomy' to describe his system. He is known as the 'father of taxonomy'.

SEMI-PLANT

What variables could we change? What could we measure?

Independent Variable: We will change the...
Dependent Variable: We will measure/observe...

Our question is... We will answer this by...

Day 1 **Vegetable**

Day 1: A potato, black spots.

Day 2: A potato, mold on kind of wet and a lot on the surface.

Day 3: Lots of mold on surface.

Day 4: (after washed) Lots of mold on surface and some mold on skin.

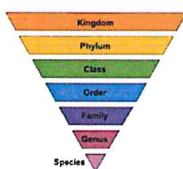
LIVING THINGS IN THEIR HABITATS

ORGANISMS & MICROORGANISMS



- Why do different organisms, including microorganisms, live in different habitats?
- What is mould?
- What conditions does mould prefer to grow in?

CARL LINNAEUS



- Explain what Carl Linnaeus became famous for.
- Explain the purpose of Carl Linnaeus' classification system.
- Explain each of the 7 levels.

YEAR 6

Year 6 have also studied 'Living Things in Their Habitats'. They have investigated the growth of microorganisms (YUCK!) as well as learning about the work of Carl Linnaeus and his classification systems. As part of their topic work, they have created complex food webs.

1. Prepare two strips of paper towel between 2 and 4 cm wide. Tip: Use one kitchen roll and fold it in half and then in half again until it was the correct width. Set the kitchen roll strips aside and gather the rest of the materials.

2. Next, Position your three empty glasses about 4 to 5 cm apart. Pour water into the two outside glasses until they are halfway full. Leave the middle glass empty.

3. Now add a few drops of blue food colouring into the first glass and then add a few drops of yellow food colouring into the last glass. Give the water a stir until it is fully combined.

4. Take one of the strips you prepared in step 1. Place one end of the kitchen roll into the blue water and then place the other end into the empty glass.

5. Take the other strip of kitchen roll and place it in the yellow water and the other end in the empty glass. Now over the next hour observe what happens.

The water appears to defy gravity, but it is actually the process of capillary action. Water is able to move against the force of gravity because water molecules stick to each other and they stick to the fibres in the kitchen roll. As water molecules are attracted to the fibres in the kitchen roll they pull other water molecules with them.

Science at Home

Materials

- 3 Glasses of Equal Height
- Kitchen roll
- Water
- Food Colouring (Blue & Yellow)

