Coley Primary School – Knowledge Organiser

SUBJECT FOCUS: Biology strand	Science: Living thing and their habitats	YEAR 4	TERM 4

WHAT? – Key Knowledge

Grouping Living Things

Animals

Animals can be divided into two groups:

Vertebrates – animals **with** a backbone (spine)



Invertebrates- animals **without** a backbone.

The two groups can be split into further, smaller groups.

Vertebrates can be split into:

Mammals: breathe with lungs, have hair or fur, warm blooded, young are born alive, mother feed baby milk.



Birds: breathe with lungs, have feathers, warm blooded, lay eggs with hard shells.



Fish: breathe with gills, lay eggs in the water, fins and scales, cold blooded.



Reptiles: dry scaly body, breathes with lungs, lays eggs on land, cold blooded.



Amphibians: born with gills and then grow lungs, lay eggs in the water, damp skin, cold blooded. reptiles and amphibians.



Invertebrates can be split into:

Insects: 3 body sections and 6 legs.



Arachnids: 2 body sections and 8 legs.



Molluscs: soft body with no segments and often have a shell.



Annelids: no legs, no skeleton, body in many little segments like rings joined together.



WHAT? – Key Vocabulary

organisms	A living thing.
Characteristic	A special quality or appearance that makes an individual or a group different from others physical characteristics.
Classification	To classify things means to place them in different categories, or groups. Scientists place living things in groups based on the features that the living things share.
Species	A group of animals, plants or other living things that all share common characteristics and that are all classified as alike in some manner.
Habitat	A place where a plant or animal lives.
Key	
Cold Blooded	Animals that cannot create their own body heat.
Warm Blooded	Animals that can create their own body heat.
Deciduous	A tree that loses its leaves in the autumn.
Coniferous (evergreen)	A tree that keeps its leaves all year.

WHAT? – Key Knowledge

Plants can be split into two groups:

Flowering: These plants produce flowers. They include grasses, cereals and deciduous trees (leaves drop off)





Non-flowering: These plants that do not produce flowers. They include algae, mosses, ferns and coniferous trees (keep their leaves -evergreens)







Changing Environment

Natural Changes - different seasons can change habitats – plants dying, trees losing their leaves and the weather becoming warmer or cooler.

Habitats can be both positively and negatively impacted by humans.

Negative ways:

- Deforestation - cutting down trees.
- Littering – dropping rubbish or leaving large objects lying in the environment
- Pollution – introducing harmful substances into the environment.

Positive ways:

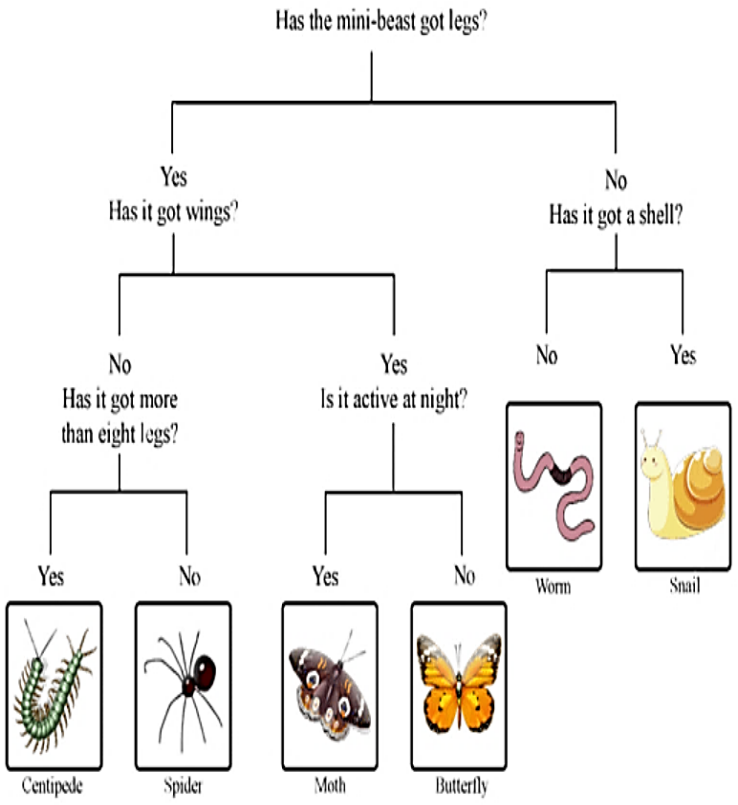
- Protecting endangered species via conservation projects
- Cleaning bodies of water

Replanting trees and creating habitats such as ponds and meadows.

Diagrams and symbols

Living Things – Classification

Keys and branch models can be used to help identify and group animals and plants.



Famous Scientist

Carolus Linneeaus studied animals and plants. He created a system for sorting and naming plants and animals that scientists still use today.



Working Scientifically Challenge

Let's think like scientists…

Make careful observations about different living things.

Draw diagrams to present information.

Ask questions and research to find the answers.

Gather and record information and present it in different ways.

Use scientific language and vocabulary.

I wonder…Can I…

Can I spot the characteristics of different living organisms by observing carefully?

Can I name groups in the vertebrate and invertebrate groups?

Can I use a classification key or branch diagram?

Can I name some different habitats in our school and local area?

Do I know how a nature reserve can have a positive impact on the environment?

Can I explain the negative impacts of deforestation and pollution?

Possible experiences: *Curious minds…*

Locate different habitats on the school grounds and in the local area.

Answer questions about different animals to use classification key and branch diagrams.

Create a database of different animals found in the school grounds.

Find out about nature reserves and their impact on wildlife.

Find out about the negative effects of deforestation and pollution.

Resource

Living things by y Georgia Amson-Bradshaw

Carolus Linnaeus devised a system to classify plants and animals. We still use his system in science today when we are sorting plants and animals into different classification groups.