

Ashtree Primary School and Nursery Medium Term Plan for Science

Year 6 Summer Term – Living Things and their Habitats Unit

Prior Knowledge – Y5

Step 1 - sequence the life cycles of a variety of plants and animals - *Live young, hatch, tadpole, caterpillar, butterfly, ladybird, pupae, larvae, chrysalis*

Step 2 - recognise the similarities in the life cycles of plants, animals and humans - *Live young, hatch, tadpole, caterpillar, butterfly, ladybird, pupae, larvae, chrysalis*

Step 3 - name the parts of a flower, describe the functions of some parts of a flower, describe the main functions of parts of a plant involved in reproduction - *pollen, stamen, stigma, pollination*

Step 4 - describe the processes of *sexual* and *asexual reproduction* in plants

Step 5 - compare methods of *seed dispersal*

Step 6 - name the parts of the human reproductive system, describe the simple functions of parts of the human reproductive system, know that most animals reproduce by sexual reproduction

Also refer to Y4 Living things and their Habitats prior learning regarding classification.

Prior Skills – Y5 - beginning to use and develop keys and other information to identify, classify and describe living things and materials
uses their scientific experiences to explore ideas and raise different types of questions
records and presents findings using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
reports on findings from enquiries, using relevant scientific language and conventions, **in oral and written explanations such as displays and other presentations**

Key Vocabulary *Micro-organism, microbe, fungus, bacteria, virus, classified, classification key, yeast, characteristic, microscope*

Key Knowledge

Step 1 - recognise that there is a wide variety of living things, understand why *classification* is important – *classification key, characteristic*

Step 2 - identify vertebrates and invertebrates, name and describe the five vertebrate groups - *classified, classification key, characteristic*

Step 3 - understand there are living things that are too small to be seen and these can affect our lives – *Micro-organism, microbe, fungus, bacteria, virus*

Step 4 - recognise that there are many micro-organisms, some which can cause illness or decay, recognise that there are useful micro-organisms which can be used in food production - *Micro-organism, microbe, fungus, bacteria, virus*

Step 5 - describe how micro-organisms feed, grow and reproduce like other organisms, describe evidence, from investigations, that *yeast* is living - *Micro-organism, microbe, fungus, bacteria, virus*

Step 6 - explain how micro-organisms can move from one food source to another or from one animal to another - *Micro-organism, microbe, fungus, bacteria, virus*

Key Skills

Step 1 - recognises the applications of specific scientific ideas

Step 2 - uses and develops keys and other information to identify, classify and describe living things and materials

Step 3 - uses their scientific experiences to explore and generate ideas and raise different types of questions

Step 4 - recognises which secondary sources will be most useful to research their ideas

Step 5 - **reports on findings from enquiries**, using relevant scientific language and conventions, **in a variety of ways, including oral and written presentations.**

Step 6 - talks about how and why scientific ideas have developed over time, **identifies scientific evidence that has been used to support or refute ideas**

Curriculum Enhancements

Bake bread, using yeast to show the effect of the living micro-organism.

Show the effect of micro-organisms by growing mould on bread (please ensure that risk assessments are in place)

Possible Misconceptions

all micro-organisms are harmful

mushrooms are plants.

Suggested Activities

Step 2 - devise own keys to classify organisms and objects
Step 2 - describe early ideas about classification (e.g. Aristotle)

Use secondary sources to learn about the formal classification system devised by Carl Linnaeus and why it is important.

Step 3 - describe how the development of the microscope has contributed to our understanding of microorganisms

Step 6 - describe how ideas about hygiene have changed over time (e.g. Semmelweis)

Curriculum links

PSHE – Hygiene

DT – Food Technology

This will lead to . . .

In Year 6 – Evolution and Inheritance, the children will learn,

Step 1 - recognise variation in different species (e.g. dogs, horses) - **Variety, variation, species**

Step 2 - recognise that **offspring** have some of the features of their parents

Step 3 - recognise that animals have to compete for food

Step 4 - describe how animals avoid **predators** (e.g. speed, camouflage)

Step 5 - describe how animals and plants are **adapted** to their environments - **evolve, fossil record, gills, blubber, moulting, long neck, hooves, eyelashes, tails, generation**

Step 6 - explain how being well **adapted** to an **environment** means an organism is more likely to **survive** - **evolve, fossil record, gills, blubber, moulting, long neck, hooves, eyelashes, tails, generation**