L Asghar

Subject –Science Spring 2 Year 5 Living Things and their Habitats

TAPS Assessment: Lifecycles

Key vocabulary: Life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, bulbs, cuttings

National Curriculum	Week	NC - Coverage	Disciplinary Knowledge	Factual Knowledge	Activity Outline
The national curriculum for Science aims to ensure that all pupils: **Working Scientifically Upper KS2** Pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests	1	Describe the life process of reproduction in some plants.	To draw and label appropriate scientific diagrams of a plant lifecycle.	To know the stages of the life cycle of flowering plant i.e. germination, pollination, fertilisation, seed dispersal.	Share topic vocabulary (on cards) and ask children to sort them into words most familiar and least familiar. Ask children to discuss their definitions and assess their understanding. Complete their KWL grid. Complete 'Meet the scientist and BBI'. Children to make wildflower seed bombs. Ask children to identify a suitable place to throw them. Give children images of the stages of the life cycle of flowering plants and ask them to add detail.
	2	Describe the life process of reproduction in some plants.	I can use secondary resources to carry out research. Compare and contrast the life cycles of ferns and conifers and present findings.	To know that ferns do not produce seeds instead they reproduce sexually using from spores. To know that conifers do not produce flowers or fruit instead they produce cones (male cones contain pollen, female cones contain ovules that become seeds when fertilised)	Take children outdoors to look at moss in different places to see if any of it has flowers. Children to make close observations- can they identify spores? CT to show a close-up image of moss and its spores. Use this to explain reproduction of plants. Children to then research how ferns reproduce and compare this to how conifers reproduce.
	3	Describe the life process of reproduction in some plants.	To observe plants that reproduce asexually e.g. strawberries, spider plant, potatoes	To know the difference between sexual and asexual reproduction of plants.	Leave potatoes in a dark cupboard beforehand if possible. Children to observe how potatoes have changed (sprouts) strawberry plants grow and reproduce. Children to observe changes to the potatoes i.e. Children to describe how strawberry pants can be propagated asexually via runners. Its important that pupils are aware that the actual strawberries are the result of

reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations identifying scientific evidence that has been used to support or refute ideas or arguments. **Subject Content** Pupils should be taught to: • describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird				To know that asexual reproduction involves only one parent and results in identical offspring. To know potatoes can reproduce asexually using tubers.	sexual reproduction, as they grow from flowers. Children to also be aware that potatoes can reproduce sexually by flowers.
	4	Describe the life cycle of a bird.	To make observations of the eggs, the chicks and include subject knowledge that they have learnt. To carry out research using secondary sources and compare findings using scientific diagrams.	To name the main three main stages of a bird's lifecycle and describe key facts – egg, fledgling, and adult bird.	CT to use Encounters Edu to observe the main stages of the life cycle of birds. Children to research the main stages and gives some key facts about each stage. Ask children to compare the lifecycle of a chicken to another bird e.g., robin using a Venn diagram.

• describe the life process of reproduction in some plants and animals Common Misconceptions Some children may think: all plants start out as seeds • all plants have flowers • plants that grow from bulbs do not have seeds • only birds lay eggs.	**5**	Describe the differences in the life cycles of a a mammal and bird	To carry out research using secondary sources and compare findings using scientific diagrams. To identify patterns in life cycles comparing two or more animal life cycles they have studied.	To know that animals, including humans, have offspring which grow into adults. To know in humans and some animals, these offspring will be born live, such as babies or kittens, and then grow into adults.	Children to work in groups to describe and compare the life cycles of a mammal and compare this to birds. Ensure children present their research clearly using accurate scientific language.
	6	Describe the differences in the life cycles of an amphibian and an insect.	. To report and present findings from enquiries, such as presentations, using appropriate scientific language.	To know that some insect lifecycles include complete metamorphosis e.g. butterflies others undergo incomplete metamorphosis e.g. dragonflies. To know that a frog's lifecycle includes 6 key stages including egg mass, hatching, tadpoles, tadpoles with legs, froglets and adult stage.	TAPs assessment: Children to compare different insects (beetle/butterfly) and amphibians (e.g. frog) based on their own research and that of their peers Children to consider how they will present their findings. .For example, different children could choose to make a model, a mime/drama, a rap/song or a poster/book. Agree on criteria for successful presentation of research e.g. clear order to life cycle, comparison between two life cycles, use of scientific vocabulary etc. Children present their research to the intended audience. Groups could peer assess against agreed success criteria.