Subject	Term	Unit
Science - Year 5	Summer 1	Living things and their habitats

Intent

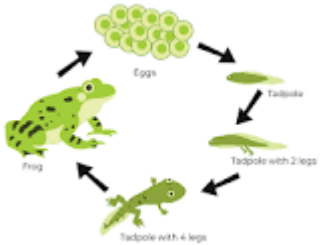
At Hurst Hill, we nurture young scientists by fostering curiosity and developing strong scientific knowledge and enquiry skills. Children learn to investigate, observe and evaluate confidently, understanding how science shapes the past, present and future while building firm foundations for lifelong scientific learning.

Prior knowledge	National Curriculum
• identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant • investigate the way in which water is transported within plants • explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	• describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird • describe the life process of reproduction in some plants and animals (from birth to maturity). • Human reproduction taught in Year 6.

What?	To go into greater depth about the structure of a flower and how plants reproduce sexually and asexually. To compare the different life cycle of different animals.
Why?	This unit builds on the information that the children learnt in Year 3. It will help them to have an understanding of sexual reproduction ready for future learning at secondary school.
How?	Through observation of flowers. Through video research and by observing different animals outside.

Vocabulary	
Anther	Part of the stamen that produces and releases pollen.

Bulb	Root shaped like an onion that grows into a flower or plant.
Cell	The smallest part of an animal or plant that is able to function independently.
dispersed	Scattered, separated or spread through a large area.
Dissect	To carefully cut something up in order to examine it.
Embryo	An unborn animal or human in the very early stages of development.
fertilisation	Male and female gametes meet to form an embryo or seed.
Flower	The part of a plant which is often brightly coloured and grows at the end of a stem.
Flowering	Trees or plants which produce flowers
Function	A useful thing that something does.
gamete	The name for the two types of male and female cell that join together to create a new creature.
Germination	If a seed germinates or is germinated it starts to grow.
Life cycle	The series of changes that animal or plant passes through from the beginning of its life until its death.
Mature	When something it matures it is fully developed.
metamorphosis	A person or thing develops and changes into something completely different.
Ovary	A female organ that produces eggs.
Ovule	A small egg.
Petal	Thin coloured or white parts which form part of the flower.
Pollen	A fine powder produced by flowers. It fertilises other flowers of the same species so that it produces seeds.
Pollination	To pollinate a plant or tree means to fertilise it with pollen. This is often done by insects.
reproduction	When an animal or plant produces one or more individuals similar to itself
Stigma	The top of the centre part of a flower which takes in pollen.
Structure	The way in which something is built or made.

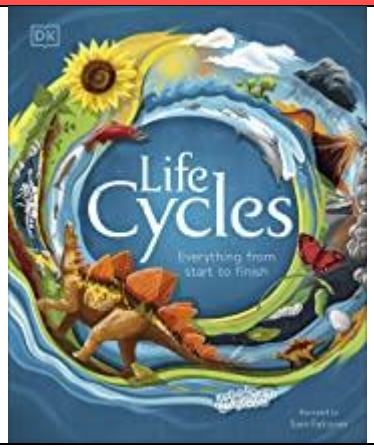
Objective	Learning
Can I explain sexual reproduction in plants?	**Comparative testing** Asexual and sexual Compare how the two types of plants. • Male **gametes** can be found in the **pollen.** • Female **gametes** can be found in the **ovary** (they are called **ovules).** • **Pollination** occurs when **pollen** from the **anther** is transferred to the **stigma** by bees and other insects. • The **pollen** then travels down and meets the **ovule**. When this happens, **seeds** are formed - this is called **fertilisation**. • **Seeds** are then **dispersed** so that **germination** can begin again. • Some **plants,** such as daffodils and potatoes, can also produce **offspring** using asexual **reproduction** **Start off with the parts of a flower and their functions - recap from Year 3.** **Model how pollen is transferred. Watch videos, create dramas, draw. Children to draw and write instructions for sexual reproduction in plants in books.**
Can I explain how to grow new plants from different parts of the parent plant?	**Observe over time** Grow new plants from different parts of the parent plant, for example seeds, stem, and root cuttings, tubers, bulbs. Observe what happens. Explain why. A sexual reproduction. Look at Tubers, runners, bulbs, cuttings. Watch videos on all these processes and create a non-chronological report.
Can I compare the life cycle of plants and mammals?	**Comparative testing** • The **life cycles** of mammals, birds, amphibians and insects have similarities and differences. • Mammal, amphibian, insect, bird. • What is similar what is different? Look at the life cycle of a plant, a mammal and a human. Draw each life cycle. Write down similarities and differences.
Can I compare the life cycle of birds and insects?	 am tly a b  **Comparative testing** gh the process of **metamorphosis.** This is when the structure of their bodies m tadpole to frog or caterpillar to butterfly). ife cycle. Write down similarities and differences.
Can I compare the life cycle of amphibian to other animals?	**Comparative testing** Look at the life cycle of an amphibian. Draw each life cycle. Write down similarities and differences. Compare to all the other animals we have looked at. 

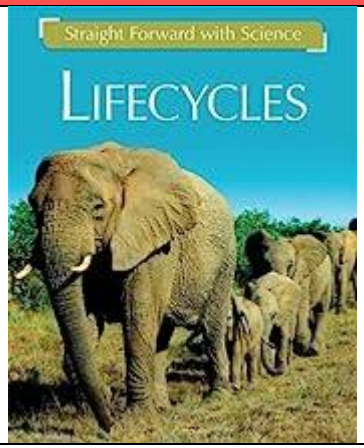
Can I compare the work of David Attenborough and Jane Goodall?	**Research** Research a significant naturalist or animal behaviourist and create a fact file / poster that showcases their life, achievements, and significance.

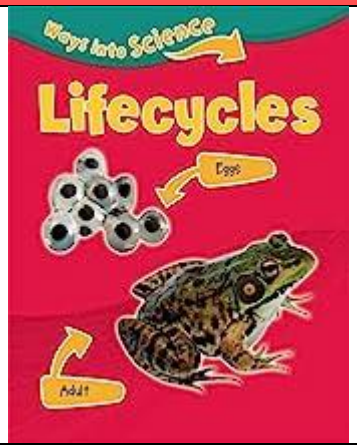
Websites

https://www.stem.org.uk/resources/community/collection/12775/year-5-living-things-and-their-habitats
https://ypte.org.uk/lesson-plans/living-things-and-their-habitats-year-5-animal-life-cycles-reproduction
https://www.bbc.co.uk/teach/class-clips-video/science-ks2--ks3-the-life-cycles-of-different-organisms/zvh8qp3

Recommended Reads







Golden Thread

Living things and their habitats