## Science Project Overview Year 5 Living things and their habitats

Subject Knowledge (PoS)	Working Scientifically (PoS+Overview)	Working Scientifically Methods
Substantive Knowledge	Disciplinary knowledge	Using different types of
<ul> <li>Life cycle of a bird – egg – chick – adult</li> </ul>	During years 5 and 6, pupils should be taught to use the following practical scientific	scientific enquiry to answer
• Life cycle of an amphibian (frog)– egg – tadpole –	methods, processes and skills through the teaching of the programme of study content:	their own questions, including:
froglet – adult	<ul> <li>Asking their own questions about scientific phenomena</li> </ul>	<ul> <li>observing changes over</li> </ul>
<ul> <li>Life cycle of an mammal – Birth – Juvenile –</li> </ul>	• Select the most appropriate ways to answer science questions using different types of	different periods of time,
Adult – mating stage	scientific enquiry, including observing changes over different periods of time, noticing	<ul> <li>noticing patterns,</li> </ul>
<ul> <li>Life cycle of an insect – egg – larva – pupa –</li> </ul>	patterns, grouping and classifying things, carrying out comparative and fair tests and	<ul> <li>grouping and classifying</li> </ul>
adult	finding things out using a wide range of secondary sources.	things,
<ul> <li>Life cycle of a plant – seed – germination – growth – reproduction – pollipation – seed</li> </ul>	<ul> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> </ul>	<ul> <li>carrying out comparative and fair tests</li> </ul>
spreading stages	<ul> <li>taking measurements using a range of scientific equipment with increasing accuracy</li> </ul>	<ul> <li>and finding things out using a</li> </ul>
spreading stages	and precision, taking repeat readings when appropriate	wide range of secondary
	<ul> <li>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> </ul>	sources.
	<ul> <li>using test results to make predictions to set up further comparative and fair tests</li> </ul>	
	<ul> <li>reporting and presenting findings from enquiries, including conclusions, causal</li> </ul>	
	relationships and explanations of and degree of trust in results, in oral and written	
	forms such as displays and other presentations	
	<ul> <li>identifying scientific evidence that has been used to support or refute ideas or arguments</li> </ul>	
	alguments.	
	• Draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings	
Previous learning:	Preparing for learning:	Bespoke to our school:
	• Reproduction in humans (as an example of a mammal), including the structure and	There is a big emphasis on the
<ul> <li>Notice that animals, including humans, have offspring which grow into adults. (Y2 - Animals, including humans)</li> </ul>	function of the male and female reproductive systems, menstrual cycle (without details of hormones), gametes, fertilisation, gestation and birth, to include the effect of maternal lifestyle on the foetus through the placenta. (KS2)	teaching and use of vocabulary.
<ul> <li>Explore the part that flowers play in the life cycle</li> </ul>	Reproduction in plants, including flower structure, wind and insect pollination	
of flowering plants, including pollination, seed	fertilisation, seed and fruit formation and dispersal, including quantitative	
formation and seed dispersal. (Y3 - Plants)	investigation of some dispersal mechanisms. (KS3)	
Vecabulary		
Vocabulary. Life cycle reproduce sexual sperm fertilises end live young metamorphosis asexual plantlets ruppers hulbs cuttings life processes sexual and asexual reproduction (plants)		

Life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, bulbs, cuttings, life processes, sexual and asexual reproduction (plants), root cuttings

## Misconceptions:

• all plants start out as seeds

• all plants have flowers

• only birds lay eggs

Cross Curricular Links:
Texts:
The cow that laid an egg,
Tadpole's Promise,
Charlotte's web.
Life cycles (DK)Where the world turns wild, The big book of birds
Diary entry (Plants) - Jan Ingenhousz
Maths:
Statistics : Identify the necessary information in tables (including timetables) and be able to complete them – lifecycle , gestation period tables
Famous Scientists to possibly study:
Sir David Attenborough-Naturalist and broadcaster- Little people book
Explorify links:
Tangling brambles
<u>Sudden downpour</u>
<u>Super seeds</u>
Puddle pals
The drinks menu
Seeds
What if there were no deserts?
Possible careers/jobs:
Animal behaviourist (studies animal interactions),), Conservationist (works for the protection and preservation of living things and the environment), Farmer (grows crops and
raises animals for food), Marine biologist (studies living things in oceans), Mammalogist (studies mammals), Microbiologist (studies tiny living things) Park ranger (maintains parks),
Vet (looks after unwell animals), Wildlife filmmaker (creates films and documentaries about wildlife), Wildlife photographer (takes pictures of animals and plants), Zoologist
(studies animals)