Science

Year 5 and 6

Summer

Topic Evolution and Inheritance

Rationale

During this unit of work, children will explore how animals and plants are adapted to the environment in which they live. They will learn that adaptations occur over time and that may lead to a species evolving. Children will conduct an experiment to answer the question; which beak is best adapted to pick up a seed? They will consider how certain adaptations occur in response to environmental conditions. They will learn about natural selection and how this links to inheritance and how some characteristics are inherited from parents and some are not. Children will consolidate previous learning on fossilisation and understand how studying fossils has helped explain the theory of evolution.

NC Objective

- Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
- Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents
- Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

Links to other Subject/Topics.

English – Writing

Inspiration for Aspiration

Doctor, Nurse, Carer, Geneticist,

Key Content

- How are plants adapted to their environment?
- How are animals adapted to their environment?
- What is natural selection and how does this lead to evolution?
- How do adaptions lead to evolution?
- What characteristics can you inherit from your parents?
- How can fossils help us explain evolution?

Concepts

Science	1	2	3	4	5	6
Plants						
Animals, including Humans						
Materials						
Light						
Sound						
Electricity						
Forces						
Earth and Space						

Skills and Knowledge Year 3 and 4

- Ask relevant questions and use different types of scientific enquiries to answer them
- Explore everyday phenomena and the relationships between living things and familiar environments.
- Raise their own questions about the world around them

Skills and Knowledge

- Reporting and presenting findings from enquiries, including conclusions, causal
- relationships and explanations of and degree of trust in results
- Using research and knowledge describe processes and theories
- Investigate the ethical issues of human intervention in the process of evolution by natural selection

• Make some decisions about which types of enquiry will be the best way of answering questions • Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment • Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them • Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used • Notice a pattern in results • Set up simple practical enquiries, comparative and fair tests • Recognise when a simple fair test is necessary and help to set it up • Think of more than one variable factor • Gather, record, classify and present data in a variety of ways to help in answering questions • Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • Use notes, simple tables and standard units and help to decide how to record and analyse their data. • Record results in tables and bar charts • Identify differences, similarities or changes • Talk about criteria for grouping, sorting and classifying and use simple keys • Compare and group according to behaviour or properties • Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations	

• Use results to draw simple conclusions, make predictions, and suggest improvements • Use scientific evidence to answer questions or to support their findings • With help, look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions • See a pattern in my results • Say what they found out, linking cause and effect • Say how they could make it better • Answer questions from what they have found out	
Year 5 and 6 Topic Vocabulary Inherited Adaptive Fossils Selective breeding Cross breeding Evolution Similar Difference Variance Adapted Environment Gene Organism Species Natural selection Charles Darwin Mary Anning	**Scientific Vocabulary** Identical/ Not identical Characteristics Environmental Vary Interventions Ethical issues Human intervention
By the end of the topic <u>Year 5</u> children will with support • Explain the terms adaptation, evolution and natural selection and use these in context. • Children will be able to describe how living things evolve through natural selection and survival of the fittest. • Children will explain (in simple terms) what DNA and genes are. • Children will investigate the ethical issues of human intervention in evolution and natural selection.	**By the end of the topic <u>Year 6</u> children will: -** • Explain the terms adaptation, evolution and natural selection and use these in context. • Children will be able to describe how living things evolve through natural selection and survival of the fittest. • Children will explain (in simple terms) what DNA and genes are. • Children will investigate the ethical issues of human intervention in evolution and natural selection.
Assessment Teacher assessment of vocabulary throughout topic. Grammarsaurus assessment	