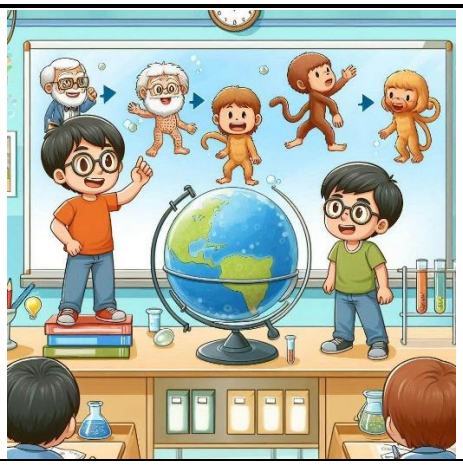
Lowerhouse Junior School
Science Overview Sheet

Year 6 – Evolution and Inheritance



Rationale: Teaching evolution and inheritance in Year 6 science helps students understand the diversity of life and how traits are passed down through generations. It fosters critical thinking, supports comprehension of natural selection, and provides a foundation for genetics. This knowledge is essential for grasping biological processes and the history of life on Earth.

Substantive Knowledge:

- 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.

Disciplinary Knowledge:

- Classifying
- Pattern Seeking

Overview:

Lesson 1: How have some animals adapted?
Lesson 2: How do external factors affect adaptation?
Lesson 3: How can adaptation in plants be described?
Lesson 4: How are offspring similar or different to adult animals?
Lesson 5: How have beaks adapted and why?
Lesson 6: What can fossils tell us about living things in the past?
Lesson 7: Who is Mary Anning?

Key Vocabulary:

Offspring: The young born of living organisms, produced either by a single organism or, in the case of sexual reproduction, by two organisms.
Sexual reproduction: A biological process where two organisms combine their genetic material to produce offspring with genetic variation.
Vary: To differ or change; in biology, it refers to differences in traits among individuals of a species.
Characteristics: Distinguishing traits, qualities, or properties of an organism.
Adapted: Having traits that enhance survival and reproduction in a specific environment.
Inherited: Traits or characteristics passed from parents to offspring through genes.
Species: A group of organisms that can interbreed and produce fertile offspring, sharing common characteristics.
Evolve: To undergo gradual change over time, often leading to new species or adaptations.
Evolution: The process by which different kinds of living organisms develop and diversify from earlier forms over generations through natural selection and genetic variation.

Impact/Assessment

Most Children will be able to: • explain the process of evolution • give examples of how plants and animals are suited to an environment • give examples of how an animal or plant has evolved over time e.g. penguin, peppered moth • give examples of living things that lived millions of years ago and the fossil evidence we have to support this • give examples of fossil evidence that can be used to support the theory of evolution • identify characteristics that will make a plant or animal suited or not suited to a particular habitat • link the patterns seen in the model to real examples • explain why the dominant colour of the peppered moth changed over a very short period of time