Linked learning theme: North America – Adapt to survive

Autumn term 2, Year 6

Science – Adaptation and evolution

Prior Knowledge

In Y5, children learnt about animals that are adapted to the rock pool and coastal habitats. They studied animal life cycles and plant reproduction.

Core knowledge

- Plants and animals are adapted to suit their environment.
- Adaptations happen as a result of natural selection.
- Adaptations that occur over a long period of time can result in an evolution of a species.
- Offspring are the same species as their parents and share similarities although they are generally not identical and vary slightly.
- Fossils, and the information they provide, can be used to make suggestions about the living things that inhabited the Earth in the past.
- The Burgess shale provides lots of evidence of adaptation and evolution that occurred in a relatively short period of time.
- Living things are classified into different categories: mammals, reptiles, amphibians, birds, fish, arachnids and insects are all classifications for animals.

Key skills

- Identify specific adaptations that have occurred in plants and animals in the Sonoran Desert, New York City and Yoho National Park.
- Make connections between the fossils of living things and modern day animals, such as the fossils found in the Burgess Shale and creatures with exoskeletons.
- Explain how adaptations occur in plants and animals, such as the Saguaro cactus in the Sonoran desert, and how these adaptations can lead to evolutionary changes in a species.
- Question why plants and animals thrive in certain environments and give answers based on observations made of their features.
- Analyse the effectiveness of adaptations and evolutionary changes and identify advantages and disadvantages of these, such as cold-blooded animals being unable to regulate their own body temperatures and how this is an issue in cold weather conditions.
- Research using secondary sources to develop knowledge of plants and animals that have adapted to the biomes of the Sonoran Desert, New York City and the Catskill mountains.
- Identify and classify the different animals living in deserts, urban sprawls and forests and make reasoned judgements about their suitability to the biome.

Vocabulary

Adaptation	Classification	Inheritance	Amphibians
Evolution	Animals	Mammals	Arachnids

Natural selection	Plants	Birds	Insects
Offspring	Fossil	Fish	Biome
	Variations	Reptiles	

Learning outcomes

- I can describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals
- I can give reasons for classifying plants and animals based on specific characteristics
- I recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.
- I know that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.
- I know that adaptation may lead to evolution
- I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- I can report and present 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.
- I can identify scientific evidence that has been used to support or refute ideas or argument