



Year 6: Evolution and Inheritance



Kindness Enjoyment Achievement

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| <p><u>Key Concepts:</u> Evolution is a change that occurs over time; it occurs when there is competition to survive. Over millions of years, some organisms have become extinct and others have evolved into new organisms.</p> <p>Characteristics are passed from parents to their children: this is called inheritance. Inheritance is genetic, not environmental.</p> <p>Offspring are not identical to their parents. Some characteristics are inherited but some are new in the offspring. These are called mutations.</p> <p>Fossils are the remains of living things and provide evidence about how living things have changed. They are an incomplete record of all evolution. Scientists have had to piece together evidence to work out how organisms evolve.</p> <p>Living things are adapted to their environments; some adaptations have led to some advantageous</p> | <p><u>Types of Enquiry:</u> <u>Sorting and classifying:</u> Classify observations into evidence for the idea of evolution and evidence against.</p> <p><u>Fair/ comparative test:</u> Use spoon, chopstick, tweezers, tongs and pegs to represent different birds beaks: how much of different types of food can they collect with each type of "beak"? See p69 A Creative Approach to teaching science.</p> <p><u>Use of secondary sources:</u> What happened when Charles Darwin visited the Galapagos islands? How did he develop his theory of evolution?</p> <p><u>Change over time:</u> Compare the skeletons of apes, humans and Neanderthals- how are they similar and how are they different?</p> <p><u>Pattern seeking:</u> Is there a pattern between the size and shape of a bird's beak and the food it will eat?</p> | <p><u>Vocabulary:</u> Evolution Inheritance Characteristics Mutation Organism Environment Variation Survival of the fittest Adaptations Offspring Fossils</p> |
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changes that make it easier for the living thing to survive. (E.g. giraffes necks have got longer over time to enable them to reach the top branches of trees). Some are not and they make it harder to survive.

Natural selection ensures that, over time, the advantageous adaptations survive in the species. Over time, the characteristics that are most suited to the environment become increasingly common.

Working scientifically skills:

Questioning:

Observe and raise questions about local animals and how they are adapted to their environment.

Observing:

Compare how some living things are adapted to survive in extreme conditions, for example, cactuses, penguins and camels.

Testing:

Recording:

Record using annotated diagrams and writing.

Communicating: Use relevant scientific language and illustrations to discuss,, communicate and justify their scientific ideas.

Concluding:

Talk about ow new discoveries change scientific understanding.

Discuss whether evidence from other sources supports or refutes their ideas.

How it fits in with the rest of the curriculum:

Y2: Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on one another.

Y3: Describe in simple terms how fossils are formed when things that have lived are trapped within rock. Know that fossils are found in sedimentary rock.

Y4: Recognise that environments can change and that this can sometimes pose danger to living things.

Y5: Observe and compare lifecycles in different environments.