

Topic Name	Evolution
Big Question	Have we always looked like this?
Scientists to use as examples	Alice Roberts, Charles Darwin
Key Knowledge	<p>Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</p> <p>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</p> <p>All living things have offspring of the same kind, as features in the offspring are inherited from the parents. Due to sexual reproduction, the offspring are not identical to their parents and vary from each other. Plants and animals have characteristics that make them suited (adapted) to their environment. If the environment changes rapidly, some variations of a species may not suit the new environment and will die. If the environment changes slowly, animals and plants with variations that are best suited survive in greater numbers to reproduce and pass their characteristics on to their young. Over time, these inherited characteristics become more dominant within the population. Over a very long period of time, these characteristics may be so different to how they were originally that a new species is created. This is evolution. Fossils give us evidence of what lived on the Earth millions of year ago and provide evidence to support the theory of evolution. More recently, scientists such as Darwin and Wallace observed how living things adapt to different environments to become distinct varieties with their own characteristics.</p>
Key investigational skills	<p>Pupils might work scientifically by: observing and raising questions about local animals and how they are adapted to their environment; comparing how some living things are adapted to survive in extreme conditions, for example, cactuses, penguins and camels. They might analyse the advantages and disadvantages of specific adaptations, such as being on 2 feet rather than 4, having a long or a short beak, having gills or lungs, tendrils on climbing plants, brightly coloured and scented flowers.</p> <p>-Does tallest person have widest handspan/biggest feet? Body comparisons/ratios Does the food of a bird affect the shape of its beak? Careful observations in nature area Research birds beaks in different areas – discuss with farmer</p>

	<p>Discuss different shaped beaks and reasons for this.</p> <p>Display results</p> <p>Present findings for others.</p> <p>Different groups investigate different ratios and present findings back to class.</p> <p>Present findings of bird's beaks locally, nationally and compare globally.</p> <p>Identify other scientific tests, compare results.</p> <p>Relate to findings of Darwin and other scientists.</p>
Vocabulary	<p>offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils, evolve, evolution</p>
Prior learning – what children should know	<p>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 each other. (Y2 - Living things and their habitats) • Notice that animals, including humans, have offspring which grow into adults. (Y2 - Animals, including humans) • Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Y3 - Plants) • Describe in simple terms how fossils are formed when things that have lived are trapped within rock. (Y3 - Rocks) • Recognise that environments can change and that this can sometimes pose dangers to living things. (Y4 - Living things and their habitats) • Describe the life process of reproduction in some plants and animals. (Living things and their habitats - Y5)</p>
Future learning – next time they will be learning	<p>Heredity as the process by which genetic information is transmitted from one generation to the next. (KS3) • A simple model of chromosomes, genes and DNA in heredity, including the part played by Watson, Crick, Wilkins and Franklin in the development of the DNA model. (KS3) • The variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection. (KS3) • Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction. (KS3)</p>
Visits	<p>Nature Area</p> <p>Fossils –Museum, Marie H</p>
Book links	<p>Beetle Boy – MG Leonard</p>