**Year 6 Science Curriculum – Autumn 2**

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| **Theme: Evolution and inheritance** | | | | | | | | | |
| **Curriculum objectives** | | | **Vocabulary** | | | | | | **Links across the curriculum** |
| 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].  Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. | | | **Anomaly** | An odd result which does not fit within a pattern of results. | **Camouflage** | | The adaptation of the covering of an organism’s body that helps it to blend in with the surroundings. | | ICT:   * Using technology to present findings * Secondary research   English:   * Oracy for presentation of findings and debate   RE:   * Creation and science debate | |
| **Evolution** | The formation of a new species; through many gradual changes and over many millions of years, organisms develop from those that preceded them. | **Extinction** | | The complete elimination of a species. | |
| **Inherited** | When a characteristic is passed on from parents to offspring. | **Migrate** | | To move from one place to another. | |
| **Natural selection** | The mechanism which drives evolution (sometimes referred to as survival of the fittest). | **Offspring** | | The product of reproduction (babies, seeds). | |
| **Variation** | A difference between an animal or a plant. |  | |  | |
| **Tier 3 vocabulary** [SNAP23\_Y6\_M2\_evolution\_ms.docx (live.com)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fstatic.collins.rhapsode.com%2FSnap_Science%2FTeaching_Science%2FYear_6%2FSNAP23_Y6_M2_evolution_ms.docx&wdOrigin=BROWSELINK) | | | | | |
| **Prior knowledge:** *What specifically have pupils learned that is relevant to this unit that they are building upon?* | | | | | | **Future knowledge:** *What specifically will pupils learn in the future that is relevant to this unit?* | | | |
| Children have previously learnt:  ● about animal and plant features and adaptations and how they are classified (all Biology topics)  ● that the habitat of an animal or a plant may change (Year 4 Biology – Living things and their habitats). | | | | | | This prepares children for later learning:  ● about genetics, differences between species and variation within species (Key Stage 3 Biology – Inheritance, chromosomes, DNA and genes). | | | |
| **Lesson Sequence** | | **Key Knowledge** | | | | **Key Skills** | | | |
| How are living thigs different? | | * Variation means the differences between organisms. * Organisms which are similar and can reproduce and have offspring which can then have their own offspring is called a species. * Species is a group of organisms which can reproduce and have offspring which can also have offspring. * There are similarities and differences between organisms from different species, and that the differences are called variation. * Although there are similarities between organisms of the same species, there is also variation between them as well. * Carry out a pattern seeking enquiry and analyse the data to conclude whether there is a correlation between height and arm span in humans. | | | | Working scientifically:   * Reporting and presenting 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.   Scientific enquiry type:   * Pattern seeking. | | | |
| How is an organism adapted to live in its habitat? | | * Any feature of an organism which helps it to survive is called an adaptation. * An organism’s adaptations help it to survive in a specific habitat. * Identify adaptations which help an animal to survive in its habitat. | | | | Working scientifically:   * Reporting and presenting 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.   Scientific enquiry type:   * Research using secondary sources. | | | |
| How do an animal's adaptations help it to survive? | | * An animal’s adaptations help it to survive in a specific habitat. * There is a range of different adaptations which help animals to survive. * If a habitat changes, an animal’s adaptations may no longer help it to survive. * If all the animals of the same species die out, this is called extinction. | | | | Working scientifically:   * Reporting and presenting 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.   Scientific enquiry type:   * Research using secondary sources. | | | |
| What can fossils tell us? | | * Fossils provide evidence of organisms that lived millions of years ago. * Some of these organisms became extinct while others evolved into new species. * Scientists are not certain what an organism looked and behaved like from its fossil. * Over millions of years and many small changes organisms have changed, and that we call this process evolution. | | | | Working scientifically:   * Identifying scientific evidence that has been used to support or refute ideas or arguments. | | | |
| How does evolution happen? | | * Changes in organisms of the same species over a long period of time is called evolution. * Identify similarities and differences between organisms of the same species. * The concept of variation between individuals of the same species. * Offspring are similar but not identical to their parents. * Offspring are likely to have inherited these similarities from their parents. * The process of natural selection. * Scientists use models, which are not real, to explain their ideas. | | | | Working scientifically:   * Reporting and presenting 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. | | | |
| How did Wallace and Darwin come up with the idea of natural selection? | | * A change in an animal’s habitat can cause a species of animal to evolve. * The five steps of natural selection. * Charles Darwin and Alfred Wallace both proposed a mechanism for evolution which is called natural selection. * Both scientists used the observations from their travels to formulate their theories. * Why natural selection is also referred to as survival of the fittest. | | | | Working scientifically:   * Reporting and presenting 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. | | | |
| **Themes and links** | | | | | | | | | |
| **Themes (types of enquiry)** | **Where these are covered:** | | | | | | | **Links across the science curriculum** | |
| **Observation over time** |  | | | | | | | |  |  | | --- | --- | | **EYFS** |  | | **1** |  | | **2** |  | | **3** | Rocks, fossils and soil | | **4** | Changes of state | | **5** | Earth and space | | **6** | Evolution and inheritance | | |
| **Research** | * Lesson 2 * Lesson 3 | | | | | | |
| **Pattern seeking** | * Lesson 1 | | | | | | |
| **Comparative and fair testing** |  | | | | | | |
| **Identifying, classifying and grouping** |  | | | | | | |  | |