Yr 6 - Autumn 2: Evolution and Inheritance

Things to include each half term:
1 x active learning
1 x outdoor science lesson
3 x experiments/investigations
1 x child-led investigation
3 x examples of working scientifically

Science display:
- Key vocabulary linked to evolution and inheritance
- Photos of children during investigations
- Examples of children's work
- Photos of Darwin and Mary Anning
- Key facts and dates/timeline

Science Adventure
Medium Term Planning

Lesson 1 (KWL)
- Gather ideas on inheritance and introduce Theory of Evolution
- Play inheritance detective and identify inherited and environmental characteristics (active learning outdoors)
- Top trumps (dogs) and play game.
- See Hamilton Trust planning:https://www.hamilton-trust.org.uk/science/year-6-science/game-survival/

Lesson 2
- Discuss how Darwin came up with his theory and look at his study of finches at the Galapagos Islands
- Child-led investigation: Which tool would make the best beak and why?
- Children to have freedom to choose a range of beak-like tools to move a range of seeds/nuts or sweets from one container to another.
- Children to write up experiment with subheadings: aims, prediction, apparatus used, method/plan, results, conclusion, evaluation

Lesson 3
- Carousel of investigations
- Peppered moth: Why did the moths' appearance adapt during the industrial revolution?
- Foxes: How have foxes adapted to a range of environments?
- Plants: How have a range of plants adapted to their environments?
- Camels: How have camels adapted to the desert?
- Children to create a poster to show their understanding of adaptation and why that may lead to evolution.

Lesson 4
- Evolutionary pioneers: Study Mary Anning, Charles Darwin and Alfred Russel Wallace
- Children research and make notes, taking specific care to understand the controversies around their discoveries
- Children choose who they think was most influential in discovering evidence for the theory of evolution and write a persuasive argument (less able writers to produce a poster to show this)

Lesson 5
- Spider diagram on fossils (plants and animals) to establish starting point. What do children already know?
- Show example fossils - What do you notice? Carousel and annotate observations on A3 paper
- Make and excavate their own fossil
- Draw scientific diagram of fossil
- In groups, create puzzle showing ages of fossils
- https://ukfossils.co.uk/

https://ukfossils.co.uk/2014/08/07/the-basics-of-classification/

http://www.discoveringfossils.co.uk/fossil-hunting-locations_of-great-britain/

http://www.bgs.ac.uk/discoveringGeology/time/fossilfocus/home.html?src=topNav

http://www.discoveringfossils.co.uk/geologic_timescale.htm

http://mapapps.bgs.ac.uk/geologyofbritain/home.html

Lesson 6
- Children to piece together hominid evolution image
- Child-led investigation: How has the humble biscuit evolved over the past 100 years?
- Children create a biscuit cladogram

Lesson 7
- Fact vs Fiction: Share Christian creation story, myths (How did the giraffe get a long neck and why does the camel have a hump?) and scientific supported theories
- Children to choose task: write a story about how the giraffe got a long neck with scientific theories (adaptation etc), write a balanced argument for each idea, create their own animal and explain its adaptations.
- Low stakes test
- Refer back to KWL