Beech Hill Primary School Knowledge Organiser

Topic:	Year group	Term
Variation	6	Summer

Background knowledge

Children are introduced to the term "variation" for the first time. They used the term "organism" in Autumn and described an organism as a living thing. They now extend this to explore the term "species" as a group of similar organisms where two parents can reproduce to create offspring. They also learn that "variation" refers to differences between organisms. To explore the concept of variation, children should be given opportunities to look at variation between individuals of the same species and individuals of different species.

Children should have opportunities to learn that human offspring inherit characteristics from their parents, such as hair colour, eye colour and skin colour. They should also explore the concept that other animals inherit characteristics from their parents. A simple way of exploring this concept is to discuss breeding in dogs. Humans can breed animals with desirable characteristics.

What should I already know?

Children have looked at sexual reproduction in Year 5. They should be aware that offspring from sexual reproduction are similar to the parents but are not identical.

National Curriculum Objectives / Key Skills	The Journey
Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. <u>Working scientifically</u> Recording data and results of increasing complexity, using scientific diagrams and labels, classification keys, tables, scatter graphs, bar charts and line graphs. Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas (non-statutory).	1. Variation 2. Inheritance and characteristics

Scientific enquiry	

Outcomes
Working towards: I can talk about reproduction and offspring (recognising that offspring normally vary and are not usually identical to their parents). I am starting to relate this to breeds of dogs and cross breeds. Expected: I can explain about reproduction and offspring (recognising that offspring normally vary and are not usually identical to their parents). I can relate this to breeds of dogs and cross breeds. Exceeding: I can clearly explain about reproduction and offspring (recognising that offspring normally vary and are not usually identical to their parents). I can explain how this relates to breeds of dogs and cross breeds.

Key Vocabulary	Timeline / Diagrams
Organism – a living thing such as an animal, plant, bacterium or fungus Variation – differences between organisms Species – similar organisms where two parents can create offspring Offspring – the young of a living thing Characteristics – a feature of an organism, used to identify individuals or a group Inheritance – the passing on of characteristics from parent to offspring Desirable characteristics – features of organisms that we prefer	 

Key people / places
STEM scientist – vet

Assessment questions / outcomes
• What is variation? • What is a species? • What are some examples of species? • What are offspring?