

Mathematics

This term we will be focusing our learning on algebra and ratio. Having spent time on fractions, we will now look at the connection between fractions and ratio and then problem solving where ratios have been used. We will then look at Algebra and how a symbol can be a variable. We will calculate missing values and create our own expressions and formula and finally solve some algebraic expressions.

Simple Algebra Rules

www.cazoommaths.com

$$2 \times a = 2a$$

$$3 \times q = 3q$$

$$2a \times 3 = 6a$$

$$a \times b = ab$$

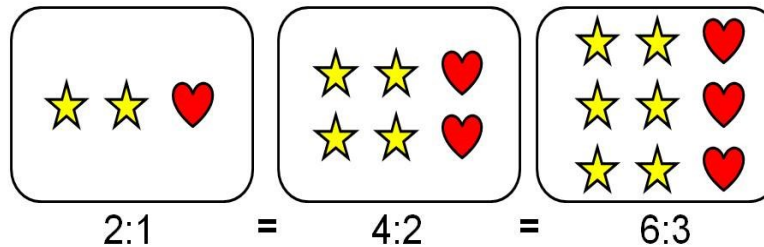
$$2a \times 3b = 6ab$$

$$a \div 2 = \frac{a}{2}$$

$$a + a = 2a$$

$$a \times a = a^2$$

Example of equivalent ratios



Generating equivalent ratios

eg

$$\begin{array}{ccc} & 3:4 & \\ \times 5 \swarrow & = & \searrow \times 5 \\ & 15:20 & \end{array}$$

eg

$$\begin{array}{ccc} & 12:8 & \\ \div 2 \swarrow & = & \searrow \div 2 \\ & 6:4 & \end{array}$$

Ratio and Algebra:

- Ratio is a mathematical concept that compares values, telling us how much of one thing there is compared to another thing. Children in KS2 are taught to solve problems involving ratio, and they start to learn about proportion and ratio in Year 6.
- Algebra is a part of maths that uses letters and symbols in the place of numbers. Each letter or symbol is a variable and can represent a range of values.

English

In English our main writing genre will be narrative

Knowledge Organiser Term 1 - Animals Including Humans - Year 6

Other Subjects: During the term we will also be completing our webpage creation unit in Computing. In RE will be exploring what means most to Humanists and Christians. During these sessions, we will look at good, bad, forgiveness and fairness. It will also give children a chance to explore Humanism, which they may not have previously studied. During our PE lessons we will be focusing on Basketball and Gymnastics. During these units, the children will engage in activities to improve a range of skills; both physical and social and also learn the rules of competitive basketball. Children will also be given the opportunity to improve their health and stamina when engaging in activities for a period of time. In Art we will be looking at some famous pieces of art and exploring and discussing the narratives they convey using our own experiences to justify our reasons. We will then research and create our own piece that conveys its own narrative.

Key Vocabulary	
offspring	The young animal or plant that is produced by the reproduction of that species.
inheritance	This is when characteristics are passed on to offspring from their parents.
variations	The differences between individuals within a species.
characteristics	The distinguishing features or qualities that are specific to a species.
adaptation	An adaptation is a trait (or characteristic) changing to increase a living thing's chances of surviving and reproducing.
habitat	Refers to a specific area or place in which particular animals and plants can live.
environment	An environment contains many habitats and includes areas where there are both living and non-living things.



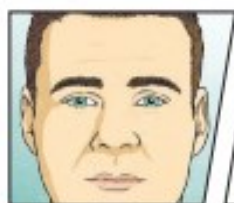
Offspring
Animals and plants produce **offspring** that are similar but not identical to them. **Offspring** often look like their parents because features are passed on.

Variation
In the same way that there is **variation** between parents and their **offspring**, you can see **variation** within any species, even plants.



Adaptive Traits

Characteristics that are influenced by the **environment** the living things live in. These **adaptations** can develop as a result of many things, such as food and climate.



Inherited Traits

Eye colour is an example of an **inherited trait**, but so are things like hair colour, the shape of your earlobes and whether or not you can smell certain flowers.



Habitats

A good **habitat** should provide shelter, water, enough space and plenty of food.

Environments

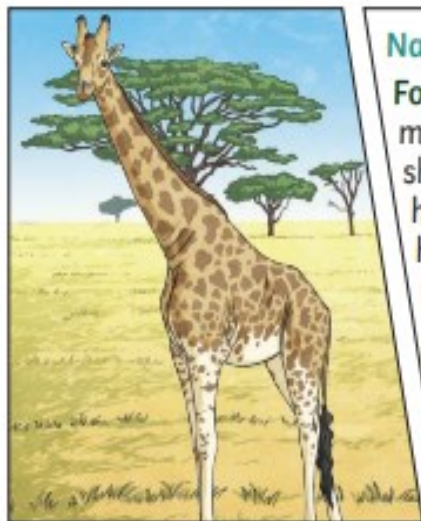
There are many types of **environment** around the world. Polar regions, deserts, rainforests, oceans, rivers, and grasslands are all **environments**.



To look at all the planning resources linked to the Evolution and Inheritance unit, [click here](#).

Key Vocabulary

evolution	Adaptation over a very long time.
natural selection	The process where organisms that are better adapted to their environment tend to survive and produce more offspring .
fossil	The remains or imprint of a prehistoric plant or animal, embedded in rock and preserved.
adaptive traits	Genetic features that help a living thing to survive.
inherited traits	These are traits you get from your parents. Within a family, you will often see similar traits, e.g. curly hair.



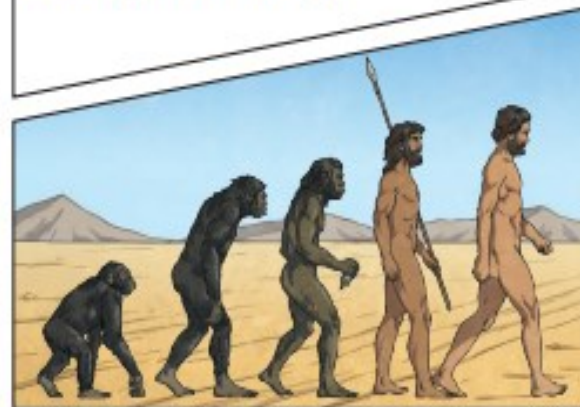
Natural Selection









Fossils of giraffes from millions of years ago show that they used to have shorter necks. They have gradually **evolved** through **natural selection** to have longer necks so that they can reach the top leaves on taller trees.

Fossils are the preserved remains, or partial remains, of ancient animals and plants. **Fossils** let scientists know how plants and animals used to look millions of years ago. This is proof that living things have **evolved** over time.



Evolution is the gradual process by which different kinds of living organism have developed from earlier forms over millions of years. Scientists have proof that living things are continuously **evolving** - even today!



Living Things		Habitat		Adaptive Traits
polar bear		arctic		Its white fur enables it to camouflage in the snow.
camel		desert		It has wide feet to make it easier to walk in the sand.
cactus		desert		It stores water in its stem.
toucan		rainforest		Its narrow tongue allows it to eat small fruit and insects.