



UKS2 Science Curriculum and Knowledge Map



Key Stage 3

Plants- structure and function of organisms, interactions and interdependences.
 Humans- adaptations and interactions that allow humans to compete for resources, genetics.
 States of matter- atoms, elements, chemical reactions, periodic table.
 Space- atmosphere, particle model of matter.
 Electromagnetism
 Colour, light and sound waves.
 Describing motion.

Light (physics)

I can explain how we see things (advancing).
 (straight line, reflection, light source).

I can explain the relationship between the shape of an object and the shadow it produces (deep).

Electricity (physics)

I can represent a basic circuit used recognised symbols (basic).

I can identify patterns between brightness of a lamp or volume of a buzzer with the number and voltage of cells in a circuit (advancing).

I can investigate variations in how components function (deep).

Evolution and inheritance (Biology)

I can describe that offspring vary and are not identical to their parents (basic).

I can explain what information fossils provide about living things that inhabited the world millions of years ago (advancing).

I can summarise how adaptation to an environment over time may lead to evolution (deep).

Living things and their habitats (Biology)

I can describe how living things (microorganisms, plants and animals) are classified (basic).

I can explain why we classify plants and animals based on specific characteristics (advancing).

Humans (Biology)

I can describe the stages of human development (basic).

I can describe how the body changes in old age (basic).

I can compare the changes in males and females during puberty due to testosterone, progesterone, and oestrogen (advancing).

Year 6

Animals including humans (Biology).

I can locate, label and describe the main parts of the human circulatory system (basic).

I can describe the ways nutrients and water are transported within animals including humans (basic).

I can explain the functions of the heart, blood vessels and blood (advancing).

I can summarise the impact of diet, exercise, drugs and lifestyle on the way our bodies function (deep).

Earth and space

I can describe the movement of the Earth and other planets relative to the sun (basic).

I can describe the movement of the moon relative to the Earth (basic).

I can explain day and night and the apparent movement of the sun across the sky using the idea of the Earth's rotation (advancing).

I can identify patterns between the shape of the sun, Earth and moon (approximately spherical) (advancing).

Forces (Physics)

I can define the forces of gravity, air resistance, water resistance and friction and describe their effects (basic).

I can identify levers, pulleys and gears (basic).

I can explain that some mechanisms allow a smaller force to have a greater effect (advancing).

Materials (chemistry)

I can define what a solution is and describe how to recover a substance from a solution (basic).

I can describe why particular everyday materials have been used based on fair tests (basic).

I can explain how mixtures might be separated through filtering, sieving and evaporation (advancing).

I can compare and classify everyday materials on the basis of their properties (hardness, solubility, transparency and conductivity (advancing).

I can investigate reversible and non reversible changes in state and summarise what I have found (dissolving, mixing, burning, acid on bicarbonate of soda) (Deep).

Living things and their habitats (Biology)

I can describe the life process of reproduction in some plants and animals (basic).

I can compare the lifecycles of a mammal, amphibian, insect and bird (advancing).

Year 5

LKS2

Animals including humans-The skeleton, muscles, teeth and the digestive system.

Materials- Rocks and states of matter.

Forces- Magnets and friction

Plants- Functions of the parts of a flowering plant, the plant life cycle and water transportation.

Living things and their habitats- Food chains and classification keys

Sound- How it is produced, volume and pitch.

Electricity- Electrical circuits, conductors and insulators