

Band 5 – Science

Working Scientifically

Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary (Year 5 focus).

I can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.

Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate (Year 5 focus).

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Record data and results of increasing complexity, using scientific diagrams and labels, classification keys, tables, scatter graphs, and bar and line graphs (Year 5 focus).

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Use test results to make predictions to set up further comparative and fair tests (Year 5 focus).

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Report and present 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 (Year 5 focus).

I can talk about and present findings from enquiries, including conclusions, causal relationships and explanations of how reliable the information is.

Identify scientific evidence that has been used to support or refute ideas or arguments (Year 5 focus).

I can identify scientific evidence that has been used to support or refute ideas or arguments.

Animals Including Humans

Describe the changes as humans develop into old age.

I can describe the changes as humans develop, up to old age.

Materials

Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.

I can compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.

Recognise that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.

I can explain that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.

Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including by filtering, sieving and evaporating.

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Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.

I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.

Demonstrate that dissolving, mixing and changes of state are reversible changes.

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Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

I can explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

Forces & Magnets

Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.

I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.

Identify the effects of air resistance, water resistance and friction, that act between moving surfaces.

I can demonstrate the effects of air resistance, water resistance and friction, that act between moving surfaces.

Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

I can show that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

Earth & Space

Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.

I can describe the movement of the Earth, and other planets, relative to the Sun in the solar system.

Describe the movement of the Moon relative to the Earth.

I can describe the movement of the Moon relative to the Earth.

Describe the Sun, Earth and Moon as approximately spherical bodies.

I can describe the Sun, Earth and Moon as approximately spherical bodies.

Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

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

Living Things & Their Habitats

Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.

I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.

Describe the life process of reproduction in some plants and animals.

I can describe how some animals and plants reproduce.

