



Grade 5 Science Curriculum Framework Document

Scientific enquiry

Ideas and evidence

1. Know that scientists have combined evidence with creative thinking to suggest new ideas and explanations for phenomena.
2. Use observation and measurement to test predictions and make links.

Plan investigative work

1. Make predictions of what will happen based on scientific knowledge and understanding, and suggest and communicate how to test these.
2. Use knowledge and understanding to plan how to carry out a fair test.
3. Collect sufficient evidence to test an idea.
4. Identify factors that need to be taken into account in different contexts.

Obtain and present evidence

1. Make relevant observations.
2. Measure volume, temperature, time, length and force.
3. Discuss the need for repeated observations and measurements.
4. Present results in bar charts and line graphs.

Consider evidence and approach

1. Decide whether results support predictions.
2. Begin to evaluate repeated results.
3. Recognise and make predictions from patterns in data and suggest explanations using scientific knowledge and understanding.
4. Interpret data and think about whether it is sufficient to draw conclusions.

Biology

Plants

1. Know that plants need energy from light for growth.
2. Know that plants reproduce.
3. Observe how seeds can be dispersed in a variety of ways.
4. Investigate how seeds need water and warmth for germination, but not light.
5. Know that insects pollinate some flowers.
6. Observe that plants produce flowers which have male and female organs; seeds are formed when pollen from the male organ fertilises the ovum (female).
7. Recognise that flowering plants have a life cycle including pollination, fertilisation, seed production, seed dispersal and germination.

Chemistry

States of matter

1. Know that evaporation occurs when a liquid turns into a gas.
2. Know that condensation occurs when a gas turns into a liquid and that it is the reverse of evaporation.
3. Know that air contains water vapour and when this meets a cold surface it may condense.
4. Know that the boiling point of water is 100°C and the melting point of ice is 0°C.
5. Know that when a liquid evaporates from a solution the solid is left behind.

Physics

Light

1. Observe that shadows are formed when light travelling from a source is blocked.
2. Investigate how the size of a shadow is affected by the position of the object.
3. Observe that shadows change in length and position throughout the day.
4. Know that light intensity can be measured.
5. Explore how opaque materials do not let light through and transparent materials let a lot of light through.
6. Know that we see light sources because light from the source enters our eyes.
7. Know that beams/rays of light can be reflected by surfaces including mirrors, and when reflected light enters our eyes we see the object.
8. Explore why a beam of light changes direction when it is reflected from a surface.

The Earth and beyond

1. Explore, through modelling, that the sun does not move; its *apparent* movement is caused by the Earth spinning on its axis.
2. Know that the Earth spins on its axis once in every 24 hours.
3. Know that the Earth takes a year to orbit the sun, spinning as it goes.
4. Research the lives and discoveries of scientists who explored the solar system and stars.