



Grade 4 Science Curriculum Framework Document

Science for Grade 4

Scientific enquiry

Ideas and evidence

1. Collect evidence in a variety of contexts.
2. Test an idea or prediction based on scientific knowledge and understanding.

Plan investigative work

1. Suggest questions that can be tested and make predictions; communicate these.
2. Design a fair test and plan how to collect sufficient evidence.
3. Choose apparatus and decide what to measure.

Obtain and present evidence

1. Make relevant observations and comparisons in a variety of contexts.
2. Measure temperature, time, force, and length.
3. Begin to think about the need for repeated measurements of, for example, length.
4. Present results in drawings, bar charts, and tables.

Consider evidence and approach

1. Identify simple trends and patterns in results and suggest explanations for some of these.
2. Explain what the evidence shows and whether it supports predictions. Communicate this clearly to others.
3. Link evidence to scientific knowledge and understanding in some contexts.

Biology

Humans and animals

1. Know that humans (and some animals) have bony skeletons inside their bodies.
2. Know how skeletons grow as humans grow, support, and protect the body.
3. Know that animals with skeletons have muscles attached to the bones.
4. Know how a muscle has to contract (shorten) to make a bone move and that muscles act in pairs.
5. Explain the role of drugs as medicines.

Living things in their environment

1. Investigate how different animals are found in different habitats and are suited to the environment in which they are found.
2. Use simple identification keys.
3. Recognise ways that human activity affects the environment e.g. river pollution, recycling waste.

Chemistry

States of matter

1. Know that matter can be solid, liquid, or gas.
2. Investigate how materials change when they are heated and cooled.
3. Know that melting is when a solid turns into a liquid and is the reverse of freezing.
4. Observe how water turns into steam when it is heated but on cooling the steam turns back into water.

Physics

Sound

1. Explore how sounds are made when objects, materials or air vibrate and learn to measure the volume of sound in decibels with a sound level meter.
2. Investigate how sound travels through different materials to the ear.
3. Investigate how some materials are effective in preventing sound from travelling through them.
4. Investigate the way *pitch* describes how high or low a sound is and that high and low sounds can be loud or soft. Secondary sources can be used.
5. Explore how pitch can be changed in musical instruments in a range of ways.

Electricity and magnetism

1. Construct complete circuits using switch, cell (battery), wire, and lamps.
2. Explore how an electrical device will not work if there is a break in the circuit.
3. Know that electrical current flows and that models can describe this flow, e.g. particles travelling around a circuit.
4. Explore the forces between magnets and know that magnets can attract or repel each other.
5. Know that magnets attract some metals but not others.