Curriculum links

Indigenous STEM Education Resources

Traditional cooking methods

NSW Curriculum links

Stage 2

Physical and living systems depend on energy

ST2-SCI-01

uses information to investigate the solar system and the effects of energy on living, physical and geological systems.

Energy is required to change the properties of matter.

Recognise that matter is anything that has mass, takes up space and consists of very small particles.

Observe examples of matter that exist as a solid, which has a defined shape and volume; a liquid, which has a definite volume but not a definite shape; and a gas, which has neither a definite shape nor a definite volume.

Observe and describe water changing from solid to liquid to gas and back again, using Tier 2 and Tier 3 vocabulary.

Describe how adding and removing heat energy affects the movement and arrangement of particles when matter is changing state.

ST2-PQU-01

Poses questions to create fair tests that investigate the effects of energy on living things and physical systems.

ST2-DAT-01

Uses and interprets data to describe patterns and relationships.

Australian Curriculum links

Year 5

Chemical Sciences

AC9S5U04

Explain observable properties of solids, liquids and gases by modelling the motion and arrangement of particles.

Science as a human endeavour

Nature and development of science

AC9S5H01

Examine why advances in science are often the result of collaboration or build on the work of others.

Use and influence of science

AC9S5H02

Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions.

Science inquiry

Questioning and predicting

AC9S5I01

Pose investigable questions to identify patterns and test relationships and make reasoned predictions.

Planning and conducting

AC9S5I02

Plan and conduct repeatable investigations to answer questions, including, as appropriate, deciding the variables to be changed, measured and controlled in fair tests; describing potential risks; planning for the safe use of equipment and materials; and identifying required permissions to conduct investigations on Country/Place.

AC9S5I03

Use equipment to observe, measure and record data with reasonable precision, using digital tools as appropriate.

Processing, modelling and analysing

AC9S5I04

Construct and use appropriate representations, including tables, graphs and visual or physical models, to organise and process data and information and describe patterns, trends and relationships.

Evaluating

AC9S5I05

Compare methods and findings with those of others, recognise possible sources of error, pose questions for further investigation and select evidence to draw reasoned conclusions.

Communicating

AC9S5I06

Write and create texts to communicate ideas and findings for specific purposes and audiences, including selection of language features, using digital tools as appropriate.

Can be adapted for:

Year 3

Physical sciences

AC9S3U03

Identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another.

Chemical sciences

AC9S3U04

Investigate the observable properties of solids and liquids and how adding or removing heat energy leads to a change of state.

Science as a human endeavour

Nature and development of science

AC9S3H01

Examine how people use data to develop scientific explanations.

Science inquiry

Questioning and predicting

AC9S3I01

Pose questions to explore observed patterns and relationships and make predictions based on observations.

Planning and conducting

AC9S3I02

Use provided scaffolds to plan and conduct investigations to answer questions or test predictions, including identifying the elements of fair tests, and considering the safe use of materials and equipment.

AC9S3I03

Follow procedures to make and record observations, including making formal measurements using familiar scaled instruments and using digital tools as appropriate.

Processing, modelling and analysing

AC9S3I04

Conduct and use representations, including tables, simple column graphs and visual or physical models, to organise data and information, show simple relationships and identify patterns.

Evaluating

AC9S3I05

Compare findings with those of others, consider if investigations were fair, identify questions for furthers investigation and draw conclusions.

Communicating

AC9S3I06

Write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and digital tools and appropriate.

Year 4

Earth and space sciences

AC9S4U02

identify sources of water and describe key processes in the water cycle, including movement of water through the sky, landscape and ocean; precipitation; evaporation; and condensation.

Science as a human endeavour

Nature and development of science

AC9S4H01

Examine how people use data to develop scientific explanations.

Use and influence of science

AC9S4H02

Consider how people use scientific explanations to meet a need or solve a problem.

Science inquiry

Questioning and predicting

AC9S4I01

Pose questions to explore observed patterns and relationships and make predictions based on observations.

Planning and conducting

AC9S4I02

Use provided scaffolds to plan and conduct investigations to answer questions or test predictions, including identifying the elements of fair tests, and considering the safe use of materials and equipment.

AC9S4I03

Follow procedures to make and record observations, including making formal measurements using familiar scaled instruments and using digital tools as appropriate.

Processing, modelling and analysing

AC9S4I04

Construct and use representations, including tables, simple column graphs and visual or physical models, to organise data and information, show simple relationships and identify patterns.

Evaluating

AC9S4I05

compare findings with those of others, consider if investigations were fair, identify questions for further investigation and draw conclusions.

Communicating

AC9S4I06

write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and digital tools as appropriate.