

CONTENTS

Introduction	v
Content Descriptions	vii
Planners	
Year planner.....	xi
Earth and space sciences planner.....	xii
Biological sciences planner.....	xiii
Chemical sciences planner.....	xiv
Physical sciences planner	xv
Content Description Tables	xvi
Using the Lesson Plans	xx
Earth and space sciences	
What is a scientist?	1
Observing the weather	5
Wind: observing the weather	12
Wind.....	17
Weather conditions	20
Water: rainfall	23
Water: how do we get it to our house and school?	27
Waterwise.....	31
Minerals from the Earth	33
Biological sciences	
Me and my changes so far 1	38
Me and my changes so far 2	42
Human families 1	49
Human families 2	53
Animal families 1	58
Animal families 2	62
Life cycle of butterflies.....	68
Life cycle of frogs	75
Caring for young 1.....	79
Caring for young 2.....	84
Chemical sciences	
Everyday materials	91
Exploring materials: properties and suitability.....	97
Exploring materials: properties and uses 1	102
Comparing materials 1	105

Materials can be changed	115
Making new materials 1	118
Exploring materials: properties and uses 2.....	127
Making new materials 2	132
Comparing materials 2.....	142
Testing properties of materials	146
Physical sciences	
Force and movement 1	151
Force and movement 2	157
Force and movement 3	163
Forces make things move.....	169
Air	177
Air pressure.....	181
Floating and sinking 1	184
Floating and sinking 2	188
Water under pressure creates movement.....	193
Certificates and awards	199

LESSON 4

WIND

CONTENT DESCRIPTIONS

Science Understanding

Earth and space sciences

Earth's resources, including water, are used in a variety of ways (ACSSU032)

Science as a Human Endeavour

Nature and development of science

Science involves asking questions about, and describing changes in, objects and events (ACSHE034)

Use and influence of science

People use science in their daily lives, including when caring for their environment and living things (ACSHE035)

Science Inquiry Skills

Questioning and predicting

Respond to and pose questions, and make predictions about familiar objects and events (AC SIS037)

Planning and conducting

Participate in different types of guided investigations to explore and answer questions, such as manipulating materials, testing ideas, and accessing information sources (AC SIS038)

Use informal measurements in the collection and recording of observations, with the assistance of digital technologies as appropriate (AC SIS039)

Processing and analysing data and information

Use a range of methods to sort information, including drawings and provided tables (AC SIS040)

Through discussion, compare observations with predictions (AC SIS214)

Evaluating

Compare observations with those of others (AC SIS041)

Communicating

Represent and communicate observations and ideas in a variety of ways such as oral and written language, drawing and role play (AC SIS042)

RESOURCES

Datalogger with temperature sensor	Excel
Instruction sheet for pinwheel (see page 19)	Thick square card (to be folded)
Scissors	Straws or icy pole sticks
Pins	Stimulus pictures of windsocks,
Digital camera	weathervanes and anemometers

RESOURCES FOR EXTENSION

Internet

Interpreting data
Recording
Creating

Brainstorming
Analysing
Problem-solving

SKILLS

ACTIVITIES

- As a class, brainstorm a list of words related to wind: “air”, “breeze”, “strong”, “gale force”.
- Explain in simple terms that the wind is caused by different weather conditions, such as temperature and air pressure. Make explicit that the hot air rises and, when this air cools, it falls. The movement of rising and falling causes wind.
- Use a datalogger with a temperature sensor to record the temperature in the room. Record the temperature near the ceiling and close to the floor. Show the students the temperature variation, thus illustrating that hot air rises.
- Tell the students that they are going to make a pinwheel, a device to measure the wind.
- Divide students into pairs, ask them to collect all of the materials and follow the instructions on the task card on page 19.
- After the students have made their pinwheels, discuss how they think they will work. Take the students outside and test their pinwheels.
- At the same time each day for a week or longer, record the wind speed.
- Put the wind-speed data into a spreadsheet and graph the results. (An extension activity would be including the daily temperature in the spreadsheet.) Compare and analyse the results.
- Ask the students: “How do we know the direction of the wind?”
- Discuss windsocks, weathervanes and anemometers. Show stimulus pictures of these.
- Ask the students to generate their own list of questions about wind. Record these and answer them throughout the lessons.

Ask the students to research a little information on windsocks, weathervanes and/or anemometers using the internet.

EXTENSION

Take a digital image of each student working and file this electronically or add to their electronic portfolio.

ASSESSMENT

LANGUAGE

Introduce and explain the following terms:

weather	graph	pinwheel
weathervane	graphing	strong
windsock	probe	air
anemometer	sensor	breeze
thermometer	analyse	gale force
data	interpret	
datalogger	compare	

LESSON 9

COMPARING MATERIALS 2

CONTENT
DESCRIPTIONS**Science Understanding****Chemical sciences**

Different materials can be combined, including by mixing, for a particular purpose (ACSSU031)

Science as a Human Endeavour**Nature and development of science**

Science involves asking questions about and describing changes in, objects and events (ACSHE034)

Use and influence of science

People use science in their daily lives, including when caring for their environment and living things (ACSHE035)

Science Inquiry Skills**Questioning and predicting**

Respond to and pose questions and make predictions about familiar objects and events (AC SIS037)

Planning and conducting

Participate in different types of guided investigations to explore and answer questions, such as manipulating materials, testing ideas and accessing information sources (AC SIS038)

Use informal measurements in the collection and recording of observations, with the assistance of digital technologies as appropriate (AC SIS039)

Processing and analysing data and information

Use a range of methods to sort information, including drawings and provided tables (AC SIS040)

Through discussion, compare observations with predictions (AC SIS214)

Evaluating

Compare observations with those of others (AC SIS041)

Communicating

Represent and communicate observations and ideas in a variety of ways such as oral and written language, drawing and role play (AC SIS042)

RESOURCES

A variety of sealed packaging
with sticker labels, e.g:

Plastic bottles

Biscuit packets

Glass bottles

A television box

Large bowls (for soaking labels off objects)

Hot water

Envelopes with stamps

Foil

Wood

Icy pole sticks