PRIMARY SCIENCE

BOOK G

Endangered Species

Ecosystems

Erosion

A Restless Earth

Kitchen Science

Liquids

Time

Energy and its Uses

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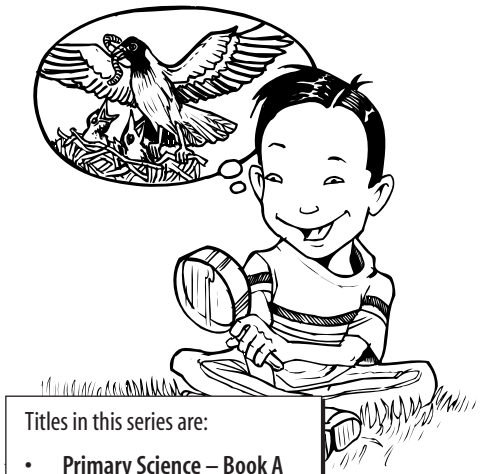
SAMPLE - NOT FOR SALE

Foreword



Primary Science G is one of series of seven blackline masters written for use in New Zealand primary schools. Each book presents eight units that cover the four strands of the New Zealand Curriculum: The Living World, Planet Earth and Beyond, The Physical World, The Material World.

Comprehensive teachers notes accompany each student activity. Concepts, knowledge and skills share an equal emphasis in each unit, along with developing positive attitudes to science.

Primary Science gives students the opportunity to enhance their knowledge of the world around them and to engage in collaborative learning that makes science interesting and exciting.

Indicators and assessment pages have been designed to match the New Zealand curriculum.

Titles in this series are:

- **Primary Science – Book A**
- **Primary Science – Book B**
- **Primary Science – Book C**
- **Primary Science – Book D**
- **Primary Science – Book E**
- **Primary Science – Book F**
- **Primary Science – Book G**

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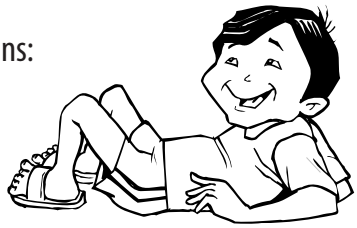
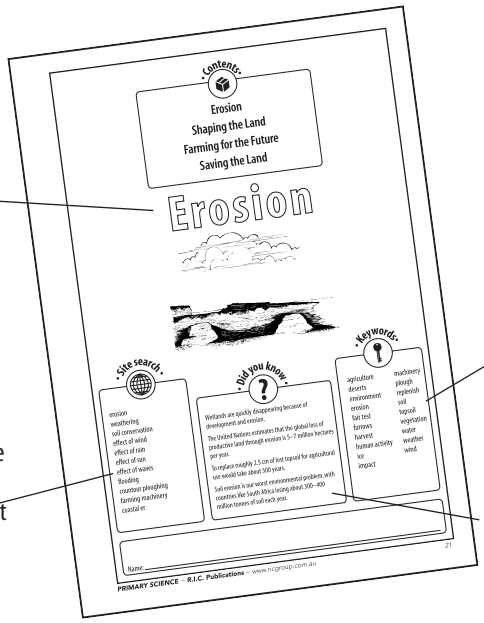
Teacher Information

Each book contains eight science units. Each unit is made up of ten pages, and contains:

- *a cover page;*
- *four teacher pages;*
- *four student pages;*
- *an assessment page.*



The **first page** of each unit is a cover page designed for the students. Listed are the titles of the four activities included in the unit. The cover page can be glued into student workbooks at the beginning of a unit or copied and attached to the completed blacklines at the end of the unit. The students can **colour** the title of the unit on the page.

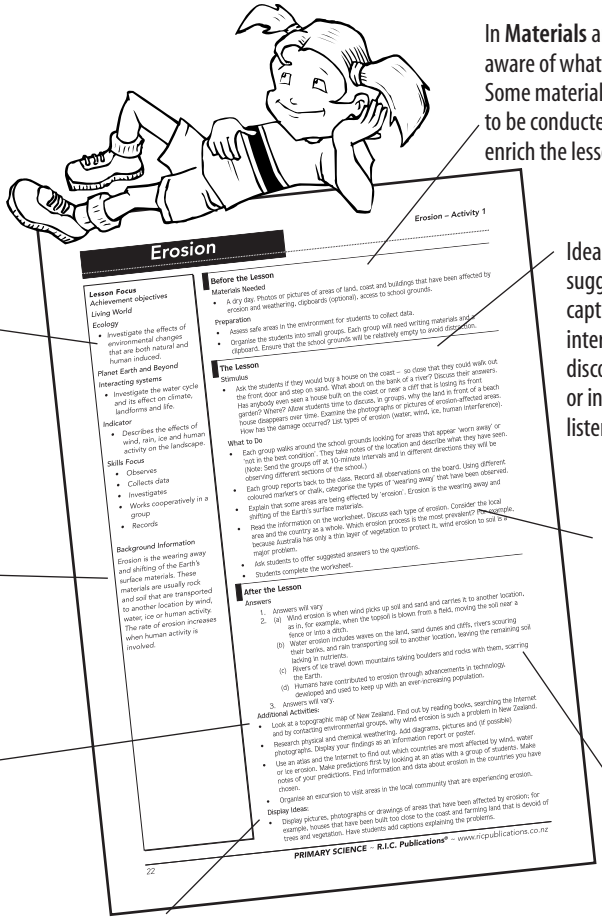


Keywords have been given for each unit, in alphabetical order. These words can be introduced and discussed at the beginning of a unit or they can be a focus as they appear throughout the activities. Introducing scientific terminology to meet the needs of individual students is discussed on page v.

Site search is a list of keywords and phrases for use by the students. They can be typed directly into the students' preferred Internet search engine to promote the most appropriate response to the topic.

'**Did you know?**' is an eclectic collection of interesting facts and figures relating to one or more of the topics. It is designed to engage the students' attention and stimulate their interest in the area being studied.

The **teacher pages** include information to assist the teacher with each lesson.



In **Materials** and **Preparation**, the teacher is made aware of what needs to be done before the lesson. Some materials and tasks are required for the activity to be conducted; others are suggestions that will enrich the lesson.

The activities in *Primary Science* have been written to the **New Zealand curriculum, Science strands**. The achievement objectives for the unit are listed and specific indicators that match each activity are included. These **Indicators** can be transferred to the assessment proforma on page ix.

Ideas under the **Stimulus** heading are suggested short activities or discussions to capture the students' attention and spark an interest in the topic. Teachers will also able to discover the existing knowledge of the class or individual students regarding the topic by listening to their responses and observations.

Background Information for each activity is included for the teacher.

What To Do gives suggested step-by-step instructions for the activity. The accompanying blackline may be the focus of the activity or it may be where the students record their observations and ideas after completing the task.

Additional Activities can be used to further develop the outcomes being assessed. These activities provide ideas to consolidate and clarify the concepts and skills taught in the unit.

The **Answers** for the activities on the blackline are included. Some answers will need a teacher check, while others may vary depending on the students' personal experiences or observations.

Display Ideas for the classroom give the teacher suggestions for the students in the topic and ways of presenting work that has been completed during the unit.

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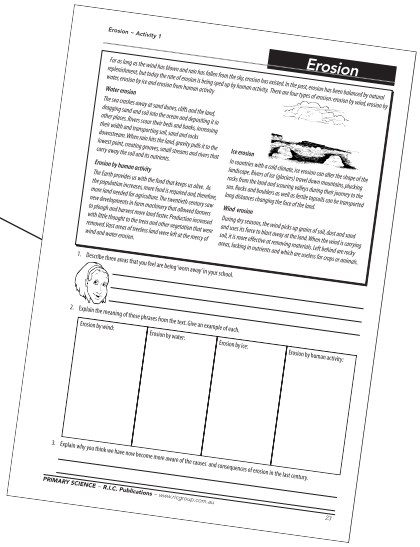
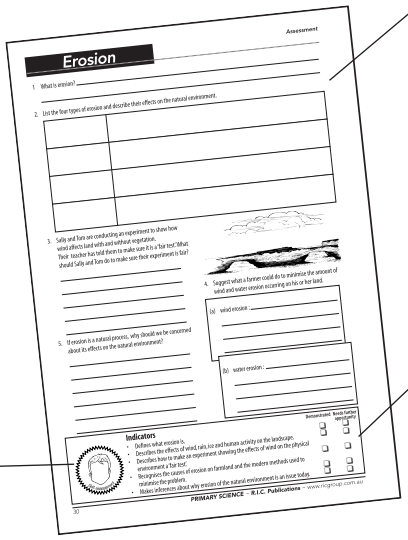
Teacher Information

The **student pages** contain a variety of activities. The written activities may be the focus of the lesson or they may be where the students record their observations, investigation results and discoveries.

The focus of each blackline master is given in the indicators on the accompanying teachers' page.



On the final page of each unit is the **assessment page**. Questions have been written that will assess individual student knowledge and understanding of the main ideas in the unit. The questions have been written from the specific indicators and overall outcomes of the unit. Each assessment page places an emphasis on content and understanding as well as skills.



After completing the unit, the students can assess themselves and provide feedback to the teacher and their parents by completing the **self-assessment face**. This face indicates how they felt about the topic. It is important that the self-assessment takes place prior to marking by a teacher.

Indicators have been written in language easily understood by parents, students and teachers and can be used as a point of reference in parent-teacher interviews or three-way conferences. These indicators can be transferred to the assessment proformas on pages ix and xi.

Assessment proformas have been included on pages ix and xi, with an explanation of how to use them on the preceding pages.

Each book of ***Primary Science*** has eight units. This gives teachers the opportunity to change topics every five weeks over one school year. However, there is no prescribed length of time for each unit. All units include some activities that can be completed in one lessons, others may go over two lessons, depending on a variety of factors, such as:

- *the stimulus suggesting learning about science outside the classroom;*
- *the students needing to make observations prior to the lesson;*
- *an experiment being conducted that needs to be observed over a number of days;*
- *the students being required to find information by researching, using the Internet, conducting surveys or interviews;*
- *a concept needing to be clarified further to ensure understanding.*

Primary Science has been written to the New Zealand curriculum. The units and activities can be followed precisely or adapted to meet the needs of specific schools and to suit individual styles of teaching. Suggestions for setting up a science classroom and for teaching science can be found on page iv. Ideas for teaching science to meet the special needs of individual students are discussed on page v, along with exciting ideas for presenting scientific information.

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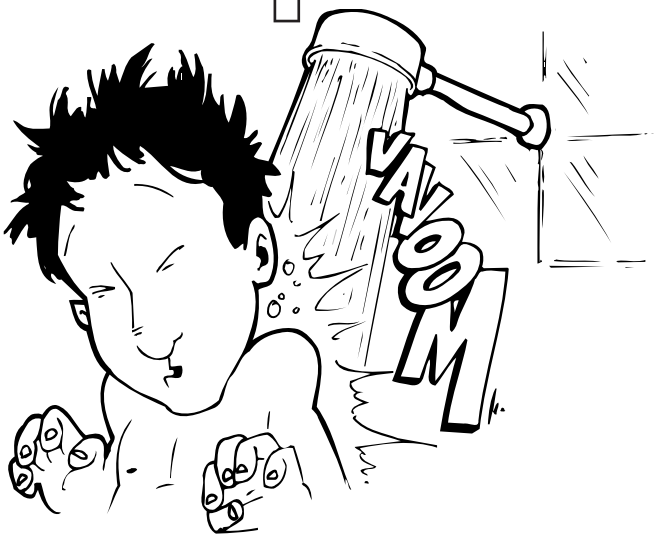
Properties of Water

Water Properties Display

Movement of Molecules

Test for Water Pressure

Liquids



Site search

liquids

water cycle

evaporation

condensation

buoyancy

Did you know ?

The Earth looks blue from outer space because it is mostly covered by water.

Almost all of the fresh water on Earth is frozen. It is in huge blocks of ice called glaciers.

There are six points on every snowflake. But no two snowflakes are alike.

We use the same water over and over again. You may be drinking the same water the dinosaurs drank!

All foods have water in them.

Keywords

adhesion
capillary
cohesion
condensation
constantly
contracts
diffusion
design
dilutes
estimates
evaporation
liquids
materials
melting
molecules
pressure
summary
surface
tension

Name: _____

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Properties of Water

Lesson Focus

Achievement objectives

Material World

Properties and changes of matter

- *Group materials in different ways based on the observations and measurements of the characteristic physical and chemical properties of a range of different materials. Compare physical and chemical changes.*

Indicator

- *Identifies the properties and importance of water.*

Skills Focus

- *Communicates processes*
- *Observes*
- *Records*
- *Compares*

Background Information

Water is essential to life on earth. Pure water is virtually colourless, odourless and has no taste. The chemical description for water is H_20; that is, one atom of oxygen bound to two atoms of hydrogen.

Water is unique in that it is the only natural material that can be found in all three states – solid, liquid and gas. Water freezes at 0°C and boils at 100°C. In its solid form (ice) water is less dense than its liquid form, which explains why ice floats. Water on Earth is constantly changing, moving or interacting. Some states and properties of water are:

- *Melting – water changes from a solid to a liquid.*
- *Evaporating – water changes from a liquid to a gas. The addition of heat results in the breaking down of the water molecules.*
- *Condensation – changes from a gas to a liquid (when water vapour turns to droplets)*
- *Sublimation – when water changes directly from a solid to a gas (mist rising from an ice cube).*
- *Adhesion – the sticking together of water molecules to other materials (water adhering to paper).*
- *Cohesion – water has high cohesion. Water molecules are attracted to other water molecules.*
- *Surface tension – where there is cohesion between the water molecules. This allows water to take the shape of any container.*
- *Capillary action – the tendency for water to adhere to and move along solid surfaces it comes in contact with (water will move up a straw if it is placed into a glass).*
- *Frosting – a gas turning directly to a solid form.*

Before the Lesson

Materials Needed

- Ice blocks, kettle, cold water, boiling water, mirror, 2 glasses, water, water jug, bowl, pepper, clear drinking straws, bucket, detergent, paper towel, food colouring, plastic bottle (filled with water and frozen).

Preparation

- Freeze a plastic bottle full of water (so it shows expansion when frozen).
- Organise a wet area for the activities. Organise class groups. Organise trays for groups (2 glasses, bowl, filled water jug, detergent, clear drinking straws).
- Alternatively, the room may be set up with stations the groups can move to.

The Lesson

Stimulus

- Place the ice blocks in a glass of cold water. Discuss what happens to the outside of the glass (condensation). What is happening in the air? Look closely at the ice blocks. Can the students see gas rising? (sublimation)
- Boil the kettle. Notice the steam (evaporation). Carefully hold the mirror over the steam at an angle and observe the gas changing to a liquid (condensation).
- Observe the frozen bottle of water and indicate how the water has expanded from its original liquid state.

What to Do

- Have students discuss and complete Questions 1 and 2 on the worksheet.
- In small groups, complete the simple experiments to demonstrate the different properties of water. The students record their observations.
- Compare the students observations with the explanations of the different properties of water. Are they similar?
- Have students, in groups, suggest other examples of the different properties.

  Examples: cohesion – rain to car windows; adhesion – water sticks to paper; capillary action – water moves through roots of plants, water creeps up a paper towel that is only partially submerged in water; surface tension – a drop of water on wax paper, an insect walking on water.

After the Lesson

Answers

1. (a) solid (b) gas (c) liquid
2. Teacher check
3. adhesion – water sticks to hand
   cohesion – water mixes well
   surface tension – pepper stays sprinkled and spreads over surface; groups together when detergent is added.
   capillary action – some water is forced up the centre of the straw
   Examples of each – (see above)

Additional Activities

- Investigate ways in which frosting, melting and sublimation occur.

Display Ideas

- Make a classroom display showing the states of water and examples of its properties.

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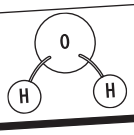
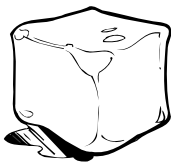
Properties of Water

A water molecule is formed when two atoms of hydrogen join with one atom of oxygen.



H_2O

1. Water is the only natural substance found in three different forms (solid, liquid and gas). Beneath the drawings below, write what form the water is in.



_____ _____ _____

2. When water changes state it is said to be undergoing a certain process. Draw pictures to show the process taking place in the boxes below.

i Liquid changing to gas.	*ii* Liquid changing to solid.	*iii* Gas changing to liquid.
→	→	→
Process is called **evaporation**.	Process is called **freezing**.	Process is called **condensation**.

3. Follow the instructions for each experiment and record the results.

ADHESION

- *Place your hands into a bucket of water. Take them out. What happens?*

_____

_____

_____

_____

Adhesion is when water sticks to other materials. Can you think of another example?

_____

_____

_____

_____

COHESION

- *Pour two glasses of water (one coloured with food dye) into a bowl and stir.*
  What happens?

_____

_____

_____

_____

Cohesion is when water mixes easily with other water molecules and they 'stick' together. Can you think of another example?

_____

_____

_____

_____

SURFACE TENSION

- *Sprinkle pepper on water. What happens?*

_____

_____

_____

Add a drop of detergent to the surface. What happens?

_____

_____

_____

Water molecules near the surface stick together (cohesion). Can you think of another example?

_____

_____

_____

CAPILLARY ACTION

- *Place a clear straw into a glass of water. What happens?*

_____

_____

_____

_____

When water (liquid) comes into contact with a solid substance it moves across or up its surface. Can you think of another example?

_____

_____

_____

_____

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Water Properties Display

Lesson Focus

Achievement objectives

Material World

Properties and changes of matter

- *Group materials in different ways based on the observations and measurements of the characteristic physical and chemical properties of a range of different materials. Compare physical and chemical changes.*

Indicator

- *Identifies the properties and importance of water.*
- *Designs a display explaining the properties of water.*

Skills Focus

- *Observes*
- *Predicts*
- *Draws conclusions*
- *Presents findings*

Background Information

Water is essential to life on Earth. It covers approximately 70% of the Earth's surface. It is one of the simplest, yet most important molecules in our living systems. Water makes up 50-95% of the weight of all living organisms.

There is as much water in the world today as there was millions of years ago. The total volume of water does not change, but rather continues within the water cycle, taking different states as it moves through the cycle. The water you drink today could contain molecules a dinosaur drank!

Water is known as the universal solvent as it dissolves more substances than any other liquid.

Before the Lesson

Materials Needed

- Large piece of art paper for each student or group (if working in groups), magazines, Internet access, charting materials.

Preparation

- Prepare some volunteers to present demonstrations to the class, illustrating the properties of water (See Stimulus).
- Have library access cleared, students will need a large area to work in.

The Lesson

Stimulus

- Have students present demonstrations showing the properties of water. These could include:
  - Cohesion: make separate drops of water on wax paper. Gently move the paper to join the drops, one at a time, to create one large droplet.
  - Adhesion: sprinkle baby powder or cinnamon over the surface of water in a small container. Add a drop of detergent in the middle. What happens?
  - Capillary Action: hang a strip of paper towel or cotton cloth from a coat hanger so it dips into a container of coloured water. What happens?
  - Melting: place ice cubes on a plate. What happens?
  - Evaporation: boil a kettle. What happens?
  - Condensation: hold a mirror carefully (oven gloves required) to show how the steam from a kettle forms into water on the surface of the mirror.

What to Do

Decide if this will be an individual or group activity.

- Explain what is required in the display plan each person/group will complete.
- Allow students to prepare their plans, using the checklist to make sure all points are covered.
- Encourage students to discuss their plans with each other or the class as they work — this will help the spread of ideas, which is a positive learning process.
- Students commence charts.

After the Lesson

Answers

Teacher check

Additional Activities

- Students could plan and use practical demonstrations, as well as the display, to present a talk.
- Arrange excursions to water authorities to see water recycling.
- Have a water fun day under the hose! (Check local water restrictions.)
- Have a lunch cooked entirely in water (for example, soup, eggs).
- Discuss, plan and present lessons on water-saving ideas.
- In Society and Environment lessons, study world rainfall and related environmental effects.

Display Ideas

- Display charts in the library or show at assembly.

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Water Properties Display

Design brief: Design and create a display on a sheet of paper explaining the properties of water.

Materials: Large piece of art paper, drawing and charting equipment, magazines, topic-related books, Internet graphics (non-copyrighted) and labels.

Steps:

1. Draw a plan for your display. Mark off the items as you include them.
2. Included in your display: (a) the water molecule (b) the three states of water (c) all the properties of water (d) some interesting water facts (e) a section of your own about water.

   Search for pictures in magazines and on the Internet to help create your display.
3. For each property of water you must have:
   (a) an explanation of the property;
   (b) a close-up drawing explaining the property;
   (c) real-life examples with drawings/pictures and explanations of each property (e.g. a straw in a cup of water shows capillary action, or an 'overfilled' glass shows surface tension, or a boiling kettle shows evaporation).

Checklist

Mark off the items as you include them in your plan.

water molecule structure
- drawing ❑
- formula ❑

three states
- solid ❑
- liquid ❑
- gas ❑

six processes
- evaporation ❑
- freezing ❑
- condensation ❑
- sublimation ❑
- frosting ❑
- melting ❑

water/ice density ❑

cohesion ❑
- explanation ❑
- drawing ❑
- examples ❑

adhesion ❑
- explanation ❑
- drawing ❑
- examples ❑

surface tension ❑
- explanation ❑
- drawing ❑
- examples ❑

capillary action ❑
- explanation ❑
- drawing ❑
- examples ❑

Water facts ❑

My special section ❑

My Plan

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ISBN 978-1-925431-36-0

Movement of Molecules

Lesson Focus

Achievement objectives

Material World

Properties and changes of matter

- *Group materials in different ways based on the observations and measurements of the characteristic physical and chemical properties of a range of different materials. Compare physical and chemical changes.*

Indicator:

- *Reads, listens and watches to find information related to how molecules dissipate dye in water.*
- *Proposes conclusions to tests to determine at which temperature the molecules in water move fastest.*
- *Uses tables as a form of presentation to record information.*

Skills Focus:

- *Observes*
- *Measures*
- *Records*
- *Predicts*
- *Draws conclusions*
- *Explains results*

Background Information

When there are two different kinds of molecules together, (dye and water) they tend to mix. They spread from where there is more of one kind to where there is less of that kind. This process is called diffusion. Food colouring spreads out and mixes with water. The currents are made by the moving water molecules.

When a dye or food colouring is added to water, the dye molecules each have their own random motion, causing them to spread and mix with the water molecules which also are moving, thus creating a constant colour.

Safety note:

This activity involves very hot water. Adult supervision and safety precautions are required.

Before the Lesson

Materials Needed

- 1 beaker or jug with about 500 mL of water, teaspoon of food dye (dark colour).

Materials Needed (for each group of at least four students)

- 3 glasses or small jars (need to hold 200 mL and withstand hot water), small bottle of food dye, 3 eye-droppers or syringes (without the needles), 200 mL of hot water, cold water and tap water, stopwatch, worksheet for each student.

Preparation

- Suitable work area that will allow for water spills.

The Lesson

Stimulus

- Have a beaker/jug of tap water and some food dye ready. Explain that the molecules in the water are moving. To demonstrate, drop about one teaspoon of dye in the water. Students can watch the dye dissipate throughout the water. Discuss the term 'dissipate'.

What to Do

- Discuss what happened in the 'Stimulus' activity. This shows the students what to expect when they do the test themselves and gives them an idea of the time required. (You may like to go onto something else as the water slowly changes colour.)
- Divide the class into groups and explain what is required. Students should be aware of the questions they need to answer before they begin.
- Students begin their experiments, (Note: Adult supervision required as hot water is in use. An electric kettle would be ideal.) All dye should be placed in the 3 jars/glasses at exactly the same time. Students should be filling in the descriptions in the table as the dye dissipates.
- Discuss the results and the patterns which have emerged regarding the way the dye dissipated and which water sample was fastest (See Background Information).
- Students complete the summary.

After the Lesson

Answers

(Dissipation will take some time.)

1. (a) The tap water dissipates evenly.
   (b) With the hot water the dye dissipates from the top.
   (c) With the cold water the dye dissipates from the bottom. These factors should appear in the diagram section of the results table.

   Dissipation in hot water was the fastest by a significant margin because the water molecules are moving faster.
2. Teacher check

Additional Activities

- Repeat the experiment, trialling other liquids such as orange juice or milk.
- Gather the whole class's timings and perform a comparison. Discuss why the times are the same/different.
- Graph the whole class's times.
- In health lessons – Look at the dangers of hot water burns and how to treat them.

Display Ideas

- Show all the final results on a large sheet. Have the jars/glasses labelled and the equipment used on display as well.
- Have the statement about moving molecules printed and used to show what happened.

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Movement of Molecules

The molecules in water are constantly moving.

Question

At which temperature do water molecules move fastest?

Design brief

You will be using water at three different temperatures and testing how quickly food dye dilutes in each sample.

Materials

- 3 jars or glasses
- 3 samples of water (500 mL each of hot water, cold water with ice cubes in it, and tap water)
- small bottle of food dye (dark colour is best)
- 3 syringes (without needles) or 3 eye-droppers
- measuring jug to measure 200 mL of water
- stopwatch

Steps

You will be recording what you see as soon as the food dye goes into the glasses, so be ready.

1. Work out in your group which three people will be dripping the dye in the three glasses and who will be the overall timekeeper.
2. On your record table, estimate how long you think the water will take to change colour completely for each temperature.
3. Collect some food dye in each dropper (or syringe). Make sure you have more than five drops.
4. Place 200 mL of tapwater in one glass, 200 mL of hot water in another glass (be careful), and 200 mL of very cold water in the third glass.
5. Immediately, place five drops of dye in each glass at the same time. Start the stopwatch as soon as the last drops have gone in.
6. As the dye is spreading in each glass, write what you see happening. Describe it as accurately as you can.
7. Record the final times for each glass as the colour change is complete.

1.

	Water Type	Estimate min./sec.	Measurement min./sec.	Description of the process of changing colour.	Diagram (Choose an important event)
(a)	Tap water				
(b)	Hot water				
(c)	Cold water				

2. Summary

a. Why did the water change colour? What made the dye go all through the water? _____

b. How close were your estimates? _____

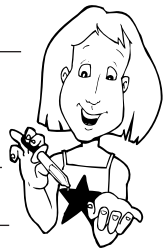
c. Which sample took the longest time to change colour? _____

d. Which sample took the least time? _____

e. Why do you think this was? (Remember about moving molecules.) _____

f. What was most noticeable about the way the dye moved in the water? _____

g. Why do you think this was? _____



SAMPLE - NOT FOR SALE

ISBN 978-1-925431-36-0

Test for Water Pressure

Lesson Focus

Achievement objectives

Material World

Properties and changes of matter

- *Group materials in different ways based on the observations and measurements of the characteristic physical and chemical properties of a range of different materials.*

Indicator:

- *Designs and conducts tests for water pressure.*
- *Uses tables as a form of presentation to record information.*
- *Draws conclusions from water pressure tests.*

Skills Focus:

- *Observes*
- *Measures*
- *Hypothesises*
- *Communicates findings*
- *Designs and conducts simple tests*

Background Information

There are two types of water pressure: static pressure and flow pressure.

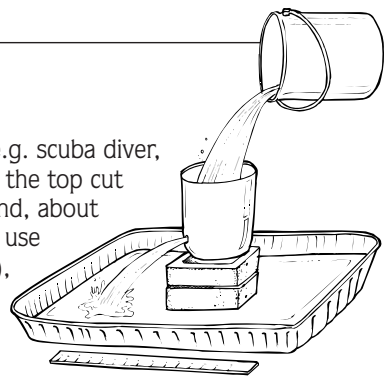
***Static pressure** can be measured with a typical pressure gauge, like measuring tyre pressure. Static pressure is directly related to the height of the water source in relation to the outlet.*

***Flow pressure** is exactly what it sounds like; it is the velocity (speed) of the water coming out of the outlet.*

The students will be testing for flow pressure, not static pressure.

Before the Lesson

Materials Needed



- A collection of pictures relating to water pressure (e.g. scuba diver, hose pressure, shower), large soft drink bottle with the top cut off, small nail (~20 mm), two bricks to use as a stand, about half a bucket of water, large metal or plastic tray to use as a catchment (if working outside this isn't needed), scrap paper for collecting results (results can be transferred to another sheet later), graph paper, access to tap and hose, ruler or tape measure.

Preparation

- Students will need to be in groups of 3 or 4.
- This experiment is best done outside, near a tap and hose. Water spills are inevitable!

The Lesson

Stimulus

- Show pictures of and discuss scuba diving. Discuss pressure as a problem for divers.
- Ask about the pressure coming from their home hoses. Ask how pressure can be altered (by increasing volume or reducing the size of the outlet).
- Show how when you increase the volume of water moving through a hose, the flow pressure increases and the resultant jet of water lengthens.

What to Do

- Have students move into their groups and collect their materials.
- Explain that the task is to investigate the statement at the top of the worksheet. Give the groups time to deduct how the experiment is set up and run.
- Have the students do the test once before they collect data. This should enable a more accurate result to be obtained.
- The students pour the water from the bucket into the bottle. As the water spurts from the hole, the spot where it first touches the tray is noted. Measurements are made from the edge of the brick to the mark. By changing the volume of the water and recording the length of the jet of water, the students are able to draw conclusions about the relationship between the volume of water and the pressure created. (see Stimulus point 3.)
- Students record their data. (Hint: the table of results should include amount of water used.)
- With their results they construct a line graph.
- Challenge the students to work out results or read information from their graph on figures not tested.
- Students can alter the experiment by changing the size of the hole in the bottle. A new statement can be devised and tested.

After the Lesson

Answer

If you double the volume of water, the jet does not double in length.

Additional Activities

- Perform the test with a large container of water.
- Perform the test with cool drink, orange juice or milk.
- Follow-up with a study of scuba diving rules and problems with water pressure.
- Do a test of angles and water pressure. For example, 'Can you make the jet go further by angling the container?'. (yes)
- Set up an experiment which all the students could do at home and bring the results to school, (e.g., 'Test the water pressure at home and compare with other class members).

Display Ideas

- Apparatus can be displayed along with the test pages, graphs and student explanations.

SAMPLE - NOT FOR SALE

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Test for Water Pressure

Complete the experiment and then answer the following questions.

1. When the volume of water in a container is doubled the pressure it creates is doubled.

Using the given equipment, design a test for water pressure to see if this statement is true. All data need to be measured and written in a table of results on the back of this sheet. You should test the pressure from the bottom of the bottle by using a jet of water.

Materials

- One large plastic soft drink bottle (top cut off)
- 2 bricks (as a stand)
- large metal tray
- small nail (about 20 mm long)
- $^1/_2$ bucket of water
- measuring jug and ruler

What did you do?

_____

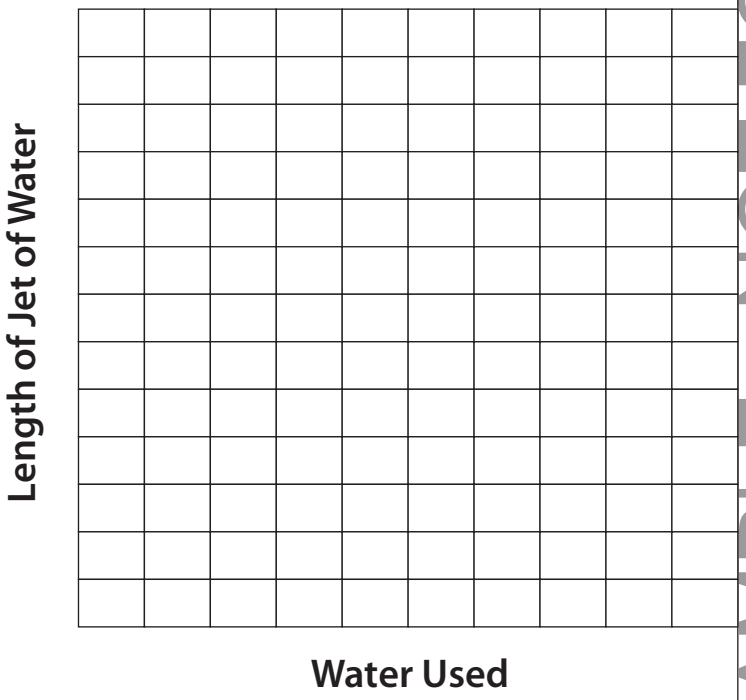
_____

_____

Diagram

Draw a labelled sketch of the test (showing all the equipment) ready to start.

Graph of results



Any problems you encountered: _____

_____

_____

_____

What happened?

_____

_____

_____

_____

_____

_____

Challenge

Can you work out results of pressure tests you didn't do by reading from your graph?

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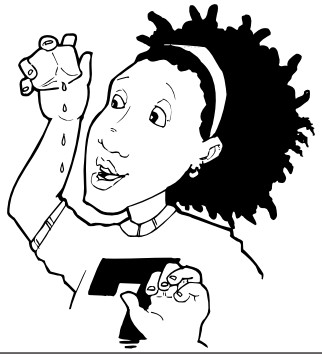
Liquids

1. A molecule of water has _____ atoms of hydrogen and one atom of _____.

2. What are the three forms in which we find water on Earth?

3. Water changing from solid to a gas is called sublimation. Match these words to the process that the water is undergoing.

freezing ***melting*** ***condensation*** ***evaporation***



(a) Water changing from liquid to a gas is called _____.

(b) Water changing from liquid to a solid is called _____.

(c) Water changing from solid to a liquid is called _____.

(d) Water changing from gas to a liquid is called _____.

4. Water molecules move faster if the water is . . .

- ***hot***
- ***cold***
- ***tap water***

5. Match the property to its description

Capillary action	•	•	Water mixes easily with other water.
Surface tension	•	•	Water sticks to other materials.
Adhesion	•	•	On the surface of water the molecules adhere to each other.
Cohesion	•	•	Water is seen to go up the material.

6. Choose one of the properties of water. Explain what it means and how it works. Provide an example of how you would demonstrate this property to another person.

Water Property	
Meaning	
Example	

Indicators

	Demonstrated	Needs further opportunity
• Identifies the structure of a water molecule.	❑	❑
• Names the three states of water.	❑	❑
• Shows understanding of how water molecules act.	❑	❑
• Identifies and explains properties of water.	❑	❑

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