

Science Alive 1



Science Alive 1



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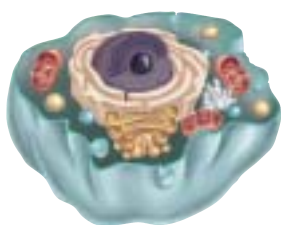
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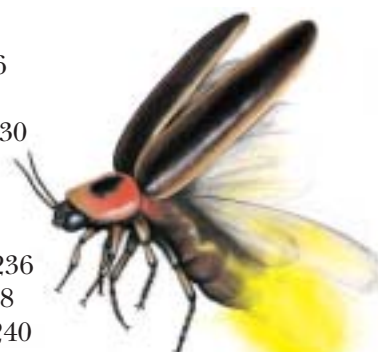
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Coverage of Multiple Intelligences

Activities in *Science Alive 1*, and in its companion text *Science Worksheets for Multiple Intelligences 1*, cater for a wide range of learning abilities and styles. Many address more than one learning style, and almost all require the exercise of some degree of verbal/linguistic intelligence.

The following grid lists the activities in these two texts that have been specifically written to engage a predominant intelligence.

Chapter	Intelligence type	Activity in <i>Science Alive 1</i> *	Worksheet in <i>Science Worksheets for Multiple Intelligences 1</i> **
1. Science alive!	Verbal/linguistic Visual/spatial Bodily/kinaesthetic Intrapersonal Interpersonal Logical/mathematical Musical/rhythmic Naturalist	5(10), 23(1f) 5(9), 7(5), 11(7), 15(8), 5(HOS***) 7(HOS) 13(8), 17(5) 3(8), 13(7), 17(4), 19(4), 21(7) 9(7), 11(6), 13(4, 5, 6), 15(5), 8(HOS), 22(8), 23(11) 19(5, 6), 21(5, 6)	1 4 3 2 5
2. Separating mixtures	Verbal/linguistic Visual/spatial Bodily/kinaesthetic Intrapersonal Interpersonal Logical/mathematical Musical/rhythmic Naturalist	45(7) 39(6), 43(6) 27(HOS), 32(HOS), 33(8), 35(HOS), 37(HOS, 7), 39(HOS) 29(8), 31(9), 39(8) 27(6, 7, 8), 35(6, 7), 39(7), 44(HOS), 46(4b), 47(13, 1c) 45(7) 29(9), 41(5, 6)	7, 9 6 8 10
3. Machines everywhere	Verbal/linguistic Visual/spatial Bodily/kinaesthetic Intrapersonal Interpersonal Logical/mathematical Musical/rhythmic Naturalist	67(1), 71(4) 59(6), 61(5), 63(8, 9), 65(7), 69(1, 6, 7), 70(3), 71(14, 3) 57(5), 61(HOS, 6) 53(5), 55(2, 4, 5, HOS), 59(5)	14 13 12, 15 11
4. The changing Earth	Verbal/linguistic Visual/spatial Bodily/kinaesthetic Intrapersonal Interpersonal Logical/mathematical Musical/rhythmic Naturalist	77(8), 79(7), 93(9) 95(1, 4) 75(7), 79(HOS), 83(HOS), 85(HOS), 91(7) 75(8), 77(7), 87(7), 89(7), 81(7), 94(16), 95(4) 85(7, 8)	19 16 17 20 18
5. Forensic science	Verbal/linguistic Visual/spatial Bodily/kinaesthetic Intrapersonal Interpersonal Logical/mathematical Musical/rhythmic Naturalist	99(10), 101(4, 9), 103(6), 115(7) 102(HOS), 103(3), 105(7), 118(10, 18) 105(HOS), 107(HOS), 109(HOS), 111(HOS), 113(HOS) 99(11), 103(8), 110(HOS) 109(8), 111(6) 99(9, 10), 101(5), 107(7), 109(7), 113(5), 117(6, 8), 119(1-3)	22, 23 24 21 25

Chapter	Intelligence type	Activity in <i>Science Alive 1</i> *	Worksheet in <i>Science Worksheets for Multiple Intelligences 1</i> **
6. Magnetic and electric effects	Verbal/linguistic	123(7), 133(6), 135(9)	29
	Visual/spatial	125(7), 129(6), 141(8), 142(8)	26
	Bodily/kinaesthetic	123(HOS), 124(HOS), 125(HOS), 128(HOS), 129(HOS), 136(HOS), 137(HOS)	
	Intrapersonal		
	Interpersonal		28
	Logical/mathematical	123(8), 129(8), 131(5, 6), 137(6), 139(HOS, 9), 141(7), 142(11), 143(5, 6)	27
	Musical/rhythmic		30
	Naturalist		
7. Cells	Verbal/linguistic	165(13)	
	Visual/spatial	155(8), 157(10, 12), 159(10), 161(9)	32, 34
	Bodily/kinaesthetic	152(HOS), 153(HOS, 9), 157(HOS), 159(HOS)	35
	Intrapersonal	167(5, 6, 7)	
	Interpersonal	147(11)	
	Logical/mathematical	153(5, 8), 159(9), 163(10)	31
	Musical/rhythmic		
	Naturalist	165(12)	33
8. Classification	Verbal/linguistic		36
	Visual/spatial	171(8), 173(3), 181(6)	
	Bodily/kinaesthetic	181(7), 191(16)	
	Intrapersonal		40
	Interpersonal	191(3)	
	Logical/mathematical	171(4, 5, 6), 173(2, 3), 175(8), 185(8, 9), 187(8), 190(10, 11)	39
	Musical/rhythmic		
	Naturalist	171(7), 177(9), 179(4, 5, 6), 181(5, 8), 184(HOS), 185(10, 11), 187(7, 9), 189(HOS, 5)	37, 38
9. Neighbours in space	Verbal/linguistic	201(7, 8), 207(8), 213(8), 214(5), 215(3b,c)	41
	Visual/spatial	199(HOS, 7, 8), 203(6, 7), 207(5, 6), 209(6, 7), 211(5), 214(1), 215(3a)	45
	Bodily/kinaesthetic	197(6), 205(HOS), 207(HOS), 209(HOS), 211(8), 214(6), 215(2)	42, 43
	Intrapersonal	195(3), 201(4, 6), 214(7)	
	Interpersonal	197(6), 213(9), 215(9)	
	Logical/mathematical	195(7), 197(4, 5), 199(6), 201(5), 211(5, 7)	44
	Musical/rhythmic		
	Naturalist		
10. Light and sound	Verbal/linguistic	219(9)	46
	Visual/spatial	225(4, 5), 227(7), 238(1, 3, 6)	47
	Bodily/kinaesthetic	219(HOS), 221(HOS), 222(HOS), 227(HOS), 233(9), 239(1)	
	Intrapersonal		
	Interpersonal		50
	Logical/mathematical	219(8), 229(6, 7, 8), 231(9), 239(2, 10, 13)	48
	Musical/rhythmic	229(9), 232(HOS)	49
	Naturalist	219(10)	

* Page number followed by activity number in brackets

** Worksheet number

*** Hands on Science

Coverage of outcomes

Science Alive 1 (with its companion text *Science Alive 2*) has been designed to allow students to achieve Science Level 5 CSF II outcomes. The learning outcomes listed below are extracts from the Curriculum and Standards Framework II document. (The Victorian Curriculum and Assessment Authority recommends that teachers and students address the entire text of the document.) The page references cited are those on which there are activities related to the outcome indicator.

Living together: past, present and future			
Biological science	Learning outcome and chapter	Indicators. Evident when student can:	Page references
	5.1 Explain the biological basis of classification of organisms into major groups. <i>Science Alive 1</i> Chapter 8: Classification	<ul style="list-style-type: none"> ■ identify patterns of similarities and differences between a range of living things ■ define the major characteristics used in the 5-Kingdom system of classification ■ explain why particular sets of features, for example, colour, movement and structural features, are useful or not useful, to sort organisms using dichotomous keys. 	171, 173, 175, 177, 179, 181, 184, 185, 190, 191 175, 187, 189, 190, 191 173, 177, 179, 181, 185, 190
	5.2 Describe interactions between living things and between living things and their non-living surroundings. <i>Science Alive 2</i> Chapter 7: Living together Chapter 8: Changing times	<ul style="list-style-type: none"> ■ describe different interactions in an ecosystem, including competition, predation, collaboration, parasitism, pollination, reproduction and parenting ■ construct a food web of organisms in an ecosystem ■ show graphically relationships between members of food chains, including a parasite-host relationship and producer-consumer relationships ■ describe the effect of changes in the environment on interactions in an ecosystem. 	<i>Science Alive 2</i>
	Structure and function		
	Learning outcome and chapter	Indicators. Evident when student can:	Page references
	5.3 Relate the structure and organisation of different cells to their function. <i>Science Alive 1</i> Chapter 7: Cells	<ul style="list-style-type: none"> ■ identify major structural components of cells as viewed at light microscope level ■ determine the functions of cells from their observable features ■ describe organisational relationships between organs, tissues, cells and systems. 	152, 153, 155, 157, 159, 161, 166, 167 147, 149, 159, 161, 166, 167 163, 165, 167
	5.4 Explain how plants and animals obtain, transport and use nutrients. <i>Science Alive 2</i> Chapter 3: Nutrients	<ul style="list-style-type: none"> ■ describe the mechanical and chemical processes of digestion ■ describe the role of the circulatory system in transporting the products of digestion to cells ■ illustrate the pathway taken by water and minerals from the soil to the leaves of a flowering plant ■ identify the categories of inorganic and organic nutrients required by plants and animals and the uses to which they are put. 	<i>Science Alive 2</i>

Substances: structure, properties and uses		
Learning outcome and chapter	Indicators. Evident when student can:	Page references
5.1 Use a simple particle model to explain the structure and properties of solids, liquids and gases. <i>Science Alive 2</i> Chapter 1: Substances: A look inside	<ul style="list-style-type: none"> describe the structure of solids, liquids and gases in terms of the arrangement and motion of particles in each physical state relate readily observable properties of matter to particle bonds and energy. 	<i>Science Alive 2</i>
5.2 Relate the safe use and disposal of common substances to their physical and chemical properties. <i>Science Alive 1</i> Chapter 2: Separating mixtures Laboratory toolbox (Also in <i>Science Alive 2</i> Chapter 3: Chemical reactions Chapter 8: Changing times)	<ul style="list-style-type: none"> describe and demonstrate safe laboratory techniques in the handling of substances used in the classroom when heating, cooling, transferring and cleaning up distinguish between common substances that are safe for sink disposal, and those that are not, in terms of solubility in water and effect on the environment describe alternative methods of disposal of common substances that are not safe for sink disposal outline and analyse several environmental problems caused by the inappropriate disposal of toxic substances. 	5, 7, 8, 22 5, 41 43 <i>Science Alive 2</i>
Chemical reactions		
Learning outcome and chapter	Indicators. Evident when student can:	Page references
5.3 Describe ways of producing a chemical change and influencing its rate. <i>Science Alive 2</i> Chapter 4: Chemical reactions	<ul style="list-style-type: none"> describe the particular conditions needed for some chemical reactions to occur fully explain slow and fast chemical reactions describe factors which affect the rate of a reaction. 	<i>Science Alive 2</i>
5.4 Relate simple procedures for preparing and separating mixtures to medical and industrial procedures. <i>Science Alive 1</i> Chapter 2: Separating mixtures	<ul style="list-style-type: none"> describe a range of techniques for separating and concentrating mixtures apply an appropriate method for separating the components of a mixture describe the formation of colloids, including emulsions describe medical and industrial applications of separating techniques. 	27, 29, 31, 32, 33, 37, 39, 41, 43, 45, 46, 47, 111 27, 32, 33, 37, 39, 44, 45, 46, 47, 111 35, 46 37, 39, 41, 43, 45, 47

The changing Earth		
Learning outcome and chapter	Indicators. Evident when student can:	Page references
5.1 Describe the formation, composition and cycling of rocks. <i>Science Alive 1</i> Chapter 4: The changing Earth	<ul style="list-style-type: none"> ■ identify the lithosphere as the region of the Earth where rocks are formed ■ distinguish between sedimentary, igneous and metamorphic rocks on the basis of their formation and composition ■ describe ways to estimate the age of rocks ■ explain the rock cycle. 	75, 77, 79, 81, 83, 87, 94 77, 79, 81, 83, 87, 89, 91, 94, 95 87, 91, 94, 95 83, 85, 87, 89, 95
5.2 Relate the properties of rocks to the ways in which they are used. <i>Science Alive 2</i> Chapter 5: What's in a rock?	<ul style="list-style-type: none"> ■ describe properties of igneous, sedimentary and metamorphic rocks in terms of composition, grain size, colour and texture ■ describe the relationship between rocks, ores and minerals ■ explain why igneous, sedimentary and metamorphic rocks are used for particular purposes. 	 <i>Science Alive 2</i>
Our place in space		
Learning outcome and chapter	Indicators. Evident when student can:	Page references
5.3 Describe how the positions of the planets, moon, sun and stars affect natural phenomena. <i>Science Alive 1</i> Chapter 9: Neighbours in space	<ul style="list-style-type: none"> ■ describe how the tides are affected by the positions of the Earth, moon and sun ■ account for the different phases of the moon in the lunar cycle ■ explain the phenomenon of the seasons in terms of relative positions of the Earth and sun ■ account for the apparent annual movement of the stars and constellations across the sky. 	209, 211, 214 209, 211, 214 201, 205, 207, 214 199, 201, 203, 215
5.4 Describe major components of the universe. <i>Science Alive 2</i> Chapter 9: The universe	<ul style="list-style-type: none"> ■ define, in simple terms, what is meant by 'the universe' ■ summarise major characteristics of selected features of the universe beyond our solar system ■ describe different kinds of evidence which contribute to knowledge of the universe. 	 <i>Science Alive 2</i>

Energy and its uses		
Learning outcome and chapter	Indicators. Evident when student can:	Page references
5.1 Describe the characteristics and applications of the transmission and reflection of energy in the form of heat, light and sound. <i>Science Alive 1</i> Chapter 10: Light and sound (Also in <i>Science Alive 2</i> Chapter 2: Heat) 5.2 Describe the operation of direct current (DC) series and parallel circuits in terms of current and voltage. <i>Science Alive 2</i> Chapter 6: Electric circuits	<ul style="list-style-type: none"> ■ use the terms conduction, radiation and absorption to describe heating and cooling effects ■ describe how insulated containers maintain the temperature of the contents 	<i>Science Alive 2</i>
	<ul style="list-style-type: none"> ■ recognise patterns of reflection of light from plane and curved mirrors and relate these to applications of mirrors ■ describe similarities and differences in the way light, heat and sound are transmitted. 	225, 226, 227, 238, 239
	<ul style="list-style-type: none"> ■ correctly connect commonly used components in series and parallel circuits ■ describe the operation of series and parallel circuits, using terms such as current and voltage ■ identify from circuit diagrams those circuit elements that are connected in series and those that are connected in parallel ■ relate the brightness of a torch globe to the magnitude of the current in it and the voltage across it ■ link the brightness of two or more globes connected in series and in parallel circuits to the magnitude of the voltage and current. 	219, 221, 222, 223, 225, 229, 231, 232, 233, 235, 237, 238, 239 and <i>Science Alive 2</i> Chapter 2
		<i>Science Alive 2</i>
Forces and their effects		
Learning outcome and chapter	Indicators. Evident when student can:	Page references
5.3 Describe simple magnetic and electrostatic effects in terms of a field model. <i>Science Alive 1</i> Chapter 6: Magnetic and electric effects	<ul style="list-style-type: none"> ■ describe field patterns surrounding differently shaped magnets and simple combinations of magnets 	128, 129, 142
	<ul style="list-style-type: none"> ■ describe attraction and repulsion of magnets and objects near magnets as effects of the magnetic field 	123, 124, 125, 127, 129, 142, 143
	<ul style="list-style-type: none"> ■ explain the action of a compass as the movement of a magnet in the magnetic field of the Earth 	129, 131, 142
	<ul style="list-style-type: none"> ■ explain attraction and repulsion of charged objects in terms of the electric field around them ■ describe the behaviour of objects in an electric field. 	136, 137, 139, 141, 143
5.4 Explain how mechanical systems can direct and modify force and motion. <i>Science Alive 1</i> Chapter 3: Machines everywhere	<ul style="list-style-type: none"> ■ describe the action of mechanical parts, such as gears, pulleys and levers in transmitting and modifying forces 	51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 70, 71
	<ul style="list-style-type: none"> ■ describe the action of simple machines that change the size or direction of movement 	51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 70, 71
	<ul style="list-style-type: none"> ■ define the operation of one or more examples of simple mechanical systems 	53, 55, 57, 59, 63, 65, 67, 69, 70, 71
	<ul style="list-style-type: none"> ■ construct a model to demonstrate the operation of an everyday piece of equipment, tool or appliance ■ describe how the model produces a mechanical advantage. 	55, 57, 59, 61, 71
		51, 55, 57, 59, 61, 69, 71

Skills, processes and procedures

The science skills, processes and procedures described in the Victorian Curriculum and Standards Framework II as appropriate to Level 5 are addressed in the 'Hands on Science' activities throughout the text, and especially in the Laboratory Toolbox and Chapter 5: Forensic Science.

'How about that!' features provide snippets of special interest to motivate and arouse curiosity.

The 'Then and now' features link the science of today with the science of the past.

Inside atoms

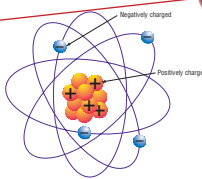
Imagine breaking up an object into smaller and smaller pieces. Eventually, the object cannot be broken up any further. It is a bit like breaking down a brick wall. In the end you just have a pile of bricks.

The small particles that are eventually formed by breaking up objects are called atoms. Atoms are the building blocks of all substances, just as bricks are the building blocks of walls.

Atoms are very small particles. They are so small that they cannot be seen with a magnifying glass or a normal microscope. Scientists have studied these particles and found that they are made up of even smaller parts. Some of these smaller parts have an electric charge. There are two different types of electric charge: positive and negative.

In and around atoms

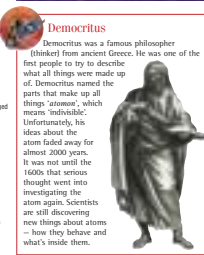
Benjamin Franklin, an American scientist who lived in the 1700s, invented many scientific words that are still used when talking about electricity. He was the first person to use the word 'charge'. He also named the two charges found in atoms positive and negative. These charges are similar to the north and south poles of magnets because they are opposites of each other.



This is a simple model of an atom. The positive charge is in the centre of each atom and the negative charge is carried by very light particles that move around the outside of each atom.

The central part of the atom is called the nucleus. The nucleus is very small compared with the overall size of the atom. To give you an idea of the size of the nucleus compared with the whole atom, imagine this: If the nucleus of an atom was the size of a marble, the overall size of the atom would be about as big as the MCG!

Democritus Democritus was a famous philosopher (thinker) from ancient Greece. He was one of the first people to try to describe what all things were made up of. Democritus named the parts that make up all things 'atoms', which means 'indivisible'. Unfortunately, his ideas about the atom faded away for almost 2000 years. It was not until the 1600s that serious thought went into investigating the atom again. Scientists are still discovering new things about atoms — how they behave and what's inside them.



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SCIENCE ASIDE 1

Benjamin Franklin — ahead of his time

Sparks flew from his key! Benjamin Franklin 'proved' the words battery, conductor, discharge, uncharged, electricity, and even electric shock. He used the term 'electric shock' after performing many experiments with electricity. One of Franklin's most well-known experiments involved flying a kite in a thunderstorm. A metal key was attached to the kite's string. During the storm, Frank was able to make a spark jump from the key to his finger. This proved that the storm was electrical.

A balancing act

In most atoms, the amount of positive charge is the same as the amount of negative charge. Atoms are usually neutral. We could also say that atoms usually have no overall charge. When there is more positive charge than negative charge in an atom, the atom has an overall positive charge. If an atom has more negative charge than positive, it has an overall negative charge.

Tipping the scales of balance in a neutral atom is easy to do. Remember that the negative charges are on the outer of the atom. This part of the atom is the easiest part to change. Removing some of the outside negative charge tips the balance. The atom would then have more positive charge than negative charge. How about making an atom negative overall? It is difficult to remove the positive charge from the centre of the atom. It is far easier to add more negative charge to the outside of the atom.

1. What is light energy produced?
2. What type of energy is used to produce light in a fairy?
3. Why do fireflies need light energy?
4. Which of the following objects are luminous?
(a) the Sun
(b) the Moon
(c) a human eye
(d) an unlit candle
(e) a burning candle
5. You can see luminous objects in the dark. Why can't you see most non-luminous objects in the dark?
6. Name at least two non-luminous objects that you can see in the darkness of night and explain why you can see them.
7. What form of energy allows light to be produced in a glow-in-the-dark sticker?
8. Light energy travels through empty space and as fast as a speed of 300 000 km/s. How long does light take to travel the 150 million km from the Sun to the Earth?
9. Find out what the word 'incandescent' means. Make a list of luminous objects that are incandescent.
10. Light produced by living things is called bioluminescence. Go to the Living Light link for this textbook to find out more about the many fascinating creatures that use chemicals in their body to produce light.

133
6. MAGNETIC AND ELECTRIC EFFECTS

Many spreads are linked to exciting worksheets that test the full range of multiple intelligences.

Practical multiple intelligence worksheets link to icons in the textbook.

WORKSHEET 16

Discovery Worksheets

Make a volcano

When magma pushes through weak spots in the Earth's crust, a volcano is formed. Magma travels through layers of rock in the crust before it loses some of its gases and spurts out of the crater in the form of lava. As more and more lava spews from the volcano, layers build up around the crater. Deposits of ash and dust also form layers around the crater. In this way, volcanoes change in size and shape. In a really violent explosion, a volcano can lose its entire top!

Construct a model

1. Use the plasticine to make a model of a volcano and the area surrounding it. Use the information from the introduction and the diagram to guide you. Your model should include:
 - (a) The layers in the Earth's crust
 - (b) The magma chamber leading to a central vent and some side vents
 - (c) Clouds of dust and ash
 - (d) The layers formed around the outside of the crater
 - (e) Lava and the path it will most likely follow in your landscape
 - (f) Vegetation that has been affected by the eruption. Use twigs to represent trees.
2. Use the labels to name and describe the parts of your volcano.
3. Near the town, use labels to describe the features that help to keep the residents safe. For example, is the town located where lava is most likely going to flow?
4. Describe also how the erupting volcano has affected the vegetation.

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The 'How it works' features show how scientific knowledge is applied to technology or how important scientific processes occur.

'Hands on science' activities and experiments support concept development and provide opportunities to practise science skills, processes and procedures.

Light energy

Like all stars, the Sun changes the energy stored inside it into heat and light energy. A burning candle converts the chemical energy in wax into heat and light energy. Some living things are also able to change the chemical energy in their bodies into light energy.

Luminous objects

Light can be produced only from other forms of energy. All objects that convert energy to produce their own light are said to be luminous. An example of a luminous living thing is the firefly. When a male firefly wants to attract a mate, it flashes its light and performs a dance. Females watch from near the ground and respond by flashing their lights. Most of the living things that produce their own light live in the ocean. Some fish living in the dark depths of the ocean produce their own light to attract prey.

Non-luminous objects

The Moon (on the right) and the statue (on the left) are not luminous. In fact, most things that you see are not luminous. We see non-luminous objects because light from luminous objects bounces from them. The bouncing of light from an object is called reflection. You see the Moon because it reflects light from the Sun — and some of that reflected light enters your eyes. You see the statue because it reflects light from the Sun or (if it were indoors) the lights in the room.

We are able to see things when light coming from them enters our eyes. The light energy is then changed into electrical energy by special cells called receptors at the back of each eye. That energy is then sent to the brain so that we know what we are looking at.

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SCIENCE ASIDE 1

Glowing in the dark

Glow-in-the-dark stickers and toys are made with a chemical called phosphor, which absorbs light energy. It then slowly releases the light energy as one colour — usually green. Because the light energy is released more slowly than it is absorbed, when you turn off the lights in your room, the sticker or toy continues to release light for quite some time. This process of absorption and slow release is called phosphorescence.

Does light travel in straight lines?

1. Look at a few letters of the alphabet on a poster on the wall through a straight length of hose or rubber tubing.
2. Bend the hose or rubber tubing slightly until you can no longer see the letters.

What do you see when you bend the tubing?

1. Explain in words why you can no longer see the letters.
2. Draw a diagram to show why you can't see the letters.
3. Does the light reflected from the letters travel in straight lines?

Active

REMEMBER

1. What is light energy produced?
2. What type of energy is used to produce light in a fairy?
3. Why do fireflies need light energy?
4. Which of the following objects are luminous?
(a) the Sun
(b) the Moon
(c) a human eye
(d) an unlit candle
(e) a burning candle

CONNECT

1. You can see luminous objects in the dark. Why can't you see most non-luminous objects in the dark?

2. Name at least two non-luminous objects that you can see in the darkness of night and explain why you can see them.

3. What form of energy allows light to be produced in a glow-in-the-dark sticker?

4. Light energy travels through empty space and as fast as a speed of 300 000 km/s. How long does light take to travel the 150 million km from the Sun to the Earth?

5. Find out what the word 'incandescent' means. Make a list of luminous objects that are incandescent.

6. Light produced by living things is called bioluminescence. Go to the Living Light link for this textbook to find out more about the many fascinating creatures that use chemicals in their body to produce light.

7. You can see luminous objects in the dark. Why can't you see most non-luminous objects in the dark?

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LONDON SCIENCE

LONDON TOWN: 23 NOVEMBER 1999

WEATHER: OVERCAST, DRIZZLE, 10°C

Platypus Hoax Exposed!



Examining the so-called 'Platypus' (an Artist's Impression)

The so-called 'Platypus' is no more than a clever hoax. This is the firm opinion of Dr Shaw, a highly respected Scientist with the British Museum.

Dr Shaw made his Announcement last week after inspecting a stuffed Creature sent to England from the Colony of New South Wales. Although he was not able to cut the Bill off with his Scissors, Dr Shaw said it did not take long to find the Hidden Stitches.

It is the practical joke of some Taxidermist, he said. 'This Skin is just a Combination of Skin of other Animals. They have all been sewn together to look like they belong to a single, odd Beast. It insults our Intelligence!'

The stuffed Specimen and a Sketch of the Creature were sent to Dr Shaw earlier this Year. A Number of bizarre and ugly Animals have already been found in the remote Colony since it was settled eleven Years ago. There was the ferocious Koala Bear, and, of course, the strange hopping Kangaroo.

Now, however, here's been more odd than this so-called Creature. It is a furry Beast with a Tail like a Beaver, and the Bill of a Duck. Yet, like the Crocodile, it has only one Opening to expel Urine and Faeces. How absurd! It has no Feathers or Scales. Yet it has webbed Feet like a Goose and Spurs like a Rooster. What's more, these spurs contain poisonous Venom like that of a Snake.

Dr Shaw has good Reason to suspect a Trick. Recently, there have been a number of Cases where smart Taxidermists, eager to improve their business Prospects, have been caught selling Monkeys to our British Sailors. These were later found to be Bodies of dead Monkeys, stitched to the Tails of large Fishes!

A Hoax Mermid

SENIOR TAXIDERMIST BRITISH MUSEUM

The British Museum wishes to employ an experienced Taxidermist to prepare animal specimens for its Collection from the Colonies.

Experience required in:

- skinning Animals
- preparing plaster casts of animal Bodies
- sewing Skins together
- mounting Animals in a lifelike Pose.

Abilities needed:

a very good knowledge of Anatomy, an Eye for Detail, artistic Ability, and a strong Stomach.

In Search of the 'Watermole'

Ever since this strange 'Platypus' was sent to London, it is reported that Colonies everywhere are looking for more specimens. They call it a 'Watermole' in the Colony.

Captain Hunter, the current Governor, says he first saw one in 1797. He says he watched an Aboriginal sit for over an Hour beside a Lagoon near the Haverbury River. He had his Spear poised, waiting for the Creature to surface. You never know what sort of Stories you are going to get out of these faraway Colonies!

See a Kangaroo!

Roll up... roll up!

See one of the strangest Creatures you will ever see in your life!

It's alive and just arrived from the Colony of New South Wales.

If you missed seeing the first kangaroo brought to London town in 1798 — now's your chance.

It does not bite or spit — but watch out for its Tail!

Only three pence! Long Queues expected, so hurry!

✓ checklist

- 1. I can understand why it was hard to classify the platypus
- 2. I can explain why a platypus is like and unlike other mammals
- 3. I appreciate the need for adequate evidence before accepting or rejecting ideas.

Graded activities test a range of abilities and intelligences.

A variety of 'Connect' questions allow students to explore fascinating web sites via Jacaranda's web site: www.jaconline.com.au

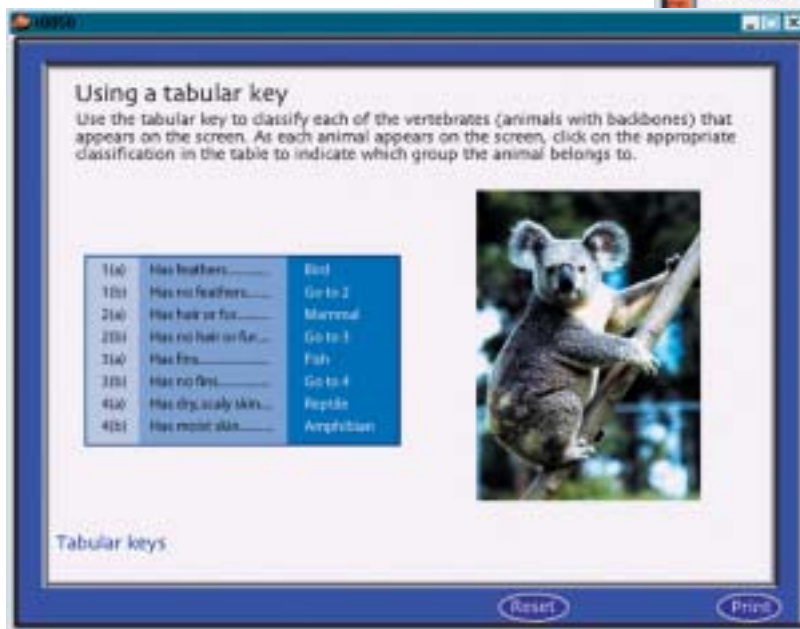
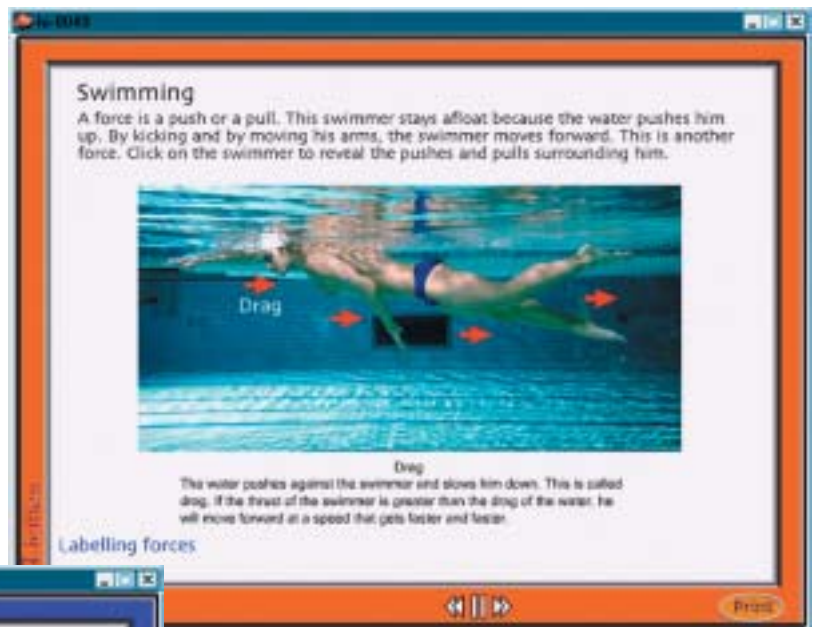
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The CD-ROM accompanying this textbook includes the text in pdf format. The text is linked to the following features that are designed to assist learning, review concept development at critical places within the text, and help students assess their own learning.

- Learning objects bring diagrams and other illustrations to life with the use of animation and provide a level of support for concept development that is not possible with a still picture. In turn, each learning object is linked to an e-tivity that tests understanding of the concept developed or re-inforces the learning object.
- Checkpoints are summaries of chapters, or parts of chapters. The checkpoints link all relevant learning objects and provide students with immediate feedback through five quick questions.
- Test yourself questions, placed at the end of each chapter, provide a link to tests that consist of 20 multiple-choice questions. Students can use these to review the chapter and/or prepare for class tests.

Running the CD-ROM

To run this CD-ROM — on both Windows 95/98 or NT, and Macintosh — simply place it in the CD-ROM drive.



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Windows 95/98 or NT

Processor: Pentium

CD-ROM drive speed: 4x

16Mb RAM

speakers

Macintosh

Macintosh OS 7.6

Processor: PowerPC

CD-ROM drive speed: 4x

6Mb RAM

Troubleshooting

If you have problems with the operation of this CD-ROM:

- Check that you have the right equipment (see Minimum system requirements).
- Visit www.jaconline.com.au/contact_us/faqs.html to check if the answer to your problem is provided under 'Frequently Asked Questions'.
- Either email or write to John Wiley & Sons Australia explaining the problem, and providing details of the type of computer and the amount of RAM you have, the processor type and the CD-ROM speed. If you return the disk, please package it appropriately to protect it during transit.

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