

Quizzes for Science *Workbooks*

The electronic revision activities on the *Workbook* CDs work well to help students learn the memory work needed for Level 5 Science, but very few students will use them unprompted. You need to direct them to do specific activities for homework, and then test their memory of the work the next day in class.

You cannot expect what you do not inspect.

Quizzing the work in class also helps students to remember the work they learnt the previous lesson, and provides revision for those who did not do their homework. Those students who did learn the work are greatly encouraged when they find they know the answers to the quiz questions.

The number codes on these quizzes match the coding system used for the revision activities. Revision task 1C 101 matches Quiz 1C 1; Revision tasks 2A 101, 2A 102 and 2A 103 all go with Quiz 2A 1. Quizzes 10A 1a and 10A 1b are parallel quizzes that both go with revision tasks 10A 101 and 10A 102. The Workbook Map lists all the revision tasks and quizzes so you can see the correlations clearly.

It can be convenient to have students do all their quizzes in a small (1B 4) exercise book that is kept in the lab. After each quiz is marked (by the students), it may be given a grade such as A–D, where A is close to 100%, B is above 85%, C is above 65% and D is below 65% (with the exact criteria for each grade shifting according to the difficulty of the quiz). It then becomes very easy to monitor student progress by flicking through the books every week or so. They can also be useful to bring along to parent interviews.

Printing this file

If you want to make a paper copy of this entire file, we suggest that you reduce the page size to 50%, printing 4 pages to a single A4 sheet. Start printing at page 2 — this will put question and answer pages next to each other. In the **Print** menu, first select **Pages from 2 to 105**, click on the **Properties** button (near the top), and select **4 Pages Per Sheet**, then click on **OK**, and **OK** again to print the file.

14A 3 Properties

What word or words could replace the following?

1	Allows electricity and heat to flow easily through it.	4	Particles are locked into a fixed position.
2	Materials that snap or shatter easily.	5	Can be pulled into a wire.
3	Particles are very far apart.	6	Reflects light well and is shiny.

- 7 What type of materials have the property shown in 2?
- 8 Name a yellow solid that has the property shown in 5?
- 9 Name a metal that is a liquid at room temperature?
- 10 Name a non-metal that is a liquid at room temperature?

Answers to: 14A 3 Properties

1	good conductor	4	solid
2	brittle	5	ductile
3	gas	6	lustrous/lustre

7 Non-metals

8 Gold

9 Mercury

10 Bromine

14D 1b Electron arrangements

Write the electron arrangements (eg 2 . 4) for atoms with the following numbers of electrons.

1	3	6	20
2	7	7	16
3	10	8	18
4	11	9	12
5	9	10	19

11 Which two atoms (question numbers) have full outer shells?

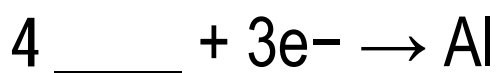
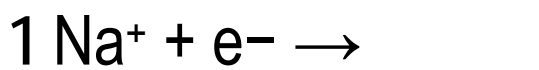
Answers to: 14D 1b Electron arrangements

1	2 . 1	6	2 . 8 . 8 . 2
2	2 . 5	7	2 . 8 . 6
3	2 . 8	8	2 . 8 . 8
4	2 . 8 . 1	9	2 . 8 . 2
5	2 . 7	10	2 . 8 . 8 . 1

11 Atoms 3 and 8.

14E 2 Electrolysis equations

During electrolysis ions gain or lose electrons to form elements. Complete the following to show what happens in each case.



6 What element is formed in reaction 1?

7 What type of particles are formed in 3 and 5?

Answers to: 14E 2 Electrolysis equations

1 Na

2 $2e^- \rightarrow Cu$

3 Cl_2

4 Al^{3+}

5 O_2

6 Sodium

7 Molecules

14F 2b Naming ions 1

Write the names for these ions.

1	H^+	6	O^{2-}
2	Na^+	7	NO_3^-
3	K^+	8	Cl^-
4	Fe^{2+}	9	S^{2-}
5	SO_4^{2-}	10	Zn^{2+}

Answers to: 14F 2b Naming ions 1

1	hydrogen ion	6	oxide ion
2	sodium ion	7	nitrate ion
3	potassium ion	8	chloride ion
4	iron ion	9	sulfide ion
5	sulfate ion	10	zinc ion

15B 2b Predicting salts

Write the name of the salts produced by the two substances.

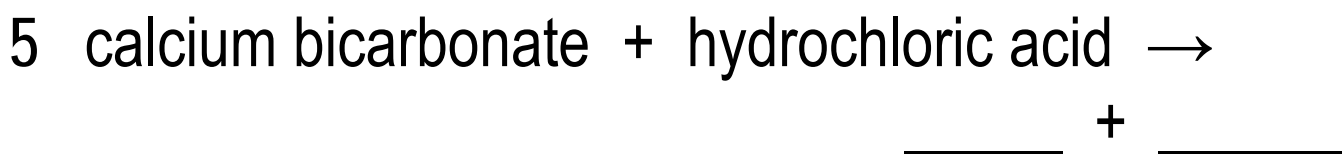
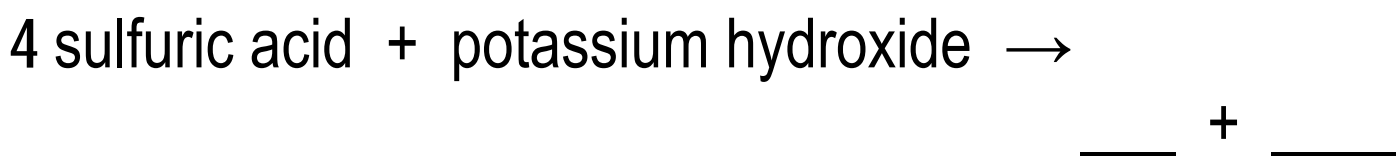
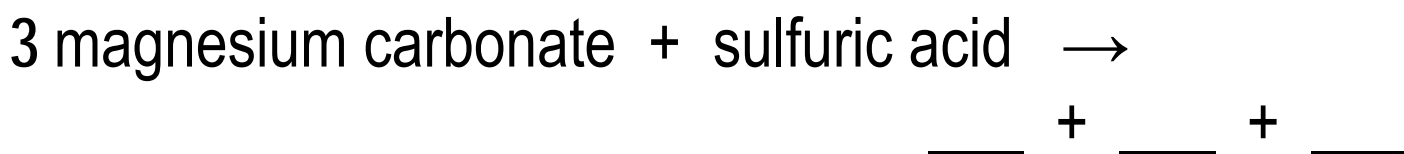
1	sodium carbonate and sulfuric acid	6	iron oxide and hydrochloric acid
2	nitric acid and magnesium oxide	7	zinc oxide and nitric acid
3	sodium hydroxide and hydrochloric acid	8	calcium carbonate and sulfuric acid
4	nitric acid and calcium hydroxide	9	potassium hydroxide and hydrochloric acid
5	magnesium carbonate and sulfuric acid	10	nitric acid and calcium bicarbonate

Answers to: 15B 2b Predicting salts

1	sodium sulfate	6	iron chloride
2	magnesium nitrate	7	zinc nitrate
3	sodium chloride	8	calcium sulfate
4	calcium nitrate	9	potassium chloride
5	magnesium sulfate	10	calcium nitrate

15B 3a Completing word equations 1

Complete these word equations.



Answers to: 15B 3a Completing word equations

1

1 → zinc nitrate + water

2 → iron chloride + water

3 → magnesium sulfate + water + carbon dioxide

4 → potassium sulfate + water

5 → calcium chloride + water + carbon dioxide

Note: when writing word equations, do not include any chemical formulae (don't write CO_2 or H_2O when the rest of the equation is written with words).

16A 2a Types of fuel 1

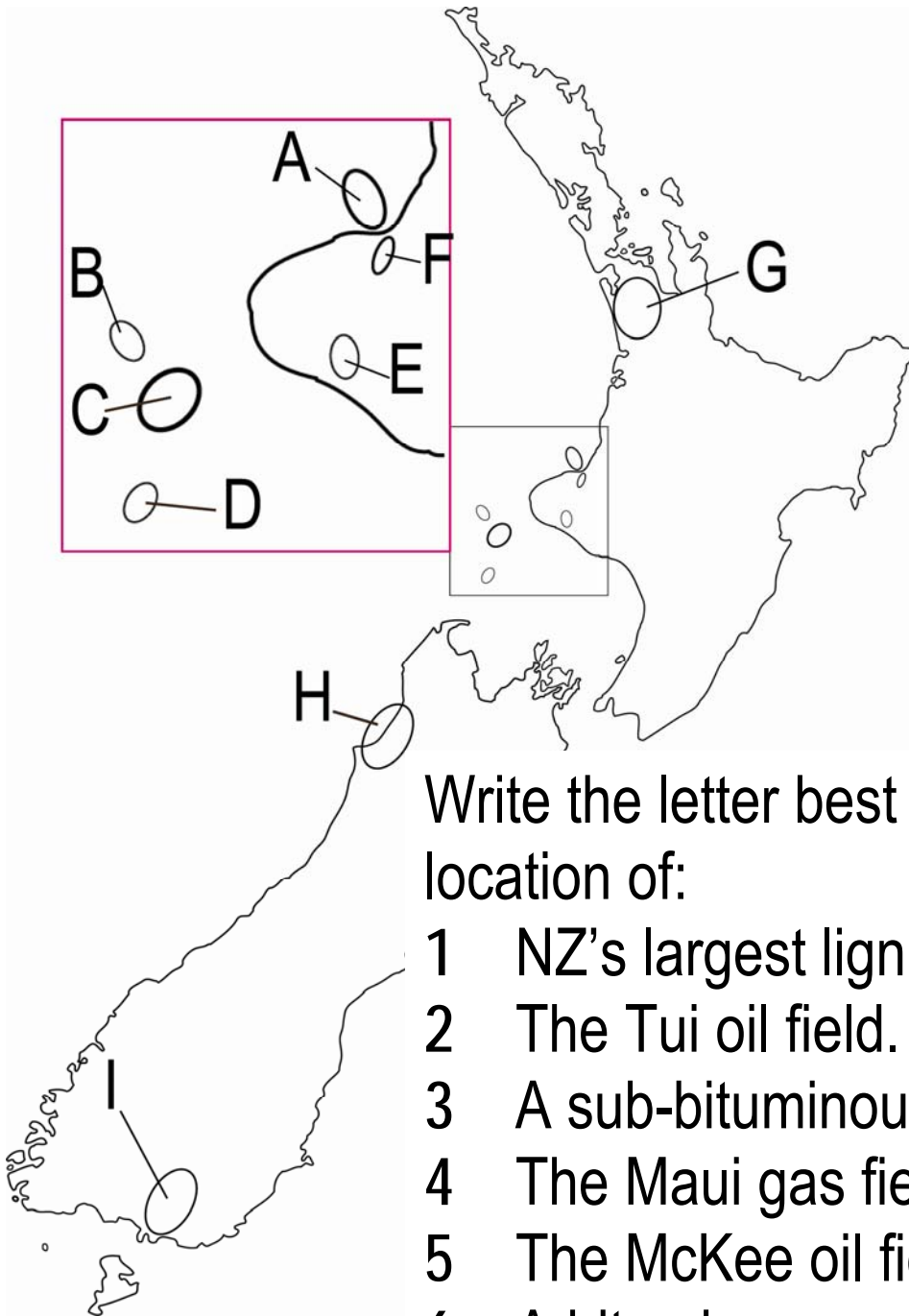
Write the fuel that fits the description.

1	Gas, the main component of LPG, sold in New Zealand for barbeques.	5	Dark brown, crumbly, low-grade coal found in Southland.
2	High-value coal mined on the West Coast and exported.	6	Oily liquid, insoluble in water, that burns with a wick and is used as a transport fuel.
3	Mid-value coal found in the Waikato and used to fuel the Huntly power station.	7	Volatile, highly flammable liquid, insoluble in water, that is used as a transport fuel.
4	Colourless, flammable liquid, soluble in water, and able to be mixed with petrol as a transport fuel.	9	Colourless gas, the main component of natural gas, sold in New Zealand as CNG.

Answers to 16A 2a Types of fuel 1

1	propane	6	lignite
2	bituminous coal	7	diesel
3	sub-bituminous coal	8	petrol
4	ethanol	9	methane

16A 3 New Zealand's fuel reserves



Write the letter best matching the location of:

- 1 NZ's largest lignite field.
- 2 The Tui oil field.
- 3 A sub-bituminous coal field.
- 4 The Maui gas field.
- 5 The McKee oil field.
- 6 A bituminous coal field.
- 7 The Pohukura gas field.
- 8 The Kapuni gas field.
- 9 The Maari oil field.
- 10 The Huntly power station.

Answers to 16A 3 New Zealand's fuel reserves

1 I

2 B

3 G

4 C

5 F

6 H

7 A

8 E

9 D

10 G

17A 2c Female reproductive system 3

Write the organ that fits the description.

1	The organ where eggs are held from birth.	6	The shape of the opening of the oviduct.
2	The area where the baby develops.	7	The area that receives the penis during sexual intercourse.
3	The tube the mature eggs travel to the uterus.	8	The area with the thick blood rich walls.
4	The narrow passage that holds the baby in place.	9	Where the ova mature.
5	Where the female hormones are produced.	10	Where fertilisation usually occurs.

Answers to 17A 2c Female reproductive system

3

1	ovary	6	funnel shaped
2	uterus or womb	7	vagina
3	oviduct or fallopian tube	8	uterus or womb
4	cervix	9	ovary
5	ovaries	10	oviduct or fallopian tube

Answers to: 17A 3b Male reproductive system

2

	Name	Function
1	prostate gland	add fluid to semen
2	testes (testis)	produces sperm (male gametes)
3	sperm duct	to transport sperm
4	urethra	tube to carry sperm and urine to exterior
5	scrotum or sac	to hold testes outside the body
6	penis	when erect can transfer sperm to female vagina

17B 2 Sexual reproduction words

Write the answer to fill the gap.

1	A cell with half the number of chromosomes.	6	Name two male gametes.
2	The ____ gamete is small and mobile.	7	Name two words for the female gametes.
3	When the plant gamete moves to fertilise the flower it is called ____.	8	The first cell after fertilisation is called a ____.
4	Sexual reproduction involves the fusing of gametes at ____.	9	Genetic material is found in the ____.
5	The ____ gamete is larger because it has a food supply.	10	Long thread-like structures of genetic material are called ____.

Answers to: 17B 2 Sexual reproduction words

1	gamete	6	sperm and pollen
2	male	7	ovule, egg or ova
3	pollination	8	zygote
4	fertilisation	9	nucleus
5	female	10	chromosomes

17B 4a Genetic words

Write the answer to fill the gap.

1	The sex chromosomes in humans are called ____ and ____ chromosomes.	6	A characteristic that is visible if the individual has just one allele for it is called ____.
2	Humans have ____ pairs of chromosomes.	7	When both forms for a particular characteristic are the same it's ____.
3	To determine the results of a genetic cross use a ____.	8	Gametes have ____ the number of chromosomes.
4	Blue eyes is ____ to brown eyes in humans.	9	Long threadlike of structures of genetic material.
5	The word for sex cells is ____.	10	A shy or hidden gene is called ____.

Answers to 17B 4a Genetic words

1	X and Y	6	dominant
2	23	7	homozygous
3	Punnett square	8	half
4	recessive	9	chromosomes
5	gametes	10	recessive

18A 3 Digestion explained

Complete the sentence.

1	Absorption occurs when ____.
2	To break large molecules into smaller molecules its quicker ____.
3	Physical digestion begins in the mouth with ____.
4	Chemical digestion is done by ____ (name a chemical).
5	To help absorption increase ____.
6	You need digestion because ____.
7	Digestion breaks long chains of complex carbohydrates into ____.
8	Fibre has no nutritional value but is important because ____.

Answers to 18A 3 Digestion explained

1	molecules cross the small intestine wall and go into the blood.
2	if you use an enzyme.
3	the teeth breaking up the food.
4	saliva, pancreatic juice, etc
5	the surface area with villi.
6	you cannot absorb big molecules.
7	simple sugars. Or, small molecules
8	it gives bulk and keeps the digestive system moving along.

18B 1b The lungs 2

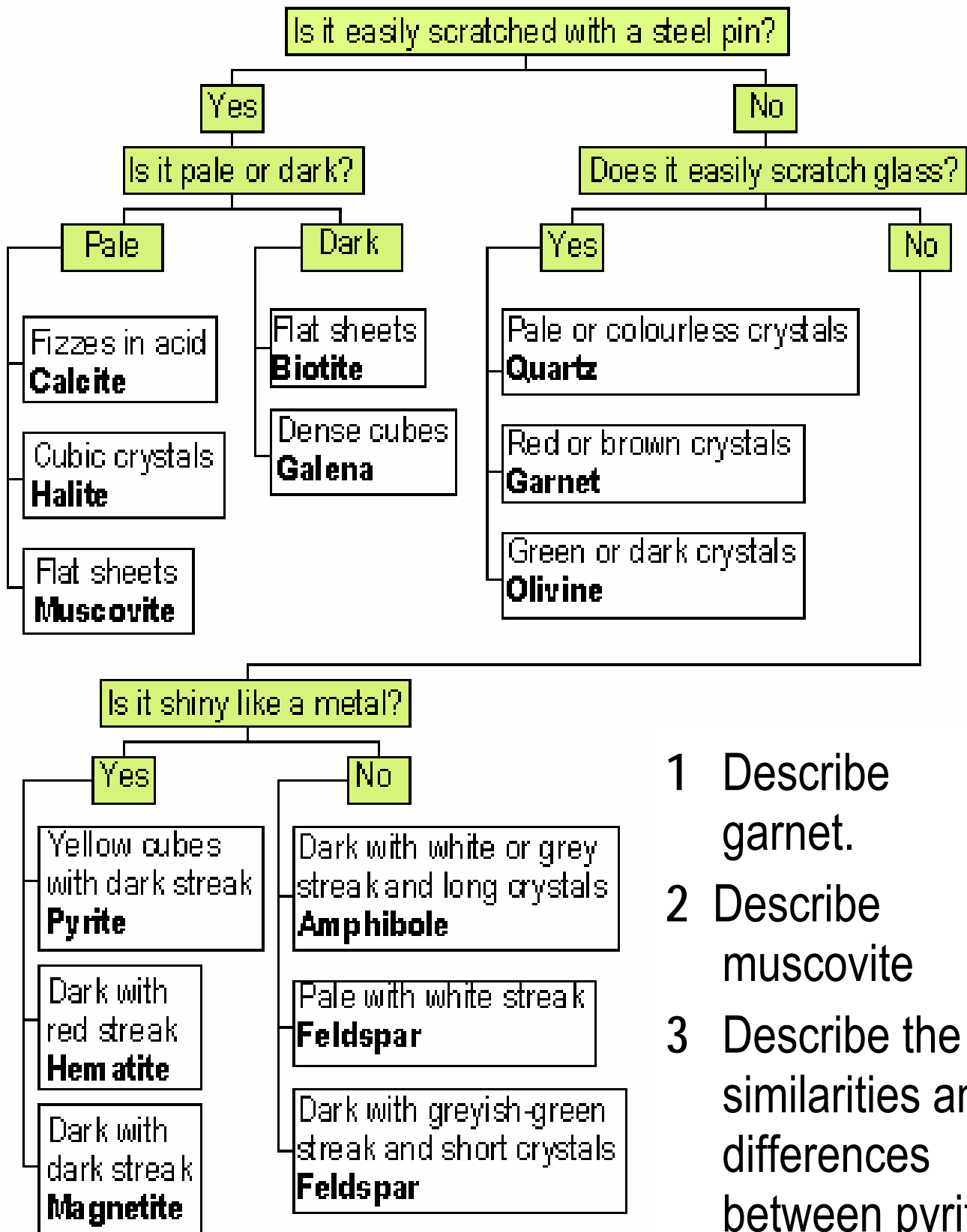
Write the missing words.

1	The cells need oxygen to carry out ____ to get energy.	6	Oxygen is carried in the blood in the ____ blood cells.
2	The lungs ____ carbon dioxide from the body.	7	The two tubes where we get bronchitis are called ____.
3	Air is sucked into the lungs by the diaphragm and the ____ moving.	8	The main windpipe is called the ____.
4	Oxygen moves from the air into the blood in the air sacs or ____.	9	When the ____ moves down air is sucked into the lungs.
5	Soft spongy organs are the ____.	10	Moving air into and out of the lungs is known as ____.

Answers to: 18B 1b The lungs 2

1	respiration	6	red
2	excrete (get rid of)	7	bronchi
3	ribs	8	trachea
4	alveoli	9	diaphragm
5	lungs	10	breathing

19A 2 Mineral identification



- 1 Describe garnet.
- 2 Describe muscovite
- 3 Describe the similarities and differences between pyrite and galena.

Answers to: 19A 2 Mineral identification

- 1 Garnet is hard – it scratches glass and is not scratched by a pin, and forms red or brown crystals.
- 2 Muscovite is soft – easily scratched by a pin, and forms pale, flat sheets.
- 3 Both galena and pyrite form cubic crystals. Galena is dark, easily scratched with a pin and is dense (noticeably heavy when picked up). Pyrite is yellow, not easily scratched, and makes a dark streak.

19C 1 Earthquake words

Write the missing words.

1	The machine used to measure earthquakes	5	The ____ scale indicates the intensity of shaking felt by people experiencing the earthquake.
2	A crack in the Earth's crust made by an earthquake.	6	The point within the Earth's crust where an earthquake happens.
3	A point on the surface above the focus of an earthquake.	7	The pattern on paper made by a seismometer is a ____.
4	A ____ is a huge wave of water that may form after a large earthquake.	8	Scale to show the energy from an earthquake is the ____ scale.

Answers to: 19B5 Earthquake words

1	seismometer	6	Modified Mercalli
2	fault line	7	focus
3	epicentre	8	seismogram
4	tsunami	9	Richter

19D 2a Volcano words

Write the words to fill the gaps.

1	A very large hole made when a very violent volcano erupts is a ____.	7	Type of volcano built up by layers of ash and lava.
2	The lower the ____ content of the lava, the runnier it will be.	8	A dent in the top of a cone volcano is the ____.
3	A tube inside a volcano through which magma flows is the volcanic ____.	9	A violent flow of water, ash and mud that rushes down a volcano is called a ____.
4	The lump of hot magma that 'fuels' a volcano is the ____.	10	Liquid rock that comes out of a volcano is ____.
5	Type of volcano built up by very runny lava.	11	A hole through which lava, ash or steam flows is called a ____.
6	Sharp, sand-like substance erupted from a volcano.	12	Liquid rock before it has reached the Earth's surface.

Answers to: 19D 2a Volcano words

1	caldera	7	composite volcano
2	silica	8	pipe
3	crater	9	lahar
4	magma chamber	10	lava
5	shield volcano	11	vent
6	volcanic ash	12	magma

19D 3 Steaming hot

Write the missing words

1	Rainwater forms ____ when it becomes heated by rocks underground and rises up through cracks in the crust.	6	Superheated water within the crust can ____ many minerals not normally soluble in water.
2	Water inside the crust may have a temperature of ____.	7	Veins of gold ____ in rock when water that was once very hot cools down.
3	When hydrogen sulfide reacts with oxygen it forms crystals of ____.	8	The magma below the crust has a temperature of about ____.
5	The ____ under Rotorua is unusually thin, so this region has particularly hot geothermal reserves.	10	The Coromandel ____ fields are thought to have once been a thermal region like Rotorua today.

Answers to: 19D 3 Steaming hot

1	hot springs	5	dissolve
2	300 °C	6	crystallise
3	sulfur	7	1000 °C
4	crust	8	gold

20B1 Atmospheric gases

Name the gas found in air that:

1	is produced during the combustion of sulfur-rich fossil fuels.	6	interferes with the transport of oxygen by red blood cells.
2	is produced by bacteria in the guts of cows.	7	absorbs UV light in the upper atmosphere.
3	can be made by lightning or in high temperature fires.	8	is converted by bacteria into a soluble compound required by plants to make protein.
4	is produced during photosynthesis.	9	varies in concentration from 1% to 4%.
5	does not form compounds.	10	is absorbed during photosynthesis.

20B 1 Answers to Atmospheric gases

1	sulfur dioxide	6	carbon monoxide
2	methane	7	ozone
3	nitrogen dioxide	8	nitrogen
4	oxygen	9	water
5	argon	10	carbon dioxide

20C 3 Hot and cold

Write the words defined below.

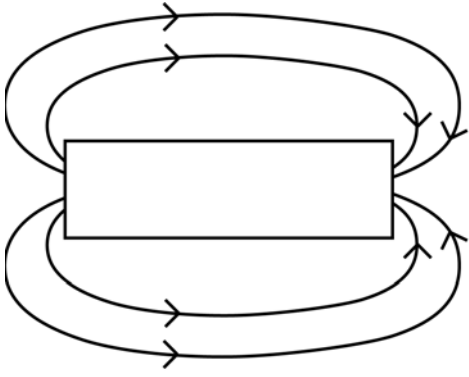
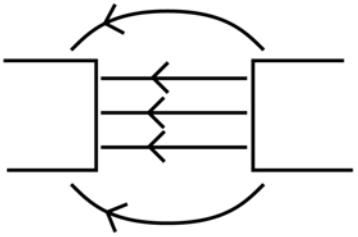
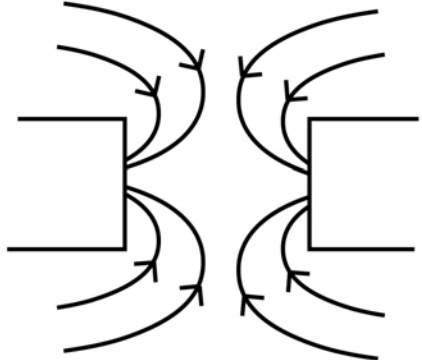
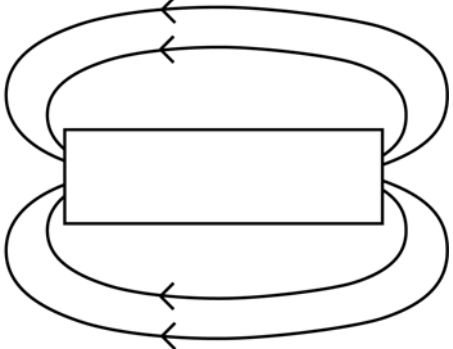
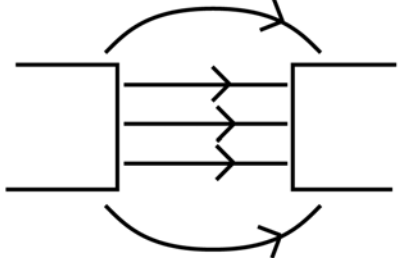
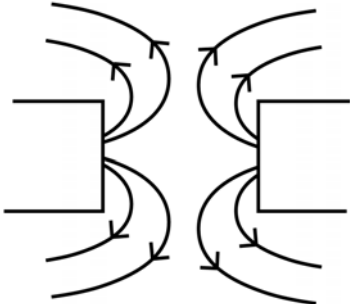
1	It is hottest close to the ____.	7	Far from the equator the Sun's rays are spread out over a ____ area.
2	On summer days the land is ____ than the sea.	8	The ____ heats up slowly during the day then slowly cools at night.
3	When the Sun is low in the sky the light intensity is ____.	9	Far from the equator the Sun is ____ in the sky.
4	Near the equator the Sun is ____ in the sky.	10	When the Sun is high in the sky the light ____ is strong.
5	Far from the sea, the daily temperature range will be ____.	11	On winter nights the land is ____ than the sea.
6	The ____ heats up quickly during the day and cools quickly at night.	12	Close to the sea, the daily temperature range will be ____.

20C 3 Answers to Hot and cold

1	equator	7	large
2	warmer	8	sea
3	weak	9	low
4	high	10	intensity
5	wide	11	cooler
6	land	12	small

21E 2 Magnetic field lines

Decide whether the poles on each diagram are arranged N–N, N–S, S–N or S–S

1		4	
2		5	
3		6	

21E 2 Answers Magnetic field lines

1	N-S	4	S-N
2	S-S	5	S-N
3	N-S	6	N-N

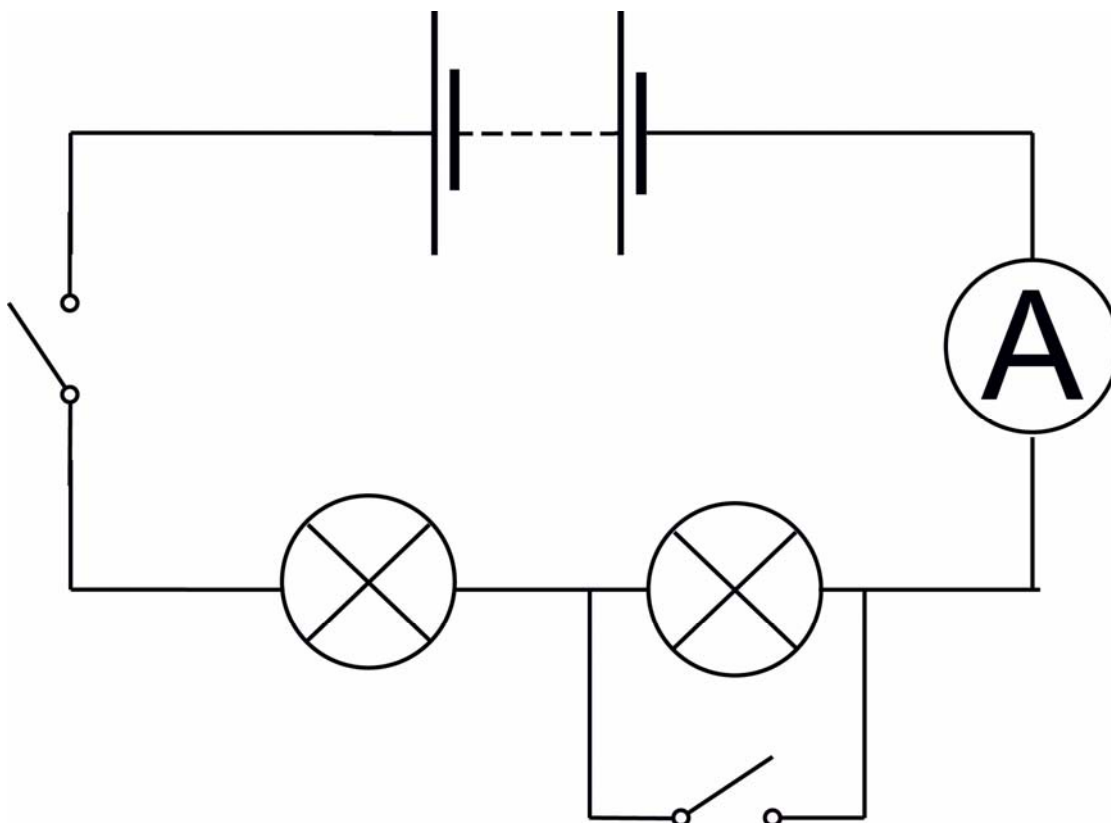
22C 4 Drawing circuits

Draw circuit diagrams to meet the following requirements:

- 1 A power supply is connected to two bulbs in series. There are two switches: one controls both lights, and the other switches off just one light. An ammeter measures the current through the whole circuit.
- 2 A three-cell battery is connected to a resistor and a bulb in parallel. A variable resistor is used to change the heat output of the resistor while leaving the bulb at full brightness.

Answers 22C 4 Drawing circuits

1



2

