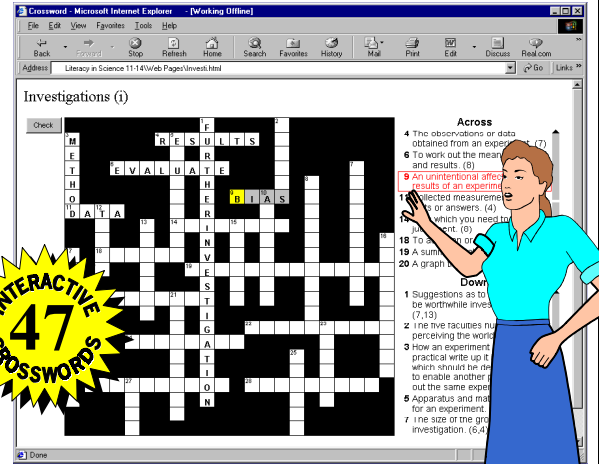


LITERACY IN SCIENCE (11-14)

- **OVER 1,000 KEY TERMS ARE IDENTIFIED!**
- **COMPREHENSIVE COVERAGE OF CORE TOPICS;**
- **FULL SITE LICENCE INCLUDED AS STANDARD;**
- **FEATURES 47 INTERACTIVE CROSSWORDS;**
- **TRULY DIFFERENTIATED BY TASK & OUTCOME.**



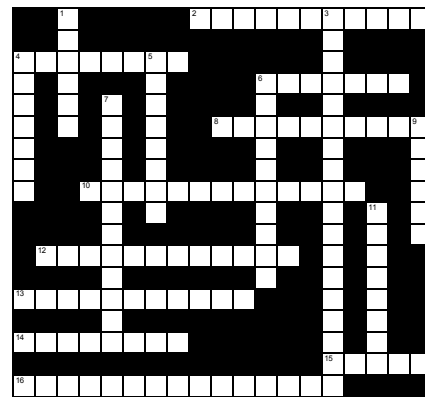
The correct use and understanding of terminology and vocabulary is fundamental to success in studying Science. 'Literacy in Science 11-14' identifies over 1,000 key terms and helps pupils become proficient users of the language of Science - pupils gain in confidence and levels of achievement. The crosswords, wordsearches, glossaries and word exercises can all be used at any time and are equally suitable for homework, classwork and supporting exam revision. The CD ROM contains all crosswords, wordsearches, word exercises, support and answer sheets in both Microsoft Word and Adobe Acrobat formats - plus the 47 crosswords in interactive web format. 'Literacy in Science 11-14' provides a truly differentiated and comprehensive resource suitable for classroom use and homework with the benefits of network and VLE deployment.

<p>Literacy in Science Environment & Feeding Relationships</p> <p>Across</p> <ol style="list-style-type: none"> All of the surroundings. (11) The place where an animal or plant lives. (7) An animal that eats other animals (dead or alive). (9) Any action taken to protect the environment and wildlife. (12) A piece of equipment used to collect insects. (6) The decay or breakdown of dead material. (13) A living animal that is food for a predator. (4) Spending the winter months in a better climate after migration. (13) All of the living things that live in a particular habitat. (9) An animal that eats both plant and animal food. (8) An animal that only eats plant food. (9) The spreading or scattering of seeds. (9) <p>Down</p> <ol style="list-style-type: none"> A period of inactivity when an animal lowers its heart rate and body temperature - usually over a winter period. (11) To use something more than once. (7) Plant material that is decaying by the action of microbes. (7) All the members of one species living in a particular ecosystem. (10) Waiting for good climate conditions to return. (7) A community and habitat suffers this when the climate changes significantly from the usual conditions; e.g. a pond may dry up. (8,6) An animal that hunts other live animals, e.g. an eagle hunting a mouse. (8) Blubber is a good example and explains how seals whales retain their body heat in the cold sea. (11) A collection of inter-related food chains. (4,3) A chain of living things that shows what eats who. (4,3) The gradual changes in the structure of living things on Earth. (9) An interdependent collection of communities and habitats; e.g. a forest or a lake. (9) When animals temporarily leave one area and move to another where the conditions are better for survival. (9) <p>© SSEL</p>	<p>Literacy in Science Light</p> <p>B G H M N J A N G L E O F R E F L E C T I O N V G H I N K L M C R S D W X D C A M K L P V W J S F C V B T R A N S L U C E N T J P M K L P M P V R J F T E P T R D F C V G E N R F V G B K E G O L D F F M K L C O N V E R G I N G L E L C H W N J M R C Q A D F T G H A C M N H E F P T R A N S P A R E N T M J K L L D A B G N V F R J V G H Y C V W D F T G C F L F R C D S G U U M E P D F T V G H J M K L P Y G M K L P C M K S L P R I S M V F M C N H I V C E G H J V K J F G T X O N H J O F O B G N B O J M F T B G H N J M K N V B I C O N C A V E L E N S V R S D F E G H J K I R U T C A N J E H O N R D C S H U T T E R K X C S G A P E R T U R E C S F H B S D F T E M O C D Q V M J T K R N H J C X A N G L E O F I N C I D E N C E M S C J D I T D M K L P C L Z V W H N L K L D J K T F G L J O K I M A G E C E J M R E A L I M A G E T L M W B G J H N C S X K L P N R G M P F T C T O M K L P V F O T X L R D F S J K A M K L L A S N O R M A L L I N E H J M K L F G G B H I G C K D V F G B H O D N X O P A Q U E S C F P B O R G T H J N M N S V F T G B N J M K L S J P M J K L P B V G F T C D F E X P O S U R E K E</p> <ol style="list-style-type: none"> Try to find the following words in the wordsearch above. The words can only be found in rows or columns. <p>ANGLE OF INCIDENCE IMAGE PRISM ANGLE OF REFLECTION FOCUS RAY DIAG APERTURE LASER REAL IMAGE BI-CONCAVE LENS LATERALLY-INVERTED IMAGE REFLECT BI-CONVEX LENS LENS REFRACT CONCAVE LENS MICROWAVES SHADOW CONVERGING LENS NORMAL LINE SHUTTER CONVEX LENS OPAQUE SPECTRUM ECLIPSE OSCILLOSCOPE TRANSLUCENT EXPOSURE PRIMARY COLOURS TRANSPARENCY</p>	<p>Literacy in Science Crossword & Wordsearch Solutions 7I - 8A</p> <p>Energy Resources - 7I Electrical Circuits - 7J</p> <p>Forces & Their Effects - 7K Solar System & Beyond - 7L</p> <p>Food & Digestion - 8A (i) Food & Digestion - 8A (ii)</p> <p>ANSWERS TO CROSSWORDS & WORDSEARCHES INCLUDED!</p>
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USE MS WORD TO EDIT TERMINOLOGY OR ALTER CLUES AND DEFINITIONS!

Topic	QCA Scheme of Work	Topic	QCA Scheme of Work
Introduction to Science	N/A	The Rock Cycle	8H
Cells, Tissues, Organs & Systems	7A	Energy - Heating & Cooling	8I
Reproduction - Human & Animal	7B	Magnets & Electricity	8J
Environment & Feeding Relationships	7C	Light	8K
Classification & Variation	7D	Sound & Hearing	8L
Chemical Changes - Acids & Alkalis	7	Inheritance & Selection	9A
Simple Chemical Reactions	7F	Fit & Healthy - Drugs	9B
Materials - Particle Model	7G	Fit & Healthy - Diet & Exercise	9B
Materials - Solutions, Mixtures & Separation	7H	Plants, Photosynthesis & Food Production	9C & 9D
Energy Resources	7I	Reactions of Metals & Metal Compounds	9E & 9F
Electrical Circuits	7J	Environmental Chemistry	9G
Forces & Their Effects	7K	Using Chemistry	9H
Solar System & Beyond	7L	Energy & Electricity	9I
Processes of Life - Food & Digestion	8A	Gravity & Space	9J
Processes of Life - Respiration & Breathing	8B	Forces - Speeding Up, Pressure & Moments	9K & 9L
Processes of Life - Microbes & Disease	8C	Investigations	General
Ecological Relationships	8D	Electronics	Not NC KSS3
Materials - Atoms, Elements & Compounds	8E & 8F	Reproduction - Flowering Plants	Not NC KSS3
Rocks & Weathering	8G		

Literacy in Science Processes of Life - Microbes & Disease (ii)



- Across**
- The introduction into the body of a weakened, dead or related microbe or antigen. (11)
 - A disease causing microbe. (8)
 - Chemicals on the surface of a microbe that trigger our immune system into action. (7)
 - A type of drug that kills bacteria that are harmful to humans. (10)
 - Chemicals that kill microbes or prevent their growth. (4-9)
 - The English doctor who produced the first ever working vaccine. (6, 6)
 - The process of producing artificial immunity by inoculation. (11)
 - The ability to resist a disease causing microbe. (8)
 - A poisonous chemical such as those used by bacterial infections such as Botulism or Tetanus. (5)
 - A type of immunity where antibodies have been produced in response to exposure to a microbe, or have been obtained from another. (7, 8)
- Down**
- A form of acquired immunity where antibodies are directly introduced into the body. Usually the person already has the infectious disease. (6)
 - A type of immunity where antibodies have been produced in response to an inoculation or injection of antibody serum. Also known as acquired immunity. (10, 8)
 - A form of acquired immunity where weakened, dead or related microbes or antigens are introduced into the body. (7)
 - An outbreak of disease within a particular community. (9)
 - The process of producing antibodies by the body to destroy pathogens. (11)
 - Have entered the body. (10)
 - Accumulation against a microbe. (8)
 - Used to protect milkmaids from bacterial infections such as Botulism or Tetanus. (5)
 - Which the first ever vaccine was produced in response to exposure to a microbe, or have been obtained from another. (7, 8)

PRINT MASTERS
250 Pages
PDF & MS Word!

UNIT 8C © SSER

Literacy In Science (11-14) is structured into 37 topics providing a large total of 188 crosswords, wordsearches and word exercises. Solutions to the crosswords and wordsearches are also provided.

Differentiate by allowing the pupils to choose a crossword or wordsearch - the associated word exercises ensure a similar outcome. Provide a support sheet (see facing page) with the crosswords to provide a differentiated intermediate task level between those of the crosswords and wordsearches. Extra resources to facilitate differentiation are provided on the CD ROM.

Literacy in Science Environmental Chemistry

Across

- The layer of gases surrounding the Earth and some other planets. (10)
- The mild acid formed when carbon dioxide dissolves in water. e.g. rain. (8, 4)
- The long term weather conditions which dominate a region. (7)
- The name given to the vast reservoirs of frozen water covering both the North and South poles. (5, 3, 4)
- A can that is used to propel a spray and that can also damage the ozone layer. (7)
- Ozone absorbs this form of light which otherwise would cause skin cancers. (11, 5)
- Rain with a pH less than 7 and containing traces of sulphur compounds. (4, 4)
- A gas made from oxygen high up in the Earth's atmosphere. It absorbs harmful ultraviolet radiation. (5)
- The gas used by photosynthesis. (6, 7)
- A device which reduces the levels of pollution made by car exhaust fumes. (9, 9)
- The steady increase in the temperature of the Earth's atmosphere. (6, 7)
- Moisture droplets produced by the rapid cooling of damp air. (12)
- A hard rock that can be damaged by acid rain. Many ancient Roman and Greek monuments were made from it. (6)
- The amount of moisture in the air. (8)
- A condition caused by the fact that radiant heat energy easily enters the Earth's atmosphere but in so doing changes into a form that finds it more difficult to leave. Thus the atmosphere warms up. (10, 6)

Down

- Chemicals that are made only from hydrogen and carbon. Fuels contain large amounts of this chemical group. (11)
- Development which meets the needs of humans and the environment both today and in the future. (11, 11)
- A domestic device which contains a lot of ozone damaging chemicals. (6)
- The relatively thin layer of plant life that covers much of the Earth's land surface. (10, 5)
- A stone that is very easily damaged by acid rain. The stone is nearly pure calcium carbonate. (9)
- A measure of how unpolluted water is. (5, 7)
- The boundary between warm and cold air. (5)
- The circulation of water through the atmosphere and the Earth's surface. (5, 5)
- A measure of how unpolluted the air is. (3, 7)
- What has been created in the ozone layer by pollution. (4)
- A device that measures changes in the environment. (6)
- These sulphur and nitrogen compounds react with water to make acid rain. (6)

UNIT 9G © SSER

Literacy in Science Materials - Particle Model (ii)

Across

- When gas volume decreases its pressure does this. (9)
- A material that is in the gaseous state but below its boiling point temperature. (6)
- Particles that are free to move can do this, e.g. in liquids and gases. (4)
- The change of state from a gas or a vapour to a liquid. (12)
- The change of state from a liquid into a vapour. Evaporation can occur below the boiling point of a liquid. (11)
- Used to describe the rare cases when a solid turns directly into a gas. (11)
- The temperature when all particle movement stops - there is nothing colder. (8, 4)
- We have to create this to study particles as they are too small to be seen. (5)
- The capacity of a body or system to do work. (6)
- This happens to the speed of particle movement or vibration if you add heat. (6)

Down

- This happens to the speed of particle movement or vibration if you let a material cool down. (6)
- Used to describe how the particles are placed in a material. (11)
- A measure of how much of a given volume of solid. (11)
- The movement of particles in solutions to form a uniform concentration. (11)
- Particles appear to be more concentrated where there is a higher concentration. (11)
- A measure of area. Measure of pressure. (9)

FEATURING
37 TOPICS EACH
CONTAINING CROSSWORDS,
WORDSEARCHES, ANSWERS,
WORD EXERCISES,
GLOSSARIES AND WEB
CROSSWORDS!

UNIT 10A © SSER

SUITABLE TO SUPPORT CLASSWORK, HOMEWORK OR EXAM REVISION!

Literacy in Science Fit & Healthy - Diet & Exercise

D V I T A M I N B M D F
C I K J F I M J A R F H
F T G T F N N H L K V F
V A N O R E X I A N H M
G M R G H R B T N U T F
B I M J K A T G C S D X
H N K L P L F G E X S V
N C C Q W S D V D C D I
M K L P V T S D D I E T
W R G F H J N K I V G A
V E X E R C I S E B G M
M K L P X A C S T N J I
F Z H E A L T H M K L N
I X C D F T D V I T A
B U L I M I A X N H M K
R B G H J U K L P F O E
E N S T A M I N A B T F

1. Try to find the following words in the wordsearch.
2. The words can only be found in rows or columns.

ANOREXIA
BALANCED DIET
BULIMIA
CALCIUM
DIET
EXERCISE
FIBRE
FITNESS
HEALTH
IRON
JUNK FOOD
MINERALS
NUTRIENTS
OBESITY

UNIT 9B © SSER

Literacy in Science Forces - Speeding Up, Pressure & Moments (ii)

Literacy in Science Crossword Support

Literacy in Science - Crossword Support Solar System & Beyond - Unit 7L

These words are the answers to the clues. Use them to do the crossword.

asteroid	Mercury	retention
astronomical unit	meteor	satellite
corona	meteorite	Saturn
Earth	Milky Way	solar system
eclipse	nebula	star
galaxy	Neptune	Sun
Jupiter	orbit	Universe
light-year	planet	Uranus
Mars	Pluto	Venus

Literacy in Science - Crossword Support Processes of Life - Food & Digestion (i) - Unit 8A

These words are the answers to the clues. Use them to do the crossword.

absorption	digestion	intestine
alimentary canal	egestion	iron
anus	excretion	mineral
calcium	fat	protein
carbohydrate	fibre	stomach
diet	gut	vitamin

Literacy in Science - Crossword Support Processes of Life - Food & Digestion (ii) - Unit 8A

These words are the answers to the clues. Use them to do the crossword.

appendix	incisor teeth	plaque
assimilation	large intestine	premolar teeth
canine teeth	molar teeth	small intestine
chemical digestion	oesophagus	tartar
colon	pancreas	villus
enzyme	physical digestion	wisdom teeth
feeding		

© SSER

C O U N T E R B A L A N C E L
B J M K L F D R N R D S F X S
M C V S D F E D T P G F T C U
D M J K L D Y N A M I C S F N
M V Z X C D S D G B J N M K B
E M K L V F G T O D F W N J A
N J H M A C H I N E S E N L
T V S X C D F G I B G T W K A
K J K M V F M A S S J M T L N
H L P V F B X S T K L P O P C
D I C U L A R D I S T A N C E
B H K C Q R P L C M D N G J D
V P T R L O A D K J L V D F F
K G V G M K M F G V B V T O
C R N J E M T F G L E V E R
G R A V I T Y P R T F G V F C
H M M C X E P L T F G D R F E
T N J F O R C E E H J N M K S

Following words in the wordsearch above
only be found in rows or columns.

GRAM
GRAVITY
LEVER
LOAD
MACHINE
MASS
MOMENT
NEWTON
PERPENDICULAR
DISTANCE
PIVOT
TURNING EFFECT
UNBALANCED
FORCES
WEIGHT

UNIT 9K & 9L © SSER

The topics and associated terminology in 'Literacy In Science 11-14' have been selected to match those encountered by pupils aged between 11-14, and match the QCA schemes of work. For paper based activities print the complementary word exercises (below left) on the back of crosswords or wordsearches to provide pupils with a topic glossary.

'Literacy In Science 11-14' is easily adapted, e.g. Key word lists, wall displays, literacy diaries, exam revision, etc.

Literacy in Science Classification & Variation

Complete the following table. The missing words are the answers from the **Classification & Variation** crossword. The words will be in alphabetical order when the table is completed.

Word	Explanation
animal kingdom	
arachnid	
arthropod	
characteristics	
class	
classifying	
conifer	
continuous variation	
crustacean	
deciduous tree	
discontinuous variation	
evergreen	
extinct	
fern	
fungus	
insect	
invertebrate	
key	
mammal	
mollusc	
moss	
plant kingdom	
reptile	
species	
variation	
vertebrate	

Literacy in Science - Word Exercise A Classification & Variation

Complete the following table. The missing words are the answers from the **Classification & Variation** crossword. The words will be in alphabetical order when the table is completed.

Word or Phrase	Explanation
	A very large group that contains all the organisms that live on Earth.
	An arthropod with four pairs of jointed legs.
	An invertebrate with an exoskeleton.
	Features of something that are shared by all members of a group.
	A large group of living things that share common characteristics.
	e.g. mammals. There are many different types of mammals.
	Sorting things into groups based on their characteristics.
	A tree which reproduces by producing cones.
	When one feature of a group of organisms differs from the others.
	e.g. eye color.
	Arthropod with about five pairs of jointed legs.
	A tree that loses all its leaves in autumn.
	When one feature of a group of organisms differs from the others.
	e.g. eye color.
	A plant which always keeps its green leaves.
	A type of animal or plant that has become extinct.
	Plant group that has fronds.
	A plant without chlorophyll.
	An arthropod with six legs.
	An animal without a backbone.
	A series of questions that are used to identify an organism.
	A vertebrate with hair.
	An invertebrate with a soft body.
	Plant group that grows in damp places.
	A group that contains all the organisms that live on Earth.
	A vertebrate with scaly skin.
	A group of closely related organisms that share common characteristics.
	The differences between two or more organisms.
	An animal with a backbone.

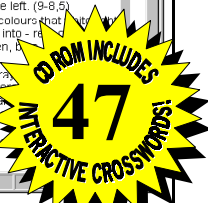
Well done! All correct!

Across

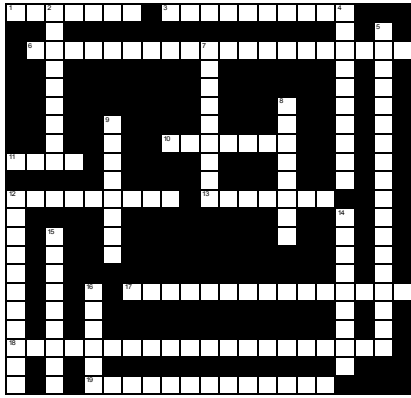
- The angle between a reflected light ray and a normal line. (6,2,10)
- The term used to describe a material that scatters light as it passes through. You cannot see clearly through it. (11)
- A convex lens, which bends light rays passing through it towards each other. (10,4)
- The term used to describe a material that lets light pass through it without scattering it. You can see clearly through it. (11)

Down

- High frequency electro-magnetic waves. (10)
- A mirror image - when the left becomes the right and the right becomes the left. (9,8,5)
- The seven colours that light can be split into - red, orange, yellow, green, blue, indigo, violet. (8)
- When light rays from one direction are spread out to another. (10)
- The three...



Literacy in Science Rocks & Weathering



Across

Down

- 1 The study of rocks and the Earth. (7)
- 3 A type of weathering where water enters a crack in the rock, freezes, expands and in so doing cracks the rock. (6,4)
- 6 The taking of photographs automatically at set time intervals so as to view the slow changes in a reasonable amount of time. (4,5,11)
- 10 A slowly moving river of ice. (7)
- 11 A type of soil made from relatively large rock particles. (4)
- 12 Igneous rocks that cool below the Earth's surface and that are eventually exposed by erosion. (9)
- 13 The wearing away of the land surface by water, ice, wind and movements caused by gravity. (7)
- 17 The length of time over which rocks form and disappear. (8,2,5)
- 18 Physical breakdown of rock by the action of plant roots and burrowing animals. (10,10)
- 19 The process of particles being deposited in layers under water. (13)
- 2 A type of weathering where rock breaks down layer by layer as the Sun heats the rock by day and then it cools by night. (9,4)
- 4 The breakdown of rocks by exposure to the weather. (10)
- 5 A type of weathering where rain (which is naturally acidic) reacts and slowly breaks down the rock. (8,10)
- 7 A rock through which fluids can pass. (9)
- 8 Physical knocking off of particles, e.g. as one rock hits another. (8)
- 9 A measure of how porous a rock is. (8)
- 12 A rock through which fluids cannot pass. (11)
- 14 A term for many thousands of years. (9)
- 15 A sedimentary deposit of compacted sand. (9)
- 16 Describes a rock such as chalk that can store water and which allows it to pass through. (6)

UNIT 8G © SSER

Across

- 4 A sedative drug which suppresses inhibitions and creates a mild state of euphoria. It also slows reaction time, causes muscle fatigue and long term damage to internal organs and body systems. (7)
- 5 A disease which can be caused by breathing in cigarette smoke over a long period of time. (4,6)
- 10 Tiny hairs covering the inside of the trachea which help remove dust and bacteria from the lungs.

Down

- 1 Inflammation in the bronchi (the tubes that connect to the windpipe), causing a painful cough and thick discharge of mucus. Smokers can get this regularly. (10)
- 2 A drug inhaled from glue and other household products. It usually makes you sick. (7)
- 3 When the heart stops beating. This can be due to a drug or blockage in a coronary artery which normally supplies sugar



The check button provides immediate feedback to the user by removing all letters and words which have been incorrectly entered. Each user can also print off a copy of their completed crossword (already checked and verified) from within the browser.

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