KS3 SCIENCE · CHEMISTRY

Chemical reactions

Word search

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

Find these 10 words

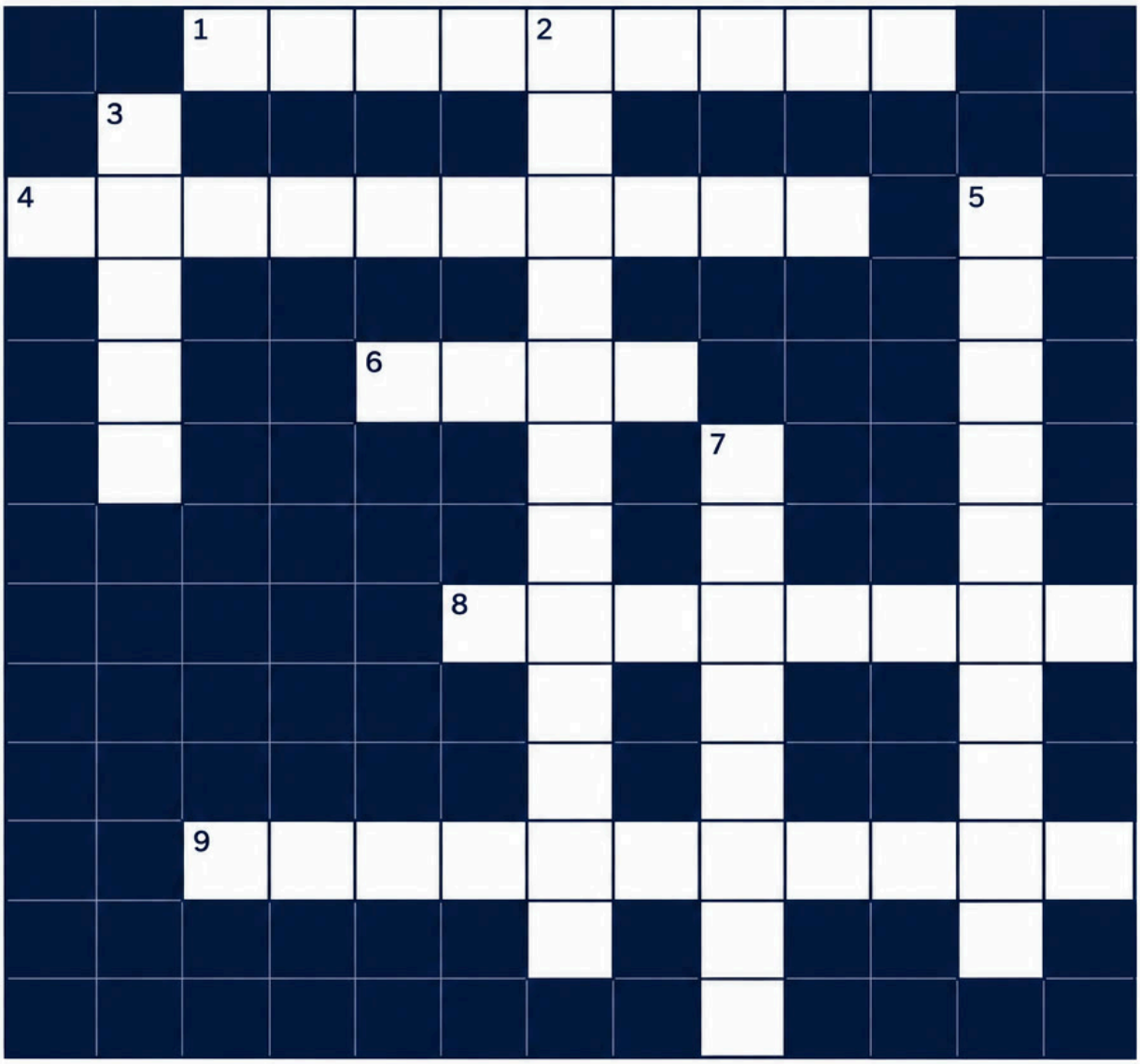
- ☐ CATALYST
- ☐ CHEMICAL BOND
- ☐ COMBUSTION
- ☐ ENDOTHERMIC
- ☐ FIRE TRIANGLE
- ☐ FUEL
- ☐ HYDROCARBON
- ☐ LIMEWATER
- ☐ OXIDE
- ☐ PRODUCT

Words go across, down or diagonally. Spaces are left out.

KS3 SCIENCE · CHEMISTRY

Chemical reactions

Crossword



Across

1 A clear solution that carbon dioxide turns cloudy (9)

4 Gives out energy, so the surroundings get hotter (10)

6 A substance that stores energy and is burned to release it (4)

8 Speeds up a reaction and is not used up (8)

9 A compound of hydrogen and carbon only, such as methane (11)

Down

2 Shows a reaction using the names of the substances (4,8)

3 A compound of an element joined with oxygen (5)

5 Burning: a reaction with oxygen that gives out heat and light (10)

7 A substance you start with in a reaction (8)

The number in brackets is how many letters the answer has.

KS3 SCIENCE · CHEMISTRY

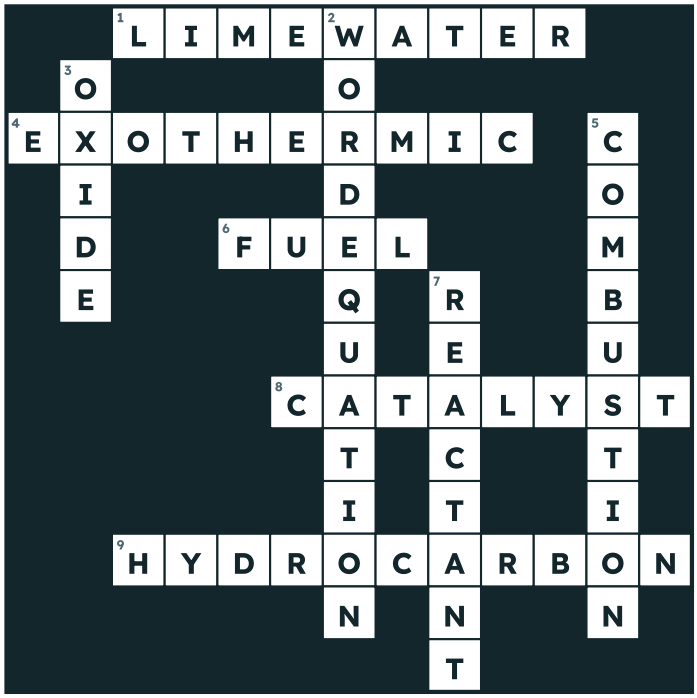
Chemical reactions

Answers

Word search

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

Crossword



Across

1 Limewater
A clear solution that carbon dioxide turns cloudy (9)

4 Exothermic
Gives out energy, so the surroundings get hotter (10)

6 Fuel
A substance that stores energy and is burned to release it (4)

8 Catalyst
Speeds up a reaction and is not used up (8)

9 Hydrocarbon
A compound of hydrogen and carbon only, such as methane (11)

Down

2 Word equation
Shows a reaction using the names of the substances (4,8)

3 Oxide
A compound of an element joined with oxygen (5)

5 Combustion
Burning: a reaction with oxygen that gives out heat and light (10)

7 Reactant
A substance you start with in a reaction (8)

In the word search, words go across, down or diagonally, and spaces are left out. The same puzzles can be played on the Chemical reactions page of the KS3 Science revision site.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 1

Physical and chemical changes

Word search

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

Find these 8 words

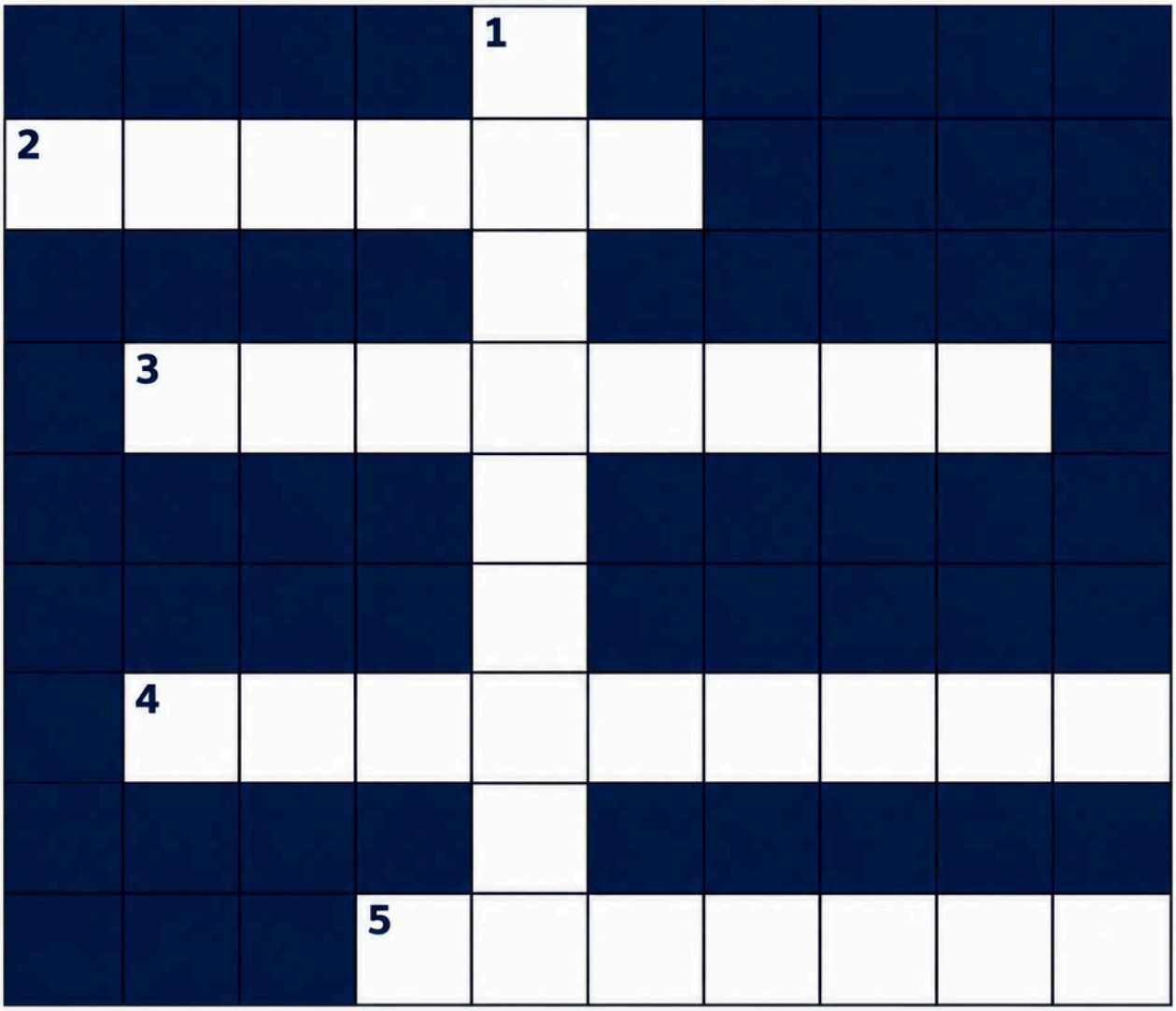
- ☐ COLOUR
- ☐ ENERGY
- ☐ IRON
- ☐ MAGNESIUM
- ☐ PHYSICAL
- ☐ PRECIPITATE
- ☐ RUST
- ☐ SUBSTANCE

Words go across, down or diagonally. Spaces are left out.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 1

Physical and chemical changes

Crossword



Across

2 The property described by words such as grey and orange-brown (6)

3 Boiling and dissolving are this kind of change, and you can usually change it back (8)

4 A metal that fizzes in acid and burns with a bright white flame (9)

5 The scientific name for the change of state from a solid to a liquid (7)

Down

1 A new one is made in a chemical change (9)

The number in brackets is how many letters the answer has.

KS3 SCIENCE · CHEMISTRY · CHEMICAL REACTIONS

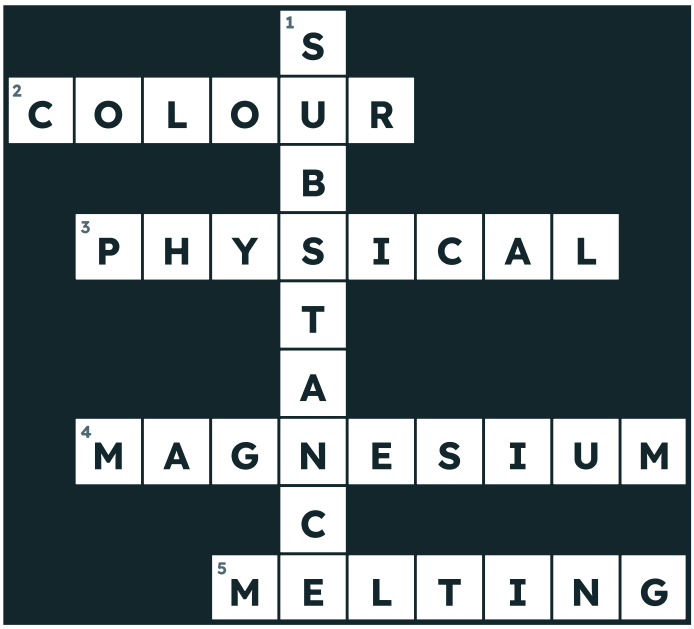
Lesson 1: Physical and chemical changes

Answers

Word search

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

Crossword



Across

2 Colour
The property described by words such as grey and orange-brown (6)

3 Physical
Boiling and dissolving are this kind of change, and you can usually change it back (8)

4 Magnesium
A metal that fizzes in acid and burns with a bright white flame (9)

5 Melting
The scientific name for the change of state from a solid to a liquid (7)

Down

1 Substance
A new one is made in a chemical change (9)

In the word search, words go across, down or diagonally, and spaces are left out. The same puzzles can be played on the Chemical reactions lesson 1 page of the KS3 Science revision site.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 2

Atoms rearrange

Word search

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

Find these 8 words

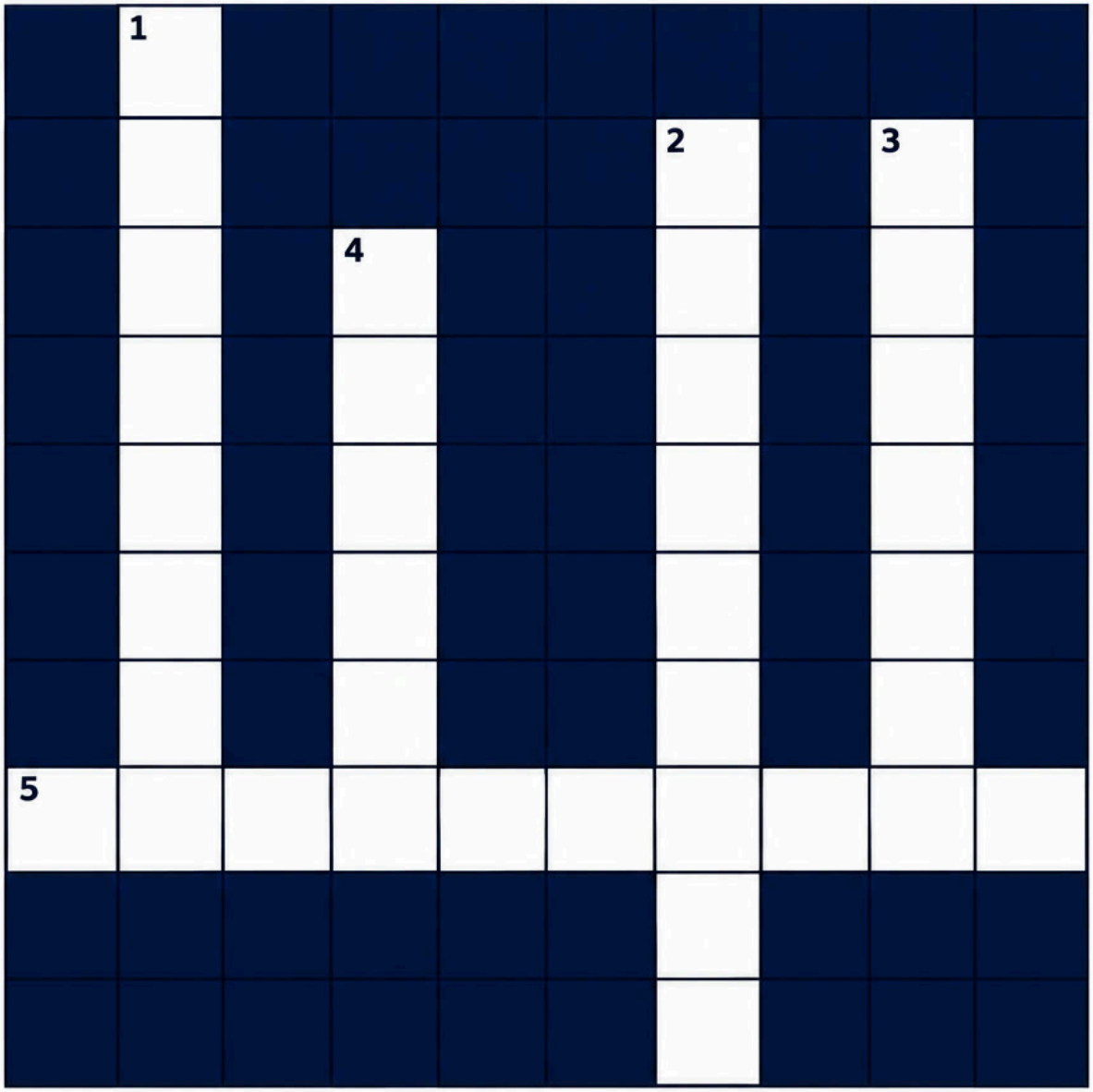
- ☐ ATOMS
- ☐ HYDROGEN
- ☐ METHANE
- ☐ OXYGEN
- ☐ PARTICLE
- ☐ REACTANTS
- ☐ REARRANGED
- ☐ SULFUR

Words go across, down or diagonally. Spaces are left out.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 2

Atoms rearrange

Crossword



Across

5 Put in a different order as the tiny building blocks change partners (10)

Down

1 A ___ diagram uses circles to show each tiny bit of a substance (8)

2 The substances you start with (9)

3 Natural gas, the fuel used on a gas hob (7)

4 Iron is heated with this to make iron sulfide (6)

The number in brackets is how many letters the answer has.

KS3 SCIENCE · CHEMISTRY · CHEMICAL REACTIONS

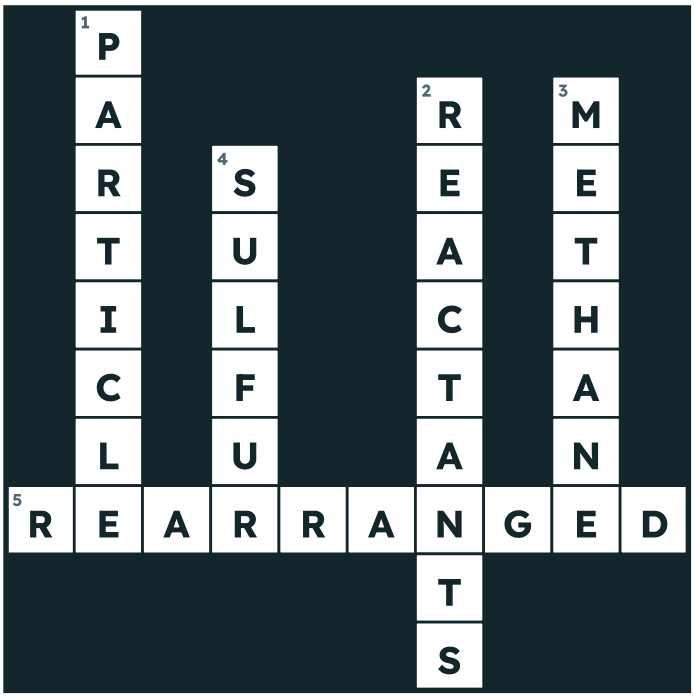
Lesson 2: Atoms rearrange

Answers

Word search



Crossword



Across

5 Rearranged
Put in a different order as the tiny building blocks change partners (10)

Down

1 Particle
A ___ diagram uses circles to show each tiny bit of a substance (8)

2 Reactants
The substances you start with (9)

3 Methane
Natural gas, the fuel used on a gas hob (7)

4 Sulfur
Iron is heated with this to make iron sulfide (6)

In the word search, words go across, down or diagonally, and spaces are left out. The same puzzles can be played on the Chemical reactions lesson 2 page of the KS3 Science revision site.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 3

Word equations

Word search

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

Find these 8 words

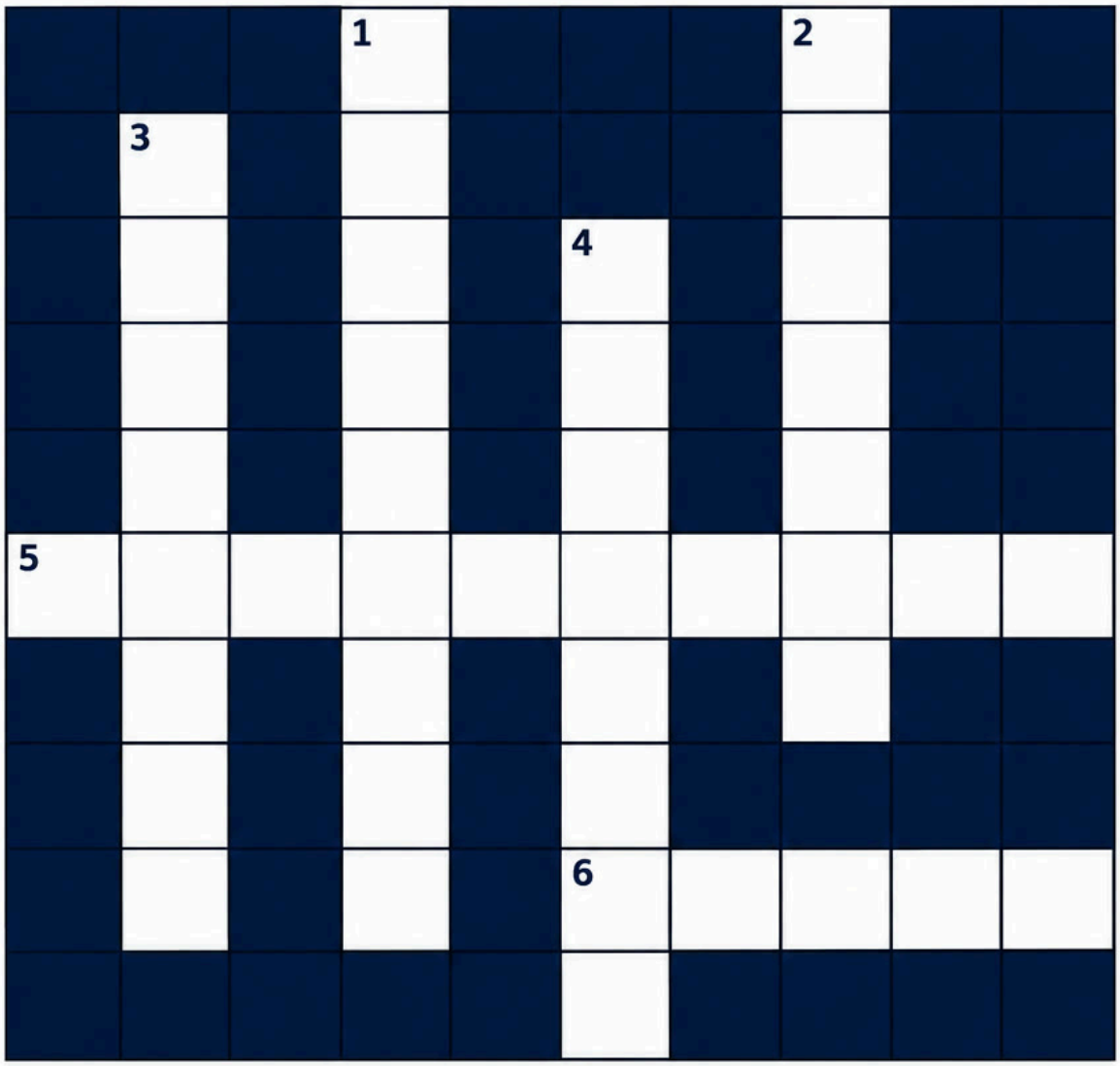
- ☐ ARROW
- ☐ FORMULAE
- ☐ HEAT
- ☐ MAGNESIUM
- ☐ OXIDE
- ☐ PRODUCTS
- ☐ REACTANTS
- ☐ SUBSTANCES

Words go across, down or diagonally. Spaces are left out.

KS3 CHEMISTRY • CHEMICAL REACTIONS • LESSON 3

Word equations

Crossword



Across

5 Only these are written in; light and flames are not (10)

6 When a metal reacts with oxygen, the product is a metal ____ (5)

Down

1 Burns with a bright white flame, held in tongs (9)

2 Numbers in front make the atoms of each element equal on both sides: they ___ it (7)

3 The new chemicals that a reaction makes (8)

4 A short way to write down a reaction (8)

The number in brackets is how many letters the answer has.

KS3 SCIENCE · CHEMISTRY · CHEMICAL REACTIONS

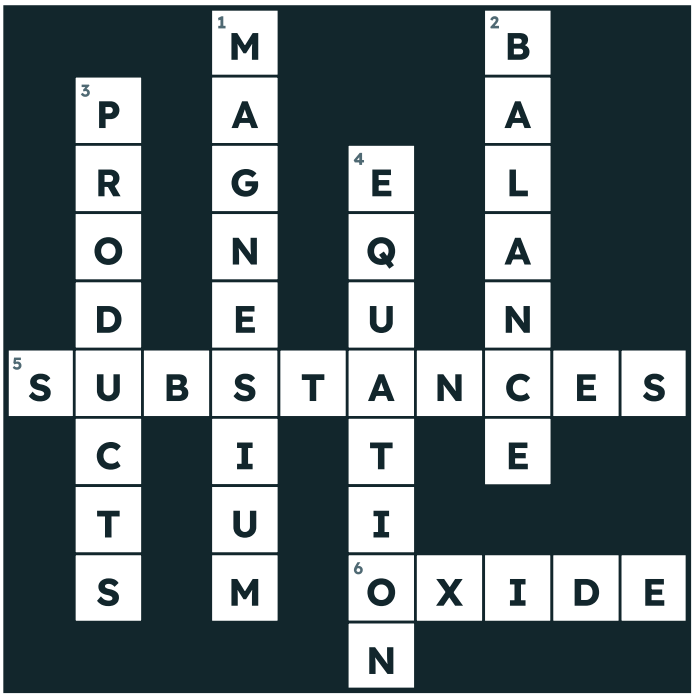
Lesson 3: Word equations

Answers

Word search



Crossword



Across

5 Substances
Only these are written in; light and flames are not (10)

6 Oxide
When a metal reacts with oxygen, the product is a metal ___ (5)

Down

1 Magnesium
Burns with a bright white flame, held in tongs (9)

2 Balance
Numbers in front make the atoms of each element equal on both sides: they ___ it (7)

3 Products
The new chemicals that a reaction makes (8)

4 Equation
A short way to write down a reaction (8)

In the word search, words go across, down or diagonally, and spaces are left out. The same puzzles can be played on the Chemical reactions lesson 3 page of the KS3 Science revision site.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 4

Conservation of mass

Word search

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

Find these 8 words

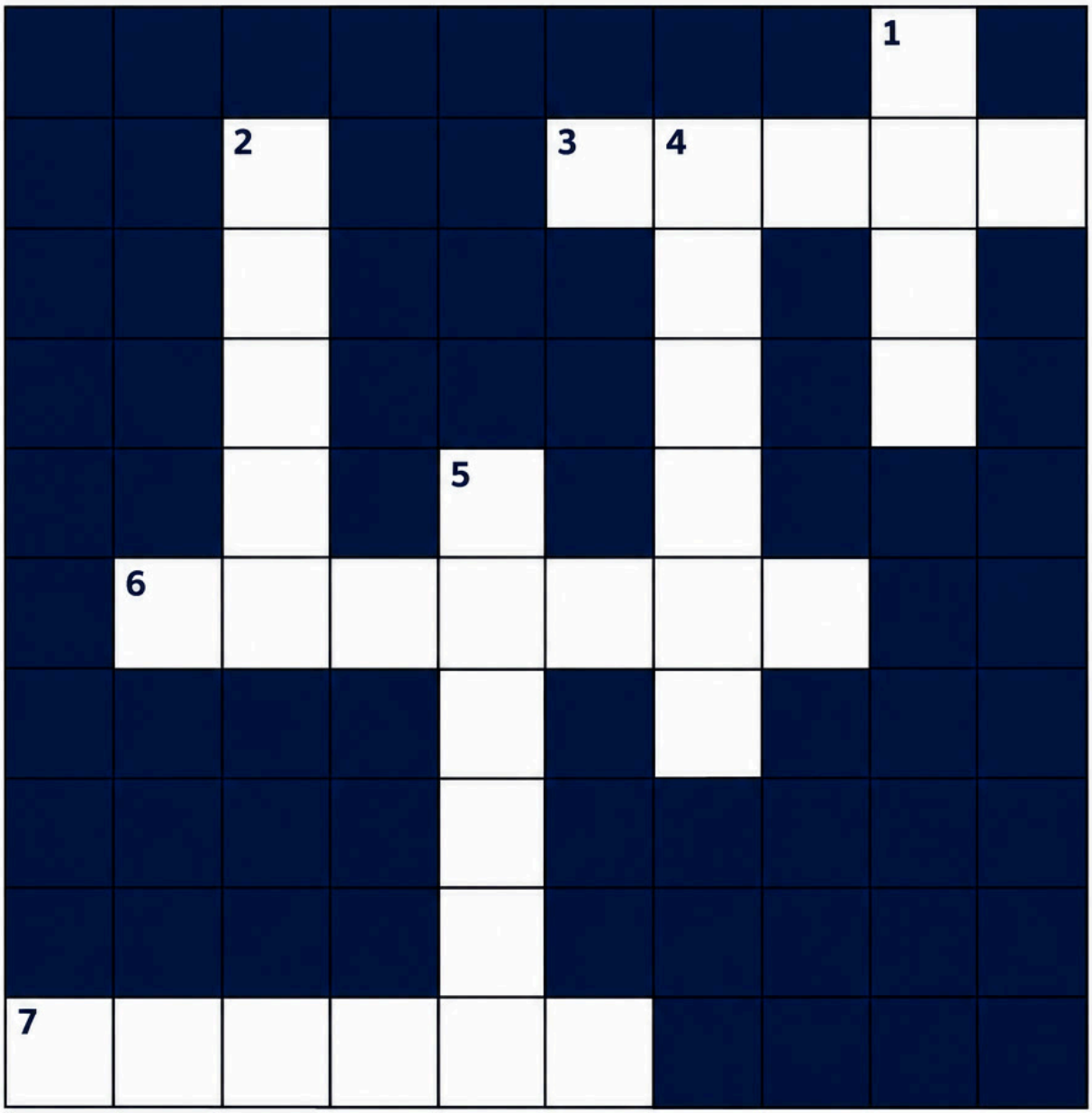
- ☐ CONSERVATION
- ☐ ESCAPES
- ☐ MAGNESIUM
- ☐ MARBLE
- ☐ OXYGEN
- ☐ POWDER
- ☐ REACTANTS
- ☐ SOLID

Words go across, down or diagonally. Spaces are left out.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 4

Conservation of mass

Crossword



Across

3 The state of the metal before it burns and gains mass (5)

6 Mass seems to fall when a product does this into the air (7)

7 The white ___ left behind has more mass than the metal had (6)

Down

1 The container, with no lid, in which the metal is burned (4)

2 None of these are made or destroyed in a reaction (5)

4 Burning metal gains the mass of this from the air (6)

5 ___ chips fizz in acid in an open flask (6)

The number in brackets is how many letters the answer has.

KS3 SCIENCE · CHEMISTRY · CHEMICAL REACTIONS

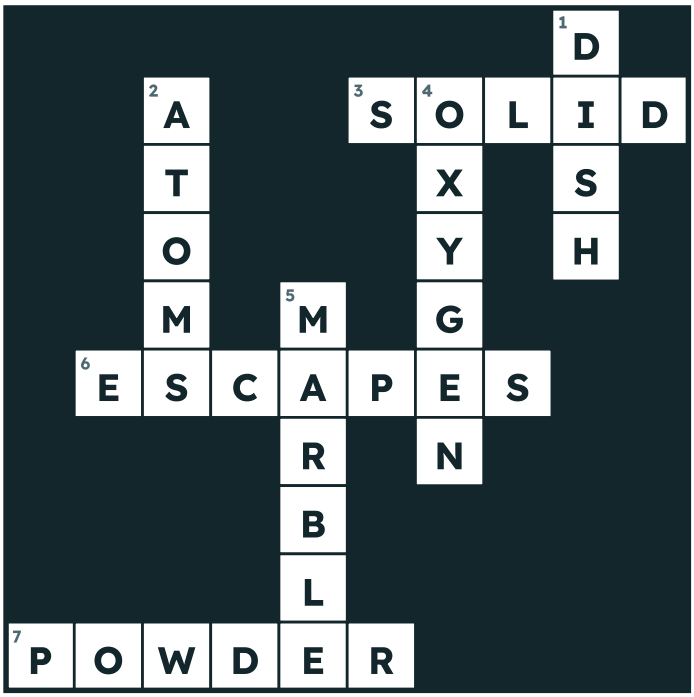
Lesson 4: Conservation of mass

Answers

Word search

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

Crossword



Across

3 Solid
The state of the metal before it burns and gains mass (5)

6 Escapes
Mass seems to fall when a product does this into the air (7)

7 Powder
The white ___ left behind has more mass than the metal had (6)

Down

1 Dish
The container, with no lid, in which the metal is burned (4)

2 Atoms
None of these are made or destroyed in a reaction (5)

4 Oxygen
Burning metal gains the mass of this from the air (6)

5 Marble
___ chips fizz in acid in an open flask (6)

In the word search, words go across, down or diagonally, and spaces are left out. The same puzzles can be played on the Chemical reactions lesson 4 page of the KS3 Science revision site.

KS3 CHEMISTRY • CHEMICAL REACTIONS • LESSON 5

Combustion

Word search

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

Find these 8 words

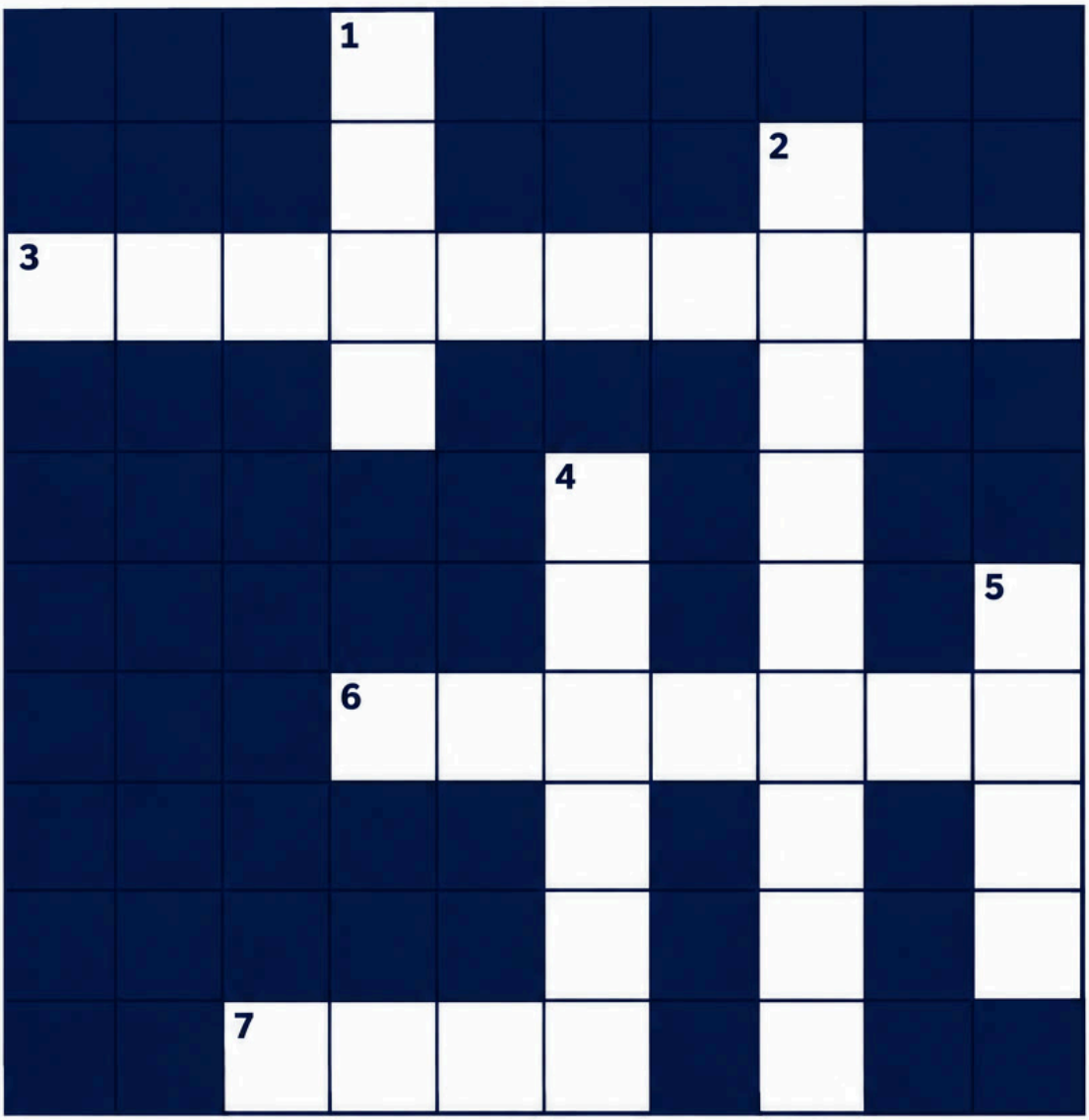
- ☐ CANDLE
- ☐ COMBUSTION
- ☐ FUEL
- ☐ HEAT
- ☐ HYDROCARBONS
- ☐ METHANE
- ☐ PETROL
- ☐ TUBE

Words go across, down or diagonally. Spaces are left out.

KS3 CHEMISTRY • CHEMICAL REACTIONS • LESSON 5

Combustion

Crossword



Across

3 Another word for burning (10)

6 Natural gas, used on a gas hob (7)

7 The general name for a substance burned to release its stored energy (4)

Down

1 The gases pass through a cold ___ (4)

2 The test for carbon dioxide (9)

4 A liquid that burns, named with wood and wax (6)

5 Energy given out by burning, along with light (4)

The number in brackets is how many letters the answer has.

KS3 SCIENCE · CHEMISTRY · CHEMICAL REACTIONS

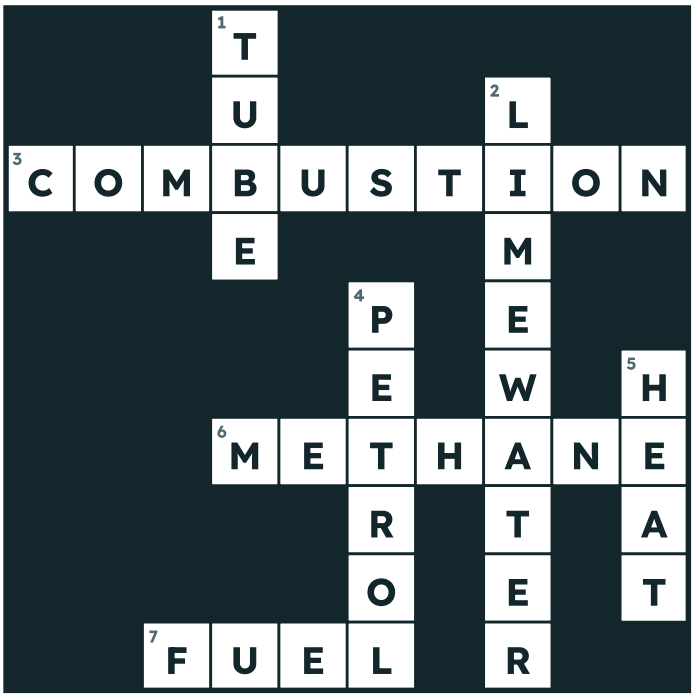
Lesson 5: Combustion

Answers

Word search

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

Crossword



Across

3 Combustion
Another word for burning (10)

6 Methane
Natural gas, used on a gas hob (7)

7 Fuel
The general name for a substance burned to release its stored energy (4)

Down

1 Tube
The gases pass through a cold ___ (4)

2 Limewater
The test for carbon dioxide (9)

4 Petrol
A liquid that burns, named with wood and wax (6)

5 Heat
Energy given out by burning, along with light (4)

In the word search, words go across, down or diagonally, and spaces are left out. The same puzzles can be played on the Chemical reactions lesson 5 page of the KS3 Science revision site.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 6

Thermal decomposition

Word search

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

Find these 8 words

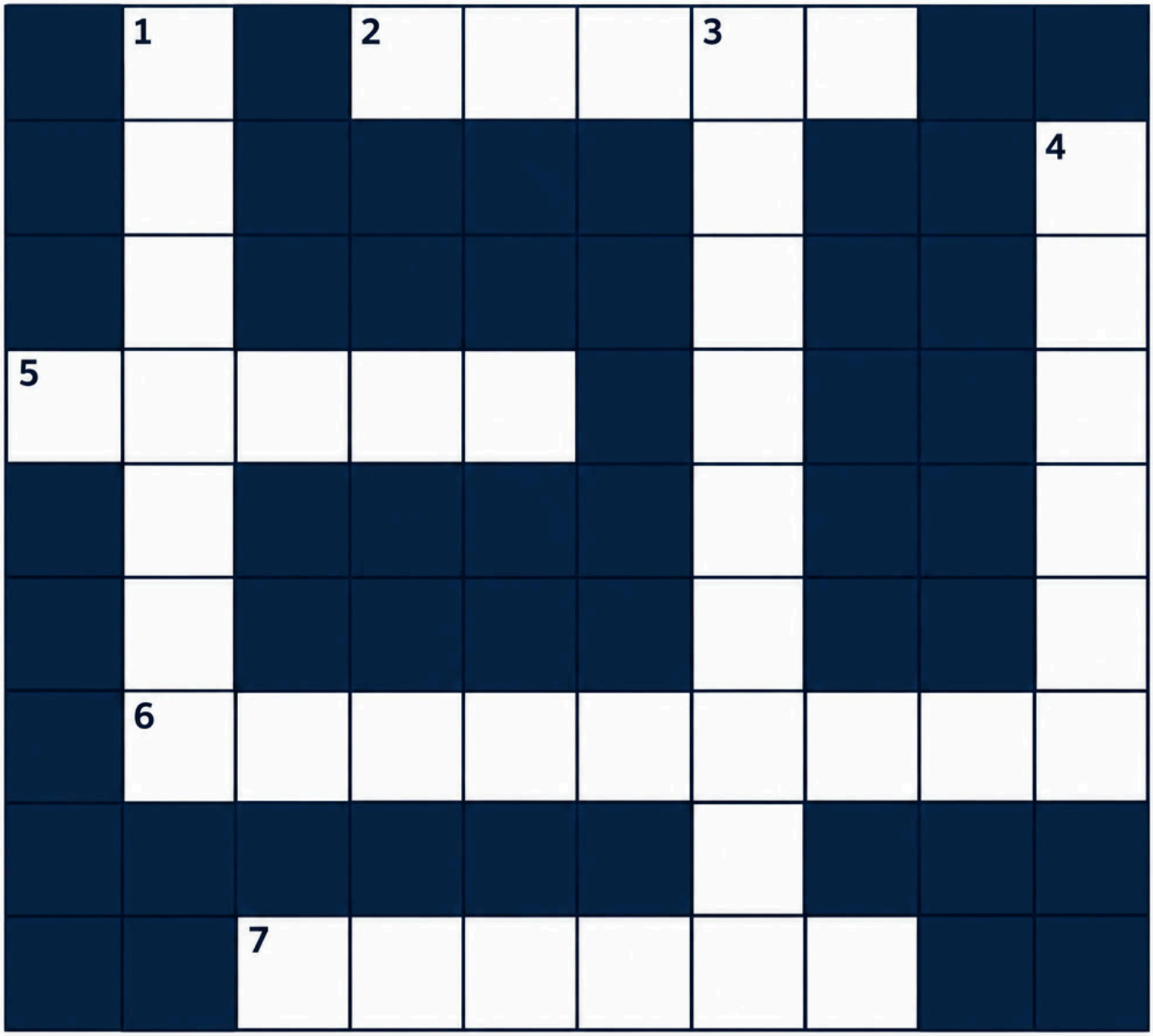
- ☐ BLACK
- ☐ CARBONATE
- ☐ COPPER
- ☐ GREEN
- ☐ LIMEWATER
- ☐ OXIDE
- ☐ POWDER
- ☐ THERMAL

Words go across, down or diagonally. Spaces are left out.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 6

Thermal decomposition

Crossword



Across

2 The colour of the solid after it is heated (5)

5 The colour of the solid before it is heated (5)

6 The test for carbon dioxide (9)

7 A reddish-brown metal used for electrical wires (6)

Down

1 '___' means heat (7)

3 Zinc ___ breaks down when you heat it strongly (9)

4 A dish of fine dry ___ beside a dish of a different colour (6)

The number in brackets is how many letters the answer has.

KS3 SCIENCE · CHEMISTRY · CHEMICAL REACTIONS

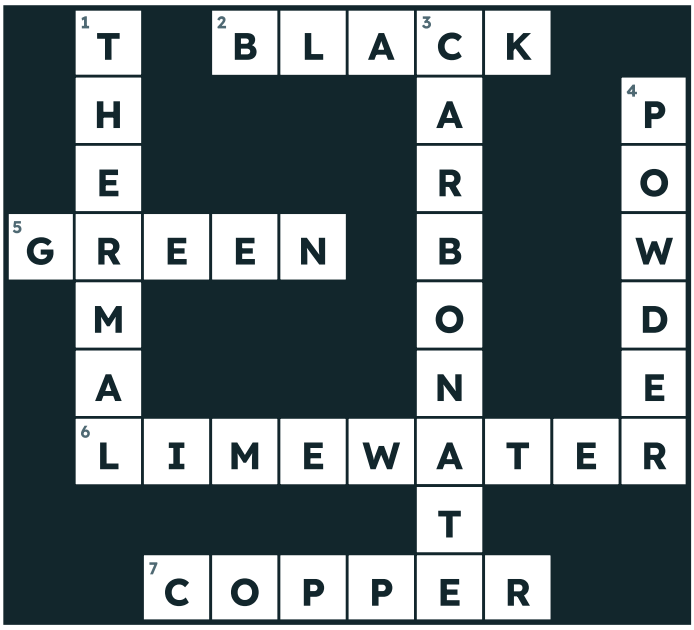
Lesson 6: Thermal decomposition

Answers

Word search



Crossword



Across

2 Black
The colour of the solid after it is heated (5)

5 Green
The colour of the solid before it is heated (5)

6 Limewater
The test for carbon dioxide (9)

7 Copper
A reddish-brown metal used for electrical wires (6)

Down

1 Thermal
'___' means heat (7)

3 Carbonate
Zinc ___ breaks down when you heat it strongly (9)

4 Powder
A dish of fine dry ___ beside a dish of a different colour (6)

In the word search, words go across, down or diagonally, and spaces are left out. The same puzzles can be played on the Chemical reactions lesson 6 page of the KS3 Science revision site.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 7

Exothermic and endothermic

Word search

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

Find these 8 words

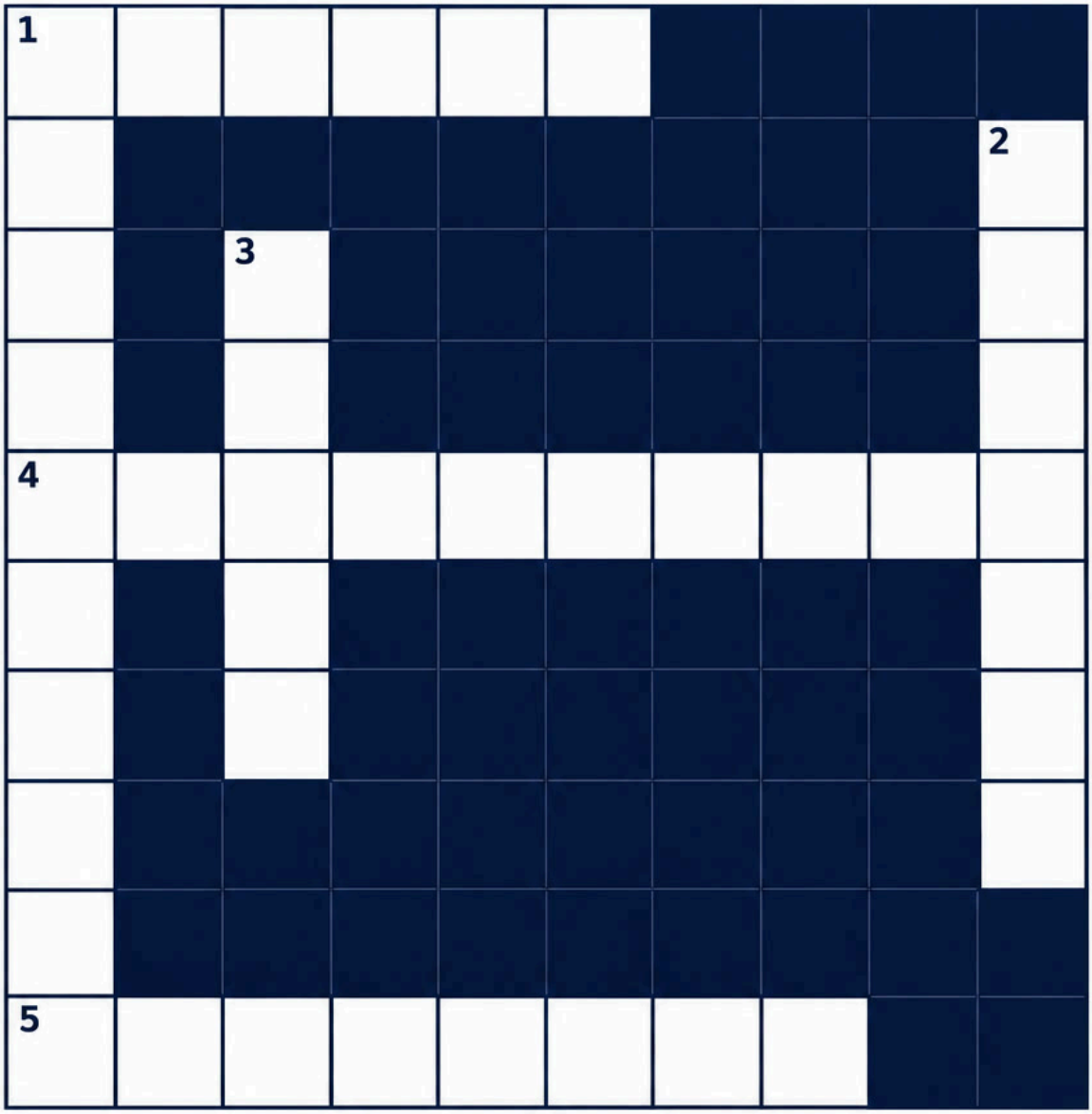
- ☐ ENDOTHERMIC
- ☐ ENERGY
- ☐ EXOTHERMIC
- ☐ HAND WARMER
- ☐ SHERBET
- ☐ SURROUNDINGS
- ☐ TEMPERATURE
- ☐ THERMOMETER

Words go across, down or diagonally. Spaces are left out.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 7

Exothermic and endothermic

Crossword



Across

1 What reactions give out or take in (6)

4 A small pack whose reaction releases heat to keep your fingers comfortable in winter (4,6)

5 Used on a footballer's knee; it turns icy cold when the chemicals mix (4,4)

Down

1 Burning a fuel is this kind of reaction; it gives out heat (10)

2 Fizzes on your tongue and feels cold (7)

3 Atoms are held together by these (5)

The number in brackets is how many letters the answer has.

KS3 SCIENCE · CHEMISTRY · CHEMICAL REACTIONS

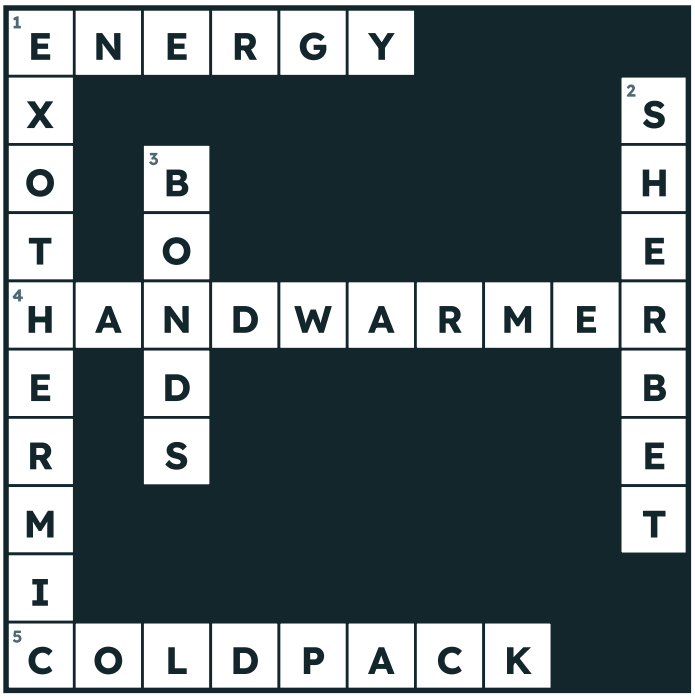
Lesson 7: Exothermic and endothermic

Answers

Word search



Crossword



Across

1 Energy
What reactions give out or take in (6)

4 Hand warmer
A small pack whose reaction releases heat to keep your fingers comfortable in winter (4,6)

5 Cold pack
Used on a footballer's knee; it turns icy cold when the chemicals mix (4,4)

Down

1 Exothermic
Burning a fuel is this kind of reaction; it gives out heat (10)

2 Sherbet
Fizzes on your tongue and feels cold (7)

3 Bonds
Atoms are held together by these (5)

In the word search, words go across, down or diagonally, and spaces are left out. The same puzzles can be played on the Chemical reactions lesson 7 page of the KS3 Science revision site.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 8

Catalysts

Word search

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

Find these 8 words

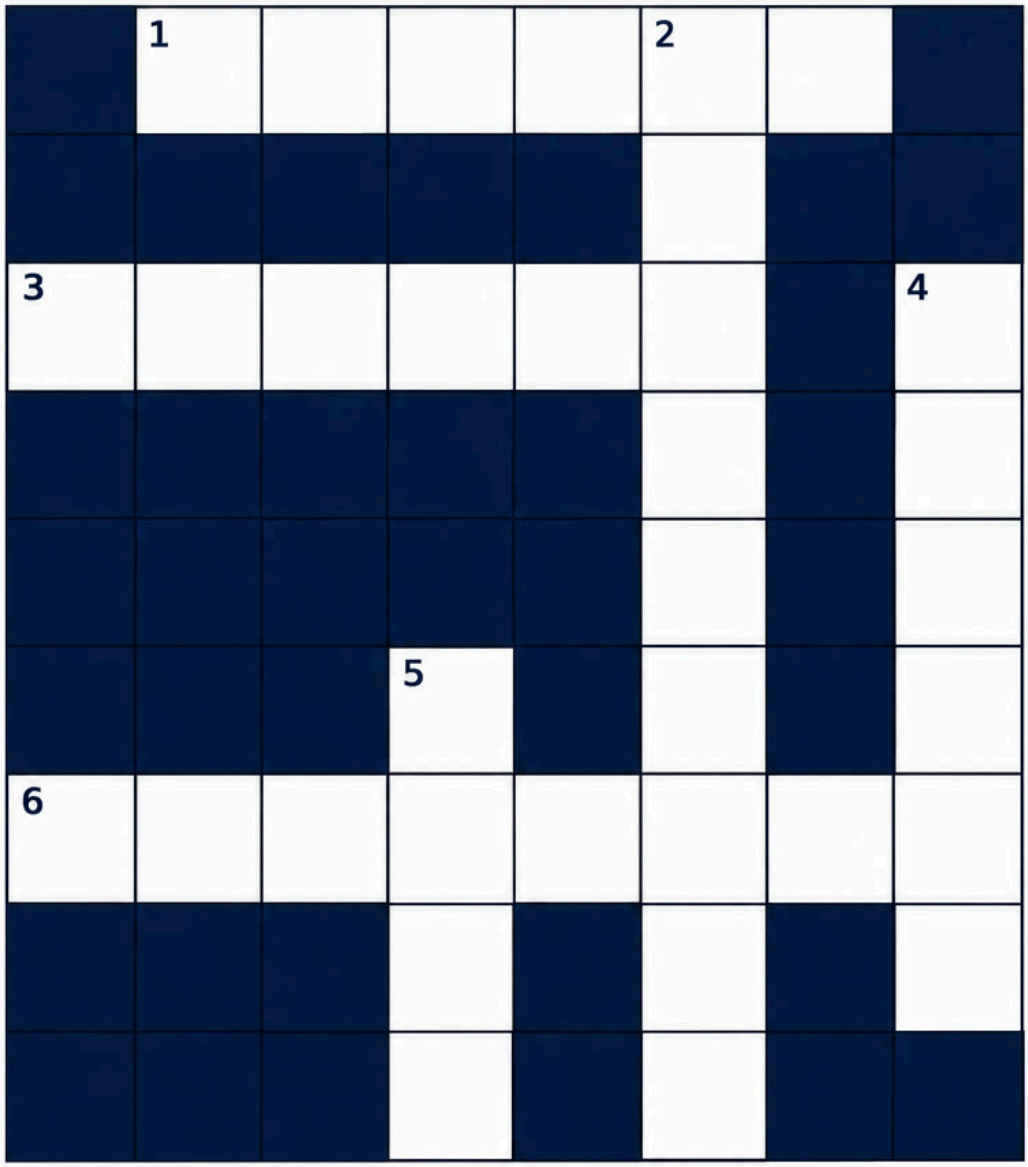
- ☐ CATALYST
- ☐ CONVERTER
- ☐ DIGESTION
- ☐ FOAM
- ☐ LIVING
- ☐ OXYGEN
- ☐ PEROXIDE
- ☐ SPEEDS

Words go across, down or diagonally. Spaces are left out.

KS3 CHEMISTRY · CHEMICAL REACTIONS · LESSON 8

Catalysts

Crossword



Across

1 Makes a reaction faster: it ___ it up (6)

3 Plants and animals are ___ things (6)

6 Hydrogen ___ breaks down very slowly into water and a gas (8)

Down

2 The breakdown of food in your gut (9)

4 The gas made when the substance in the cylinder breaks down (6)

5 Thick white ___ shoots out of the cylinder when washing-up liquid is added (4)

The number in brackets is how many letters the answer has.

KS3 SCIENCE · CHEMISTRY · CHEMICAL REACTIONS

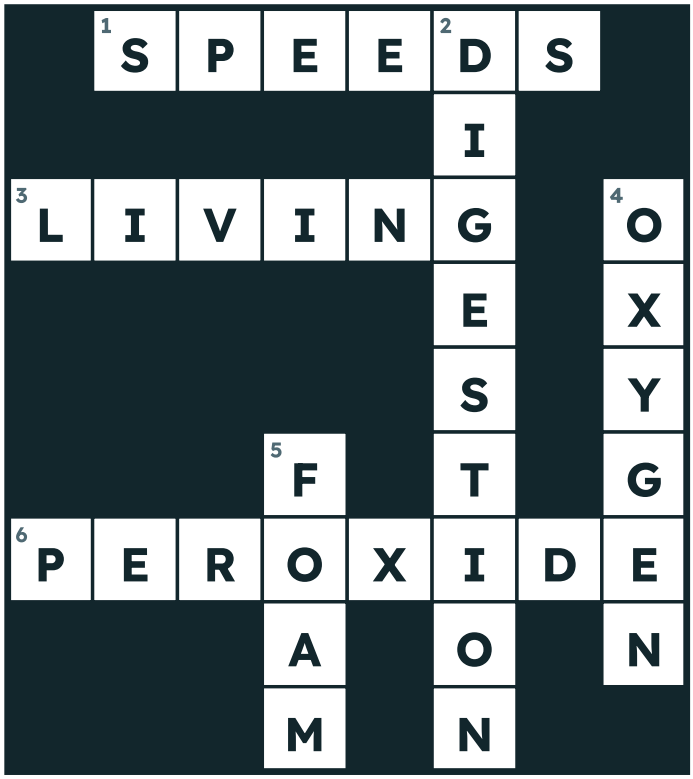
Lesson 8: Catalysts

Answers

Word search

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

Crossword



Across

1 Speeds
Makes a reaction faster: it ___ it up (6)

3 Living
Plants and animals are ___ things (6)

6 Peroxide
Hydrogen ___ breaks down very slowly into water and a gas (8)

Down

2 Digestion
The breakdown of food in your gut (9)

4 Oxygen
The gas made when the substance in the cylinder breaks down (6)

5 Foam
Thick white ___ shoots out of the cylinder when washing-up liquid is added (4)

In the word search, words go across, down or diagonally, and spaces are left out. The same puzzles can be played on the Chemical reactions lesson 8 page of the KS3 Science revision site.