KS3 SCIENCE · CHEMISTRY

Metals and reactivity

Word search

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

Find these 10 words

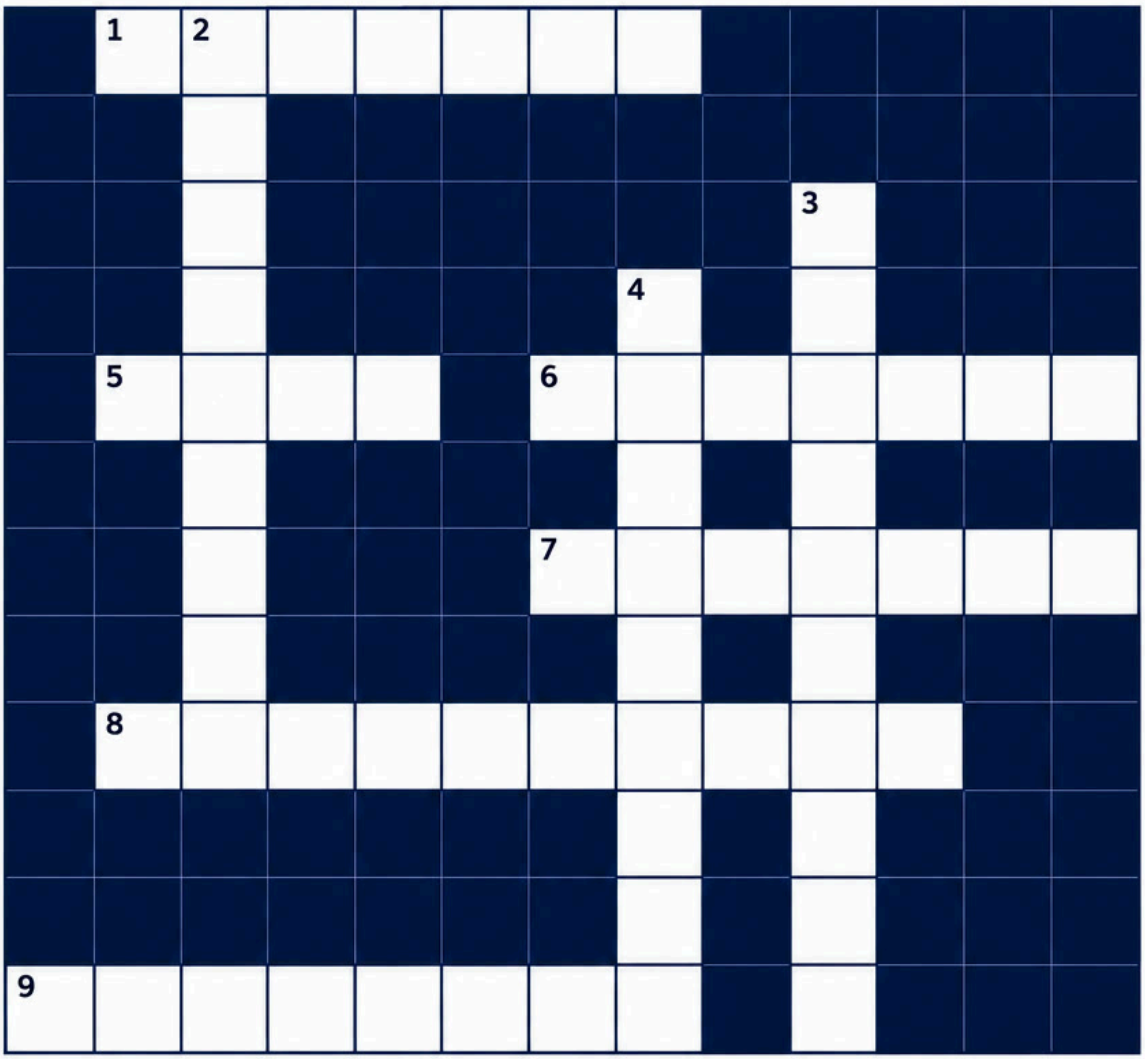
- ☐ COMPOSITE
- ☐ DISPLACEMENT
- ☐ ELECTROLYSIS
- ☐ HYDROGEN
- ☐ OXIDATION
- ☐ OXIDE
- ☐ POLYMER
- ☐ REDUCTION
- ☐ RUSTING
- ☐ SALT

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

KS3 SCIENCE · CHEMISTRY

Metals and reactivity

Crossword



Across

1 A material made of very long chain molecules (7)

5 The compound made, with hydrogen, when a metal reacts with an acid (4)

6 A hard, brittle material with a very high melting point (7)

7 The slow reaction of iron with oxygen and water (7)

8 Hardly ever takes part in chemical reactions (10)

9 The gas made when a metal reacts with water or an acid (8)

Down

2 A reaction in which a substance combines with oxygen (9)

3 How readily a substance reacts (10)

4 A reaction in which a substance loses oxygen (9)

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

KS3 SCIENCE · CHEMISTRY

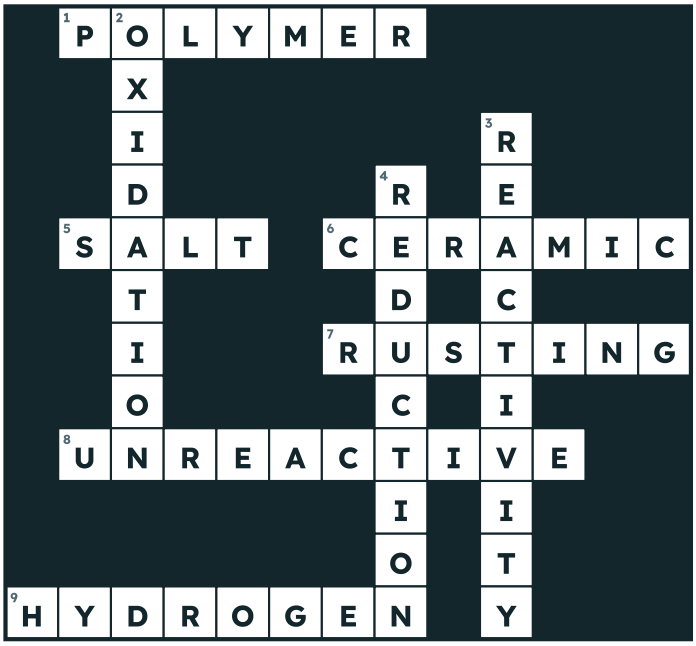
Metals and reactivity

Answers

Word search

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

Crossword



Across

1 Polymer
A material made of very long chain molecules (7)

5 Salt
The compound made, with hydrogen, when a metal reacts with an acid (4)

6 Ceramic
A hard, brittle material with a very high melting point (7)

7 Rusting
The slow reaction of iron with oxygen and water (7)

8 Unreactive
Hardly ever takes part in chemical reactions (10)

9 Hydrogen
The gas made when a metal reacts with water or an acid (8)

Down

2 Oxidation
A reaction in which a substance combines with oxygen (9)

3 Reactivity
How readily a substance reacts (10)

4 Reduction
A reaction in which a substance loses oxygen (9)

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

KS3 CHEMISTRY · METALS AND REACTIVITY · LESSON 1

Metals and oxygen

Word search

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

Find these 8 words

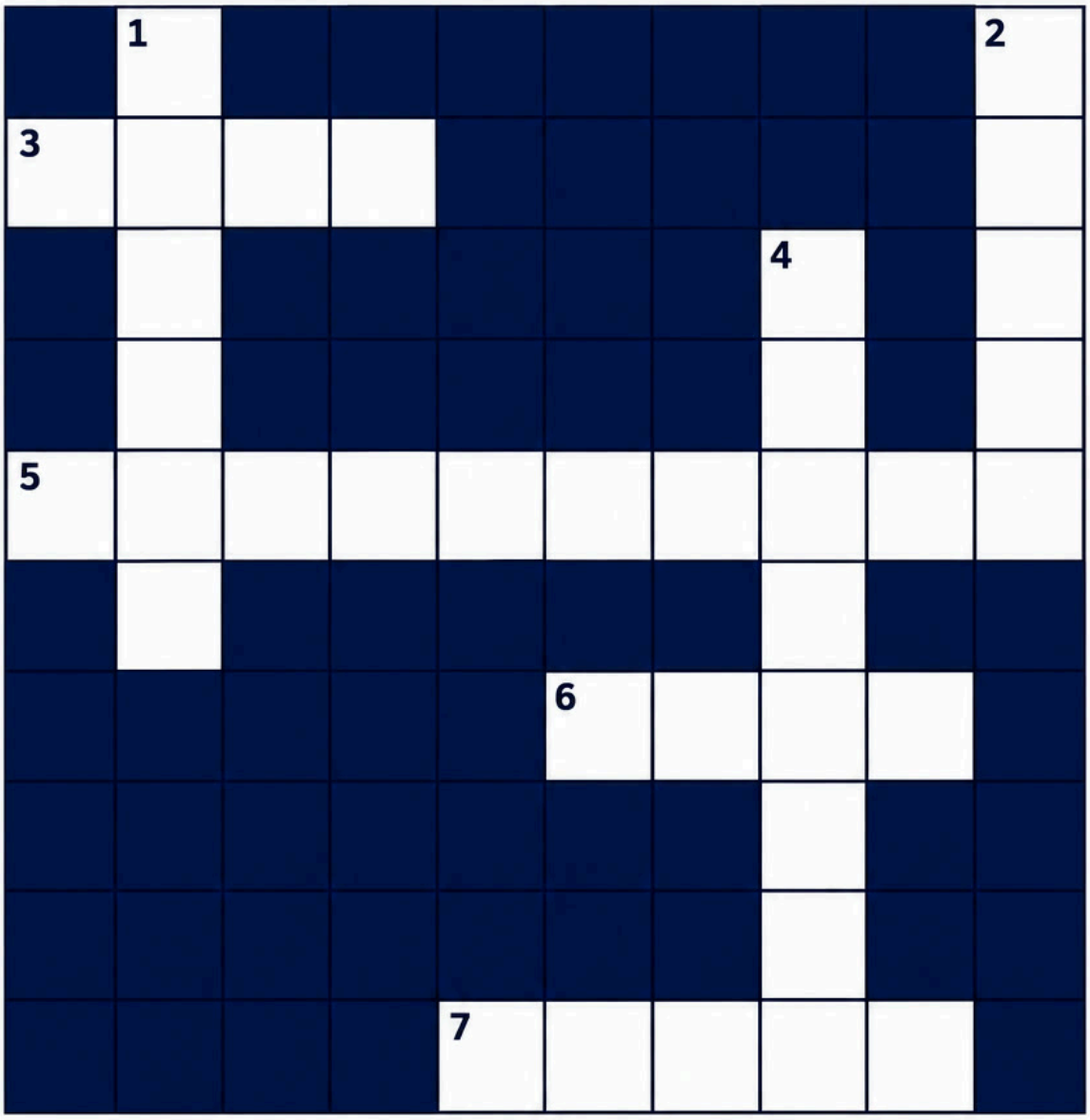
- ☐ BASIC
- ☐ COPPER
- ☐ GOLD
- ☐ MAGNESIUM
- ☐ NAIL
- ☐ NEUTRALISE
- ☐ OXIDE
- ☐ OXIDISED

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

KS3 CHEMISTRY · METALS AND REACTIVITY · LESSON 1

Metals and oxygen

Crossword



Across

3 A shiny metal that does not react with oxygen at all (4)

5 Bases do this to acids (10)

6 In the tubes, the iron ____ rusts when it has air and water (4)

7 The general name for a compound of oxygen with one other element (5)

Down

1 Only turns black when heated in air (6)

2 The bright, hot, burning part of a fire (5)

4 A substance that reacts with oxygen is ____ (8)

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

KS3 SCIENCE · CHEMISTRY · METALS AND REACTIVITY

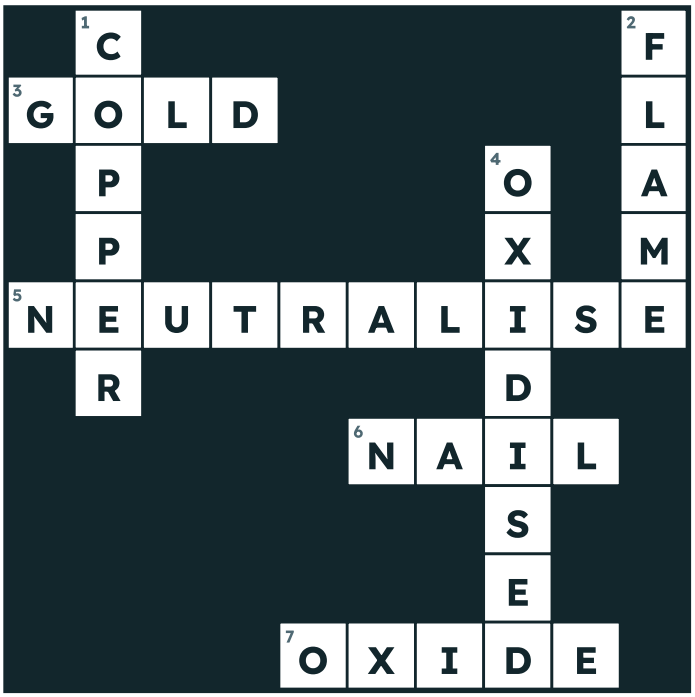
Lesson 1: Metals and oxygen

Answers

Word search



Crossword



Across

3 Gold
A shiny metal that does not react with oxygen at all (4)

5 Neutralise
Bases do this to acids (10)

6 Nail
In the tubes, the iron ___ rusts when it has air and water (4)

7 Oxide
The general name for a compound of oxygen with one other element (5)

Down

1 Copper
Only turns black when heated in air (6)

2 Flame
The bright, hot, burning part of a fire (5)

4 Oxidised
A substance that reacts with oxygen is ___ (8)

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

KS3 CHEMISTRY · METALS AND REACTIVITY · LESSON 2

Metals with water and acids

Word search

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

Find these 8 words

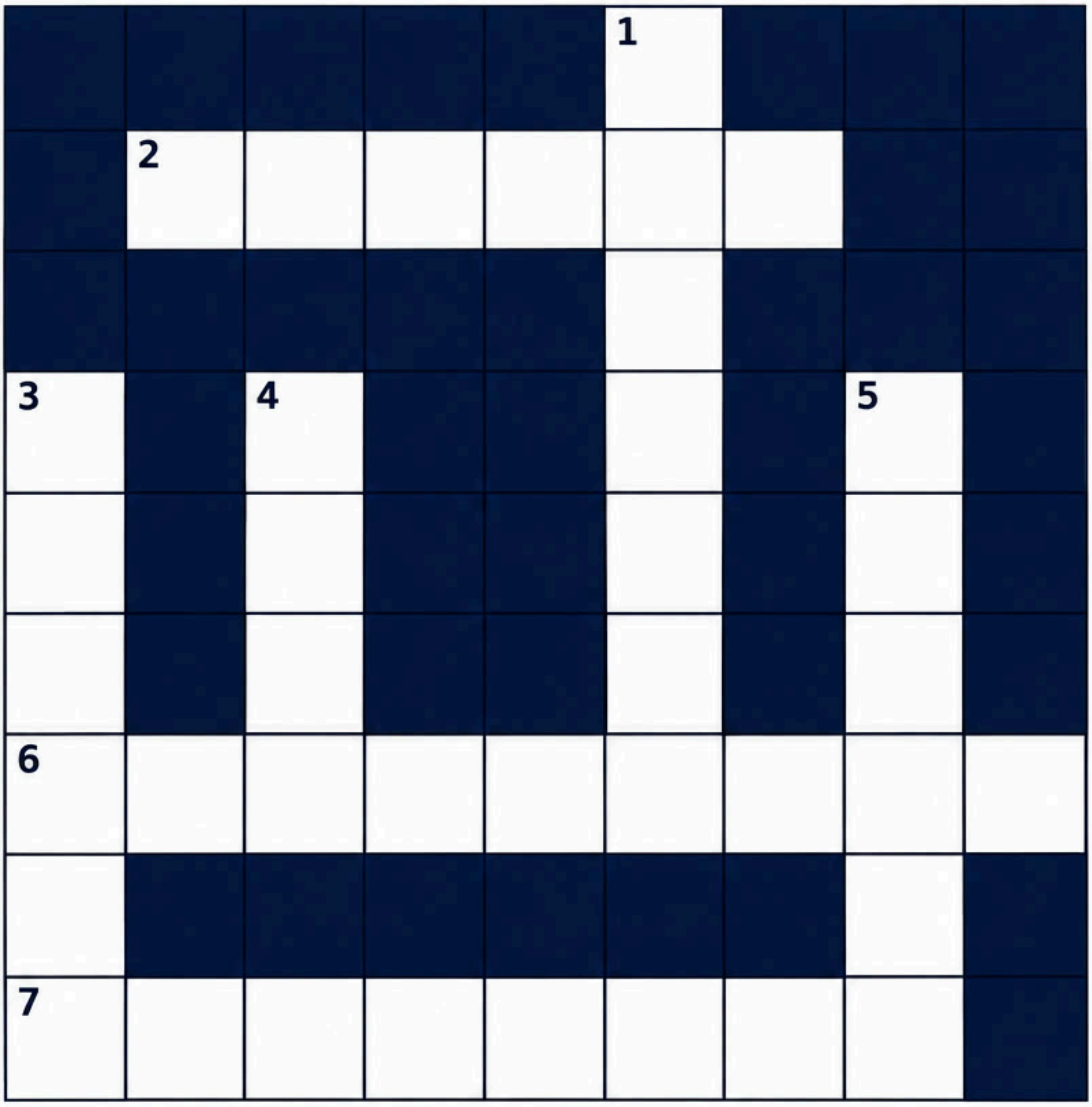
- ☐ BUBBLES
- ☐ CALCIUM
- ☐ COPPER
- ☐ DILUTE
- ☐ HYDROGEN
- ☐ REACTIVE
- ☐ SODIUM
- ☐ ZINC

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

KS3 CHEMISTRY · METALS AND REACTIVITY · LESSON 2

Metals with water and acids

Crossword



Across

2 Group 1 metal that reacts with cold water; its name starts with S (6)

6 Group 1 metal that reacts with cold water; its name starts with P (9)

7 The faster a metal reacts, the more ___ it is (8)

Down

1 The faster these come, the faster the reaction (7)

3 Along with silver and gold, this metal does not react with water (6)

4 Made when a metal reacts with an acid, along with a gas (4)

5 Magnesium and iron fizz in ___ acid (6)

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

KS3 SCIENCE · CHEMISTRY · METALS AND REACTIVITY

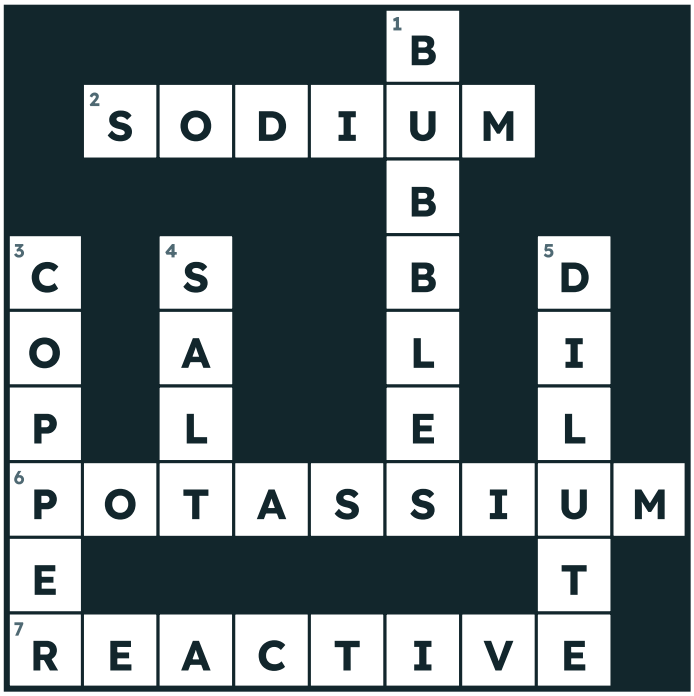
Lesson 2: Metals with water and acids

Answers

Word search

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

Crossword



Across

2 Sodium
Group 1 metal that reacts with cold water; its name starts with S (6)

6 Potassium
Group 1 metal that reacts with cold water; its name starts with P (9)

7 Reactive
The faster a metal reacts, the more ___ it is (8)

Down

1 Bubbles
The faster these come, the faster the reaction (7)

3 Copper
Along with silver and gold, this metal does not react with water (6)

4 Salt
Made when a metal reacts with an acid, along with a gas (4)

5 Dilute
Magnesium and iron fizz in ___ acid (6)

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

KS3 CHEMISTRY · METALS AND REACTIVITY · LESSON 3

The reactivity series

Word search

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

Find these 8 words

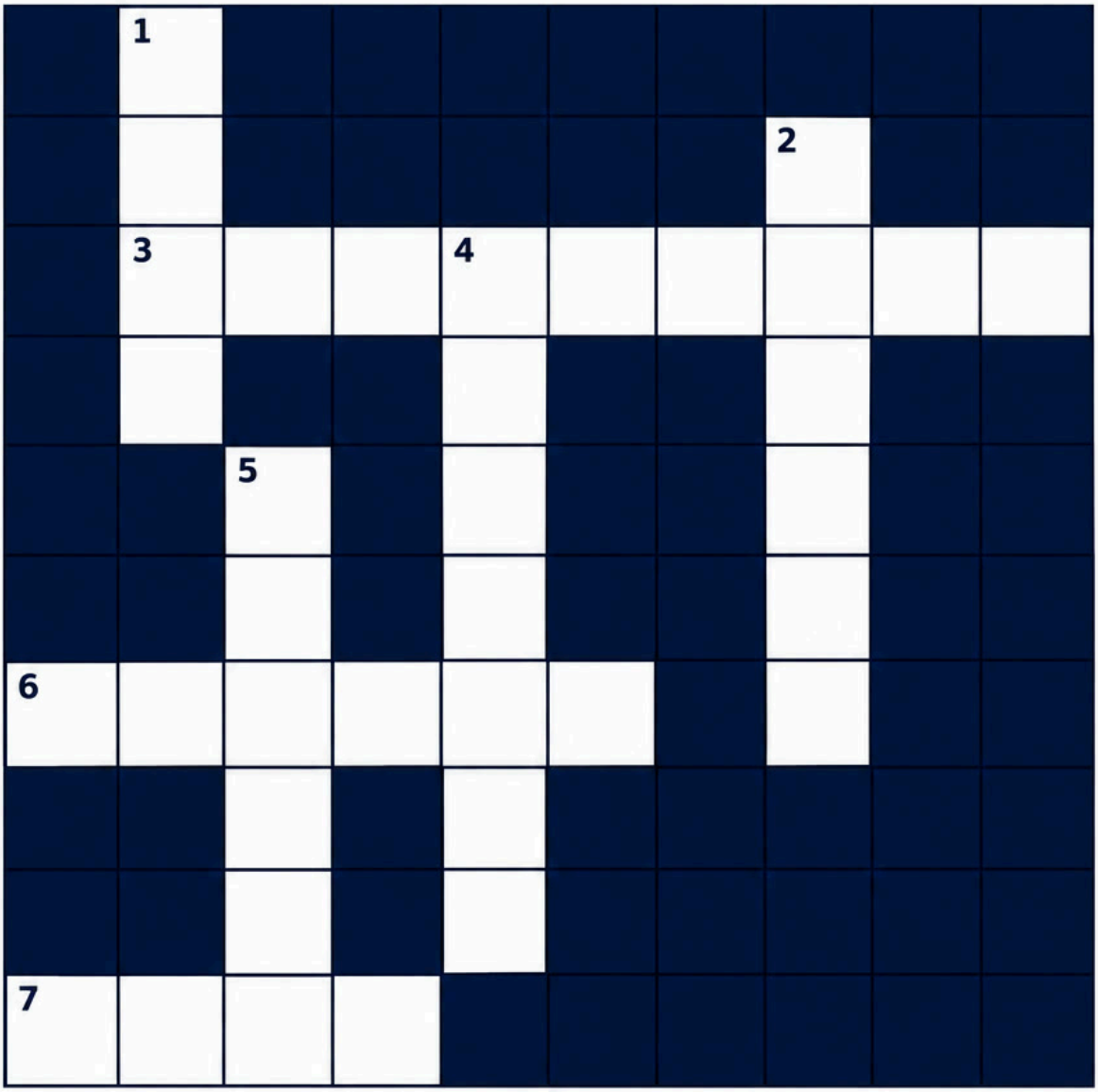
- ☐ CARBON
- ☐ GOLD
- ☐ LEAD
- ☐ MARKERS
- ☐ POTASSIUM
- ☐ REACTIVITY
- ☐ SERIES
- ☐ SILVER

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

KS3 CHEMISTRY · METALS AND REACTIVITY · LESSON 3

The reactivity series

Crossword



Across

3 In the memory phrase, the A in "Please Stop Calling Me A Careless Zebra" stands for this (9)

6 A list of metals from the most reactive to the least reactive (6)

7 The Z in "Please Stop Calling Me A Careless Zebra" stands for this (4)

Down

1 The last metal in the middle group that reacts with dilute acid (4)

2 One of the bottom three metals; it comes just after copper (6)

4 Two non-metals are in the list of metals as these reference points (7)

5 Not a metal, but it has a place in the list, like hydrogen (6)

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

KS3 SCIENCE · CHEMISTRY · METALS AND REACTIVITY

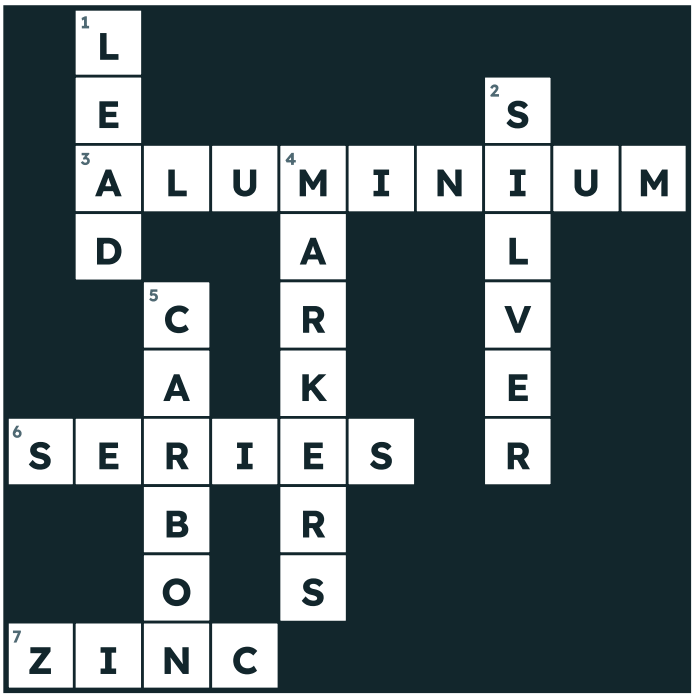
Lesson 3: The reactivity series

Answers

Word search

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

Crossword



Across

3 Aluminium
In the memory phrase, the A in "Please Stop Calling Me A Careless Zebra" stands for this (9)

6 Series
A list of metals from the most reactive to the least reactive (6)

7 Zinc
The Z in "Please Stop Calling Me A Careless Zebra" stands for this (4)

Down

1 Lead
The last metal in the middle group that reacts with dilute acid (4)

2 Silver
One of the bottom three metals; it comes just after copper (6)

4 Markers
Two non-metals are in the list of metals as these reference points (7)

5 Carbon
Not a metal, but it has a place in the list, like hydrogen (6)

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

KS3 CHEMISTRY · METALS AND REACTIVITY · LESSON 4

Displacement reactions

Word search

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

Find these 8 words

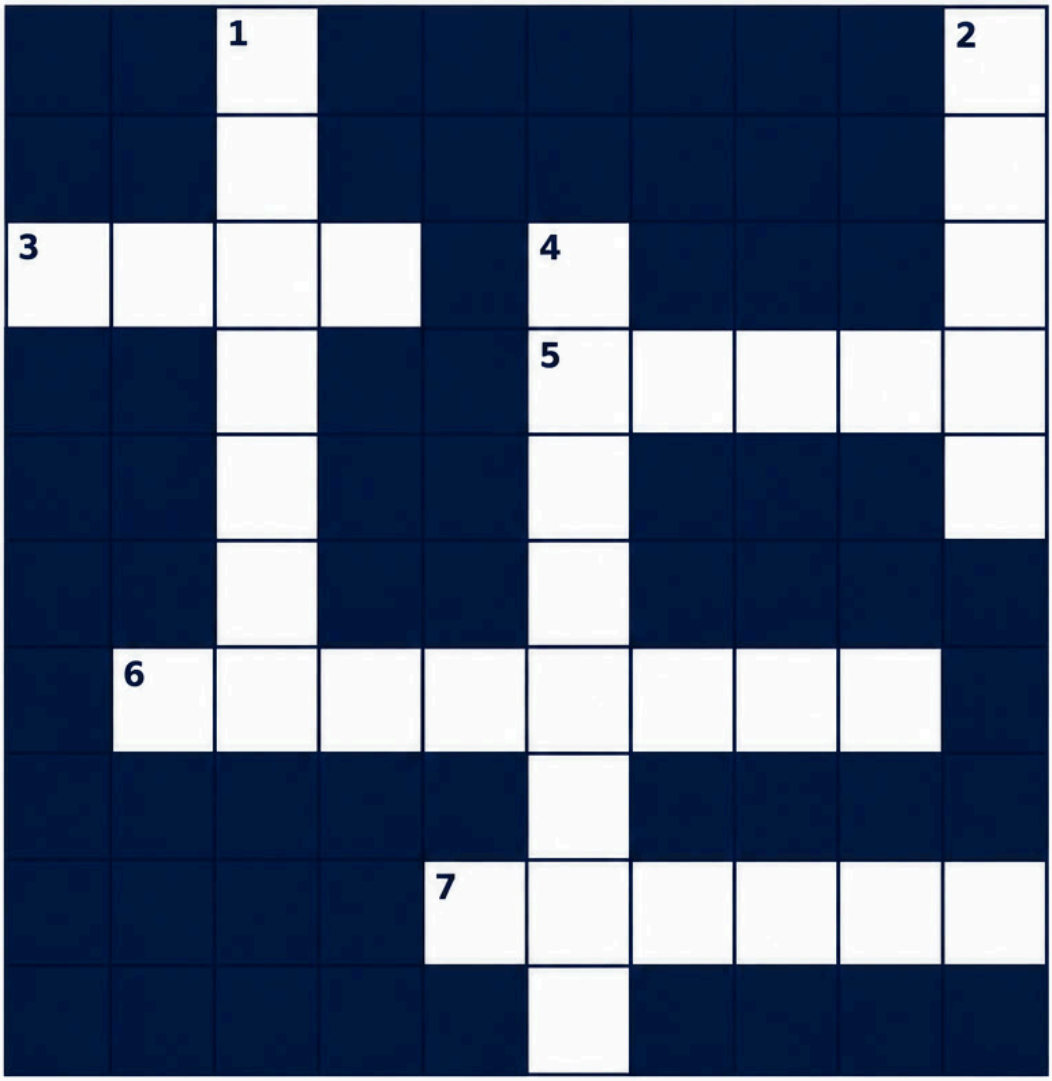
- ☐ ALUMINIUM
- ☐ COPPER
- ☐ DISPLACEMENT
- ☐ FADES
- ☐ MELT
- ☐ OXIDE
- ☐ REACTIVE
- ☐ SOLUTION

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

KS3 CHEMISTRY · METALS AND REACTIVITY · LESSON 4

Displacement reactions

Crossword



Across

3 The very hot reaction can ___ the iron: change it from solid to liquid (4)

5 The general name for a compound of a metal with oxygen (5)

6 Iron is more ___ than the brown metal that it displaces (8)

7 The brown metal that coats the thing standing in the beaker (6)

Down

1 The shared ending of the names of the compounds dissolved in the blue and pale green liquids (7)

2 To get weaker and weaker, as the blue colour of the liquid does (5)

4 A liquid with a substance dissolved in it, such as salt in water (8)

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

KS3 SCIENCE · CHEMISTRY · METALS AND REACTIVITY

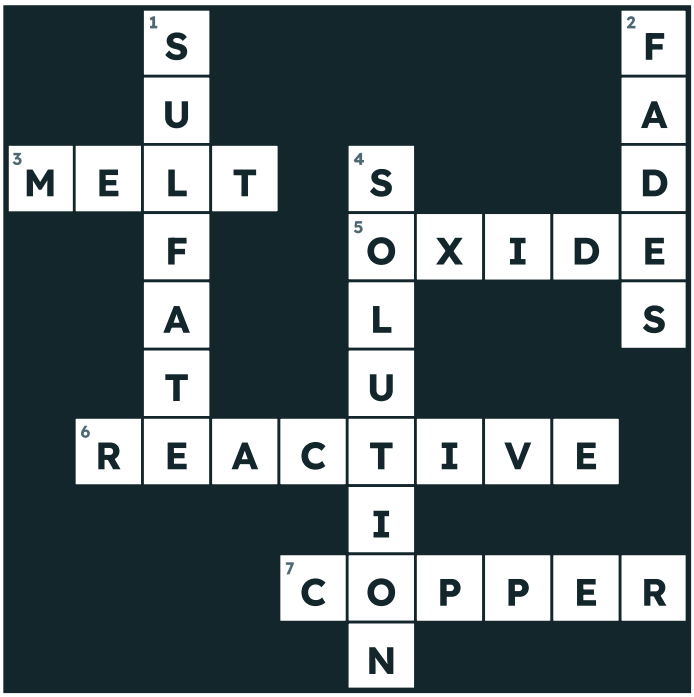
Lesson 4: Displacement reactions

Answers

Word search

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

Crossword



Across

3 Melt
The very hot reaction can ___ the iron: change it from solid to liquid (4)

5 Oxide
The general name for a compound of a metal with oxygen (5)

6 Reactive
Iron is more ___ than the brown metal that it displaces (8)

7 Copper
The brown metal that coats the thing standing in the beaker (6)

Down

1 Sulfate
The shared ending of the names of the compounds dissolved in the blue and pale green liquids (7)

2 Fades
To get weaker and weaker, as the blue colour of the liquid does (5)

4 Solution
A liquid with a substance dissolved in it, such as salt in water (8)

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

KS3 CHEMISTRY · METALS AND REACTIVITY · LESSON 5

Extracting metals

Word search

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

Find these 8 words

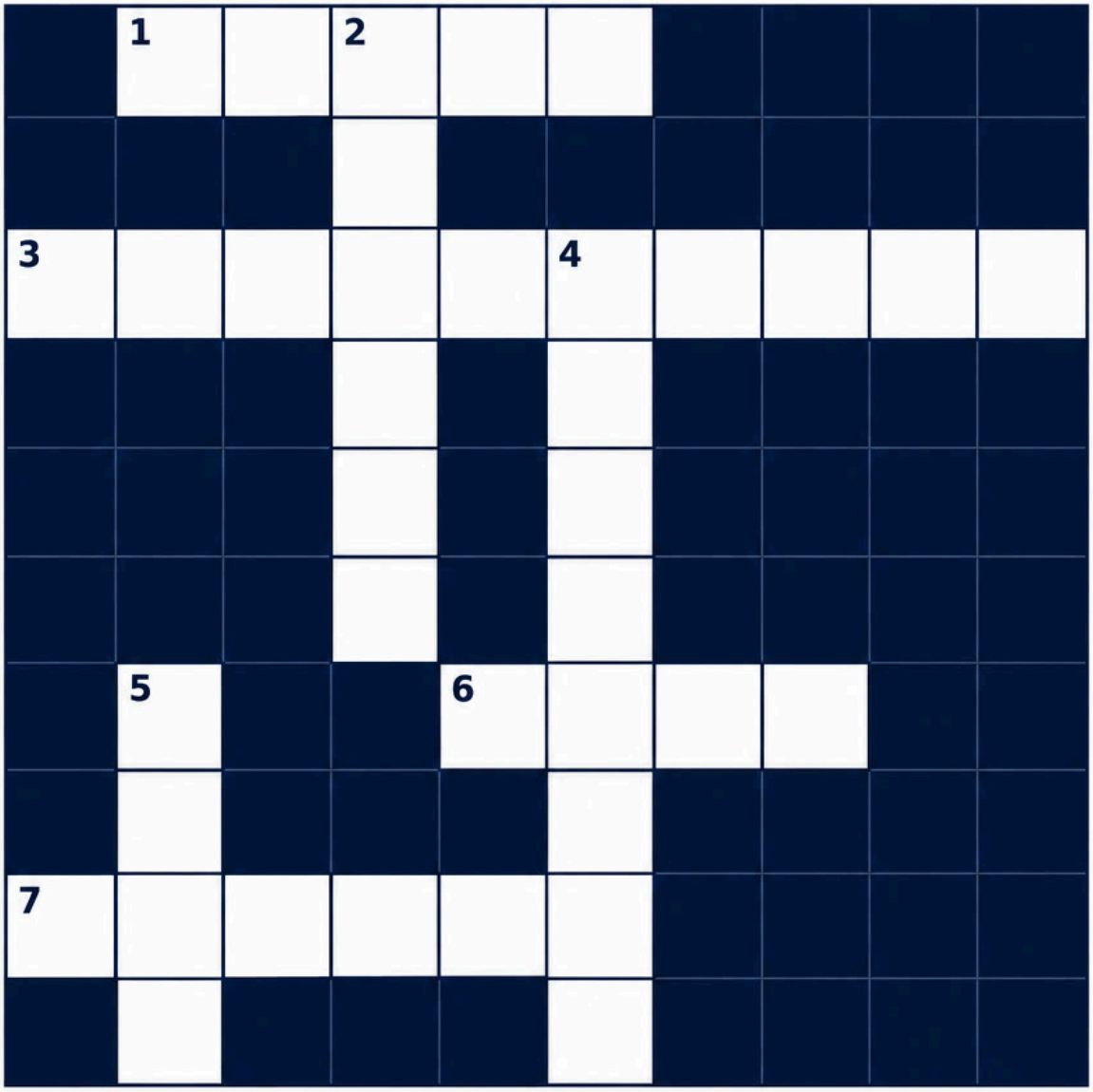
- ☐ COMPOUND
- ☐ ELECTRICITY
- ☐ ELECTROLYSIS
- ☐ EXTRACTING
- ☐ GOLD
- ☐ IRON
- ☐ REDUCTION
- ☐ ROCKS

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

KS3 CHEMISTRY · METALS AND REACTIVITY · LESSON 5

Extracting metals

Crossword



Across

1 An ore is one of these, containing enough metal to make removal worthwhile (5)

3 The first word of this lesson's title (10)

6 So unreactive that it is found as the metal itself (4)

7 Melted, as the white-hot metal that pours out (6)

Down

2 Heated with the ore to displace zinc, lead and copper (6)

4 Found in the ground, most metals are joined with other elements in this (8)

5 A metal whose reddish-brown ore is heated to extract it (4)

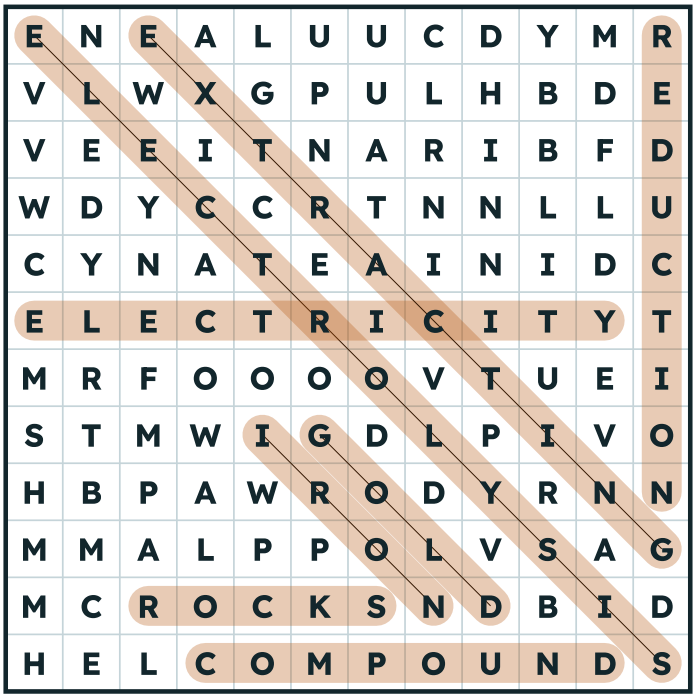
The number in brackets is how many letters the answer has.

KS3 SCIENCE · CHEMISTRY · METALS AND REACTIVITY

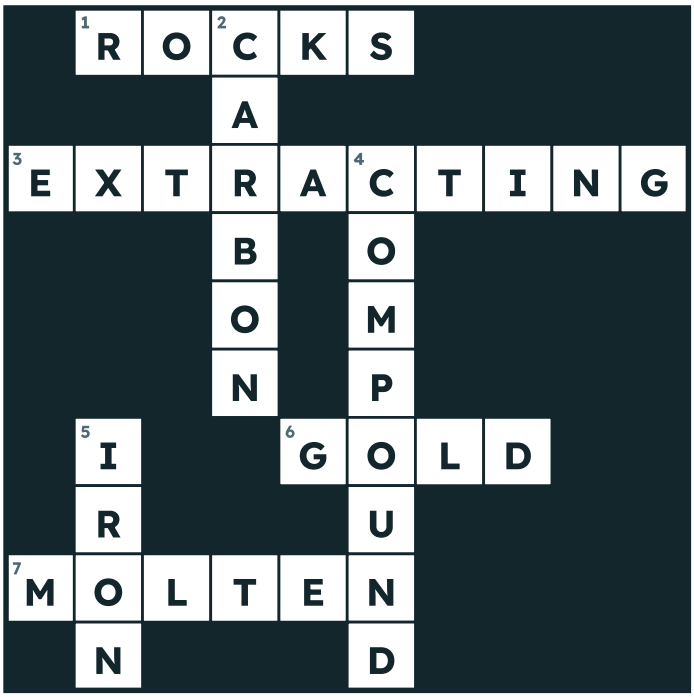
Lesson 5: Extracting metals

Answers

Word search



Crossword



Across

1 Rocks
An ore is one of these, containing enough metal to make removal worthwhile (5)

3 Extracting
The first word of this lesson's title (10)

6 Gold
So unreactive that it is found as the metal itself (4)

7 Molten
Melted, as the white-hot metal that pours out (6)

Down

2 Carbon
Heated with the ore to displace zinc, lead and copper (6)

4 Compound
Found in the ground, most metals are joined with other elements in this (8)

5 Iron
A metal whose reddish-brown ore is heated to extract it (4)

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

KS3 CHEMISTRY · METALS AND REACTIVITY · LESSON 6

Ceramics, polymers and composites

Word search

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

Find these 8 words

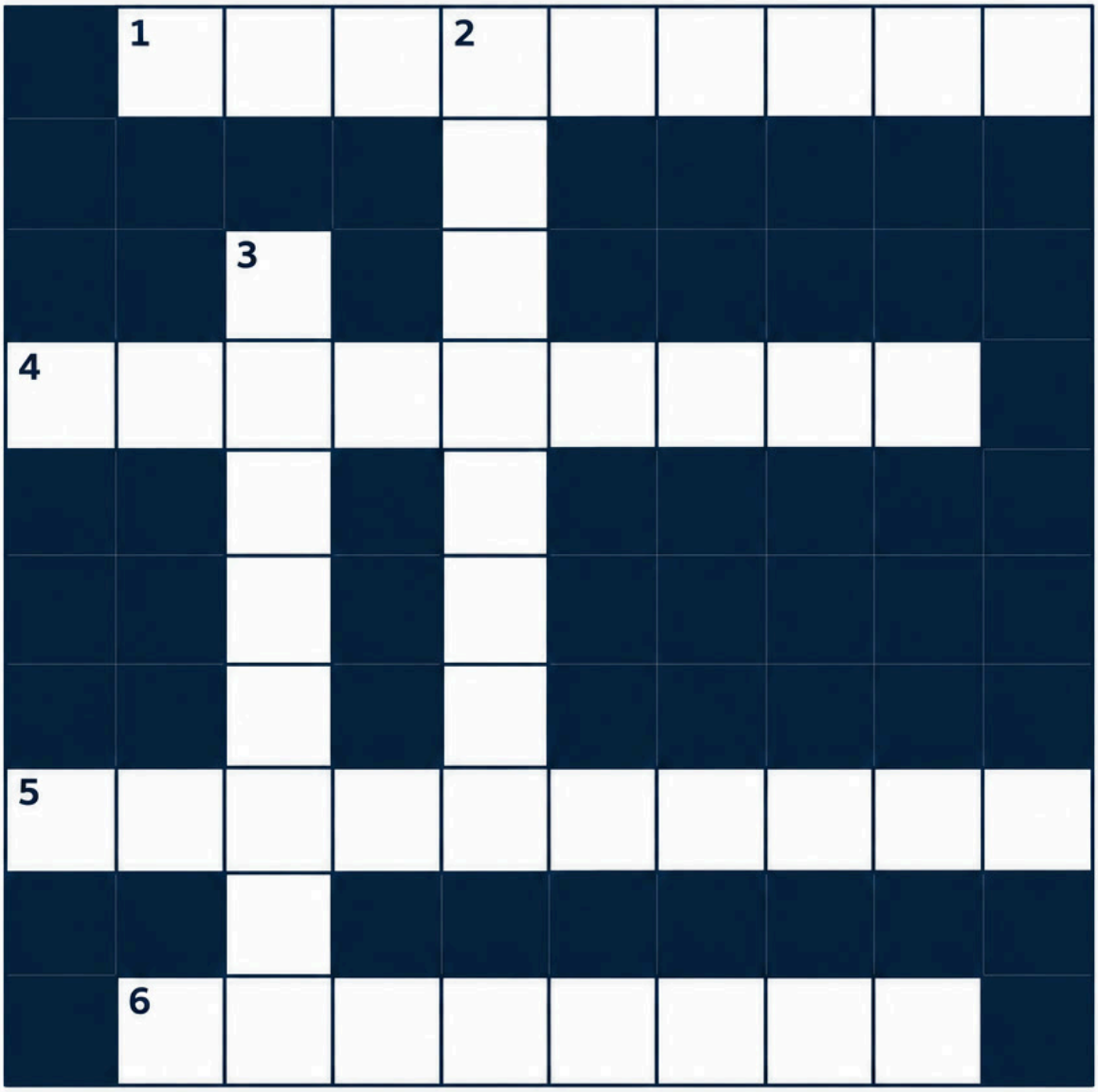
- ☐ BRITTLE
- ☐ CERAMICS
- ☐ COMPOSITES
- ☐ FIBREGLASS
- ☐ FLEXIBLE
- ☐ POLYMERS
- ☐ PORCELAIN
- ☐ RUBBER

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

KS3 CHEMISTRY · METALS AND REACTIVITY · LESSON 6

Ceramics, polymers and composites

Crossword



Across

1 A fine white pottery material used for mugs (9)

4 The very long chains of small units that make up plastics (9)

5 Also called GRP (10)

6 Pottery, brick and glass are examples of these (8)

Down

2 Poured wet over a grid of steel bars (8)

3 Able to bend easily without breaking: light, ___ and easy to mould (8)

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

KS3 SCIENCE · CHEMISTRY · METALS AND REACTIVITY

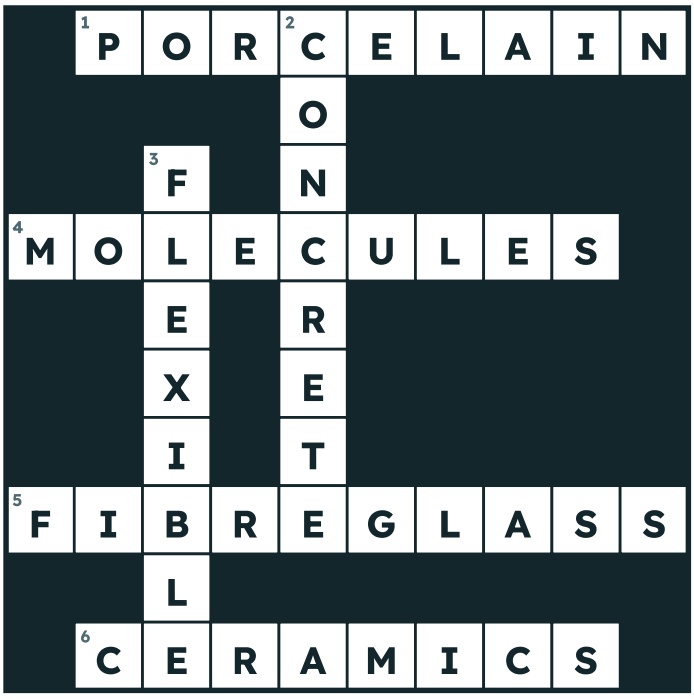
Lesson 6: Ceramics, polymers and composites

Answers

Word search



Crossword



Across

1 Porcelain
A fine white pottery material used for mugs (9)

4 Molecules
The very long chains of small units that make up plastics (9)

5 Fibreglass
Also called GRP (10)

6 Ceramics
Pottery, brick and glass are examples of these (8)

Down

2 Concrete
Poured wet over a grid of steel bars (8)

3 Flexible
Able to bend easily without breaking: light, ___ and easy to mould (8)

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