KS3 SCIENCE · CHEMISTRY

Particles and states of matter

Word search

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

Find these 10 words

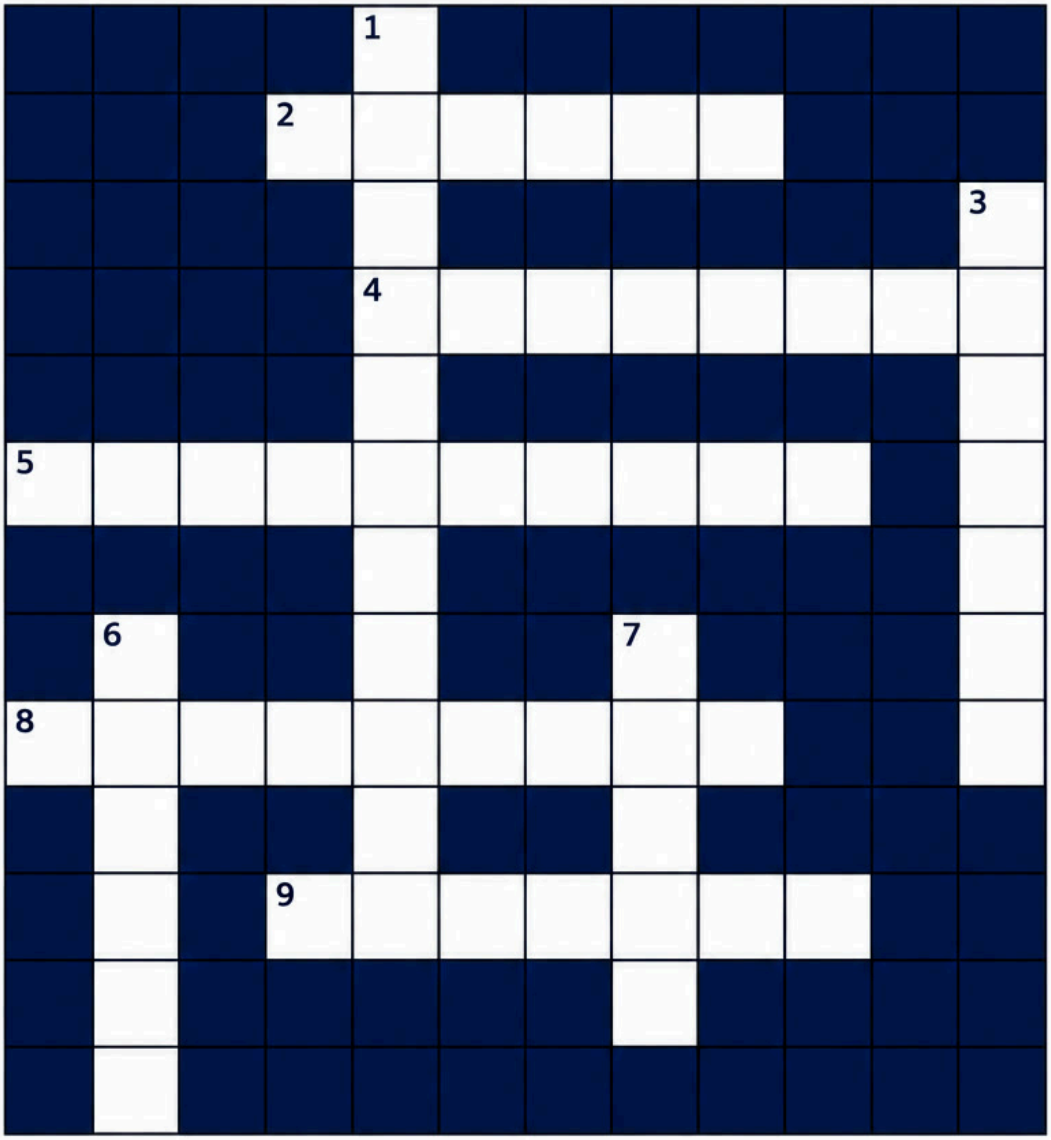
- ☐ BOILING POINT
- ☐ DENSITY
- ☐ EVAPORATING
- ☐ FREEZING
- ☐ GAS PRESSURE
- ☐ LIQUID
- ☐ MELTING POINT
- ☐ PARTICLE
- ☐ SOLID
- ☐ SUBLIMING

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

KS3 SCIENCE · CHEMISTRY

Particles and states of matter

Crossword



Across

2 A space with no particles in it (6)

4 A tiny piece of matter, far too small to see (8)

5 Changing from a gas to a liquid (10)

8 Particles spreading out from where there are many to where there are few (9)

9 The mass of one cubic centimetre of a substance (7)

Down

1 Caused by gas particles hitting the walls of their container (3,8)

3 Changing from a solid to a liquid (7)

6 Flows and takes the shape of its container, but has a fixed volume (6)

7 Has a fixed shape and a fixed volume (5)

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

KS3 SCIENCE · CHEMISTRY

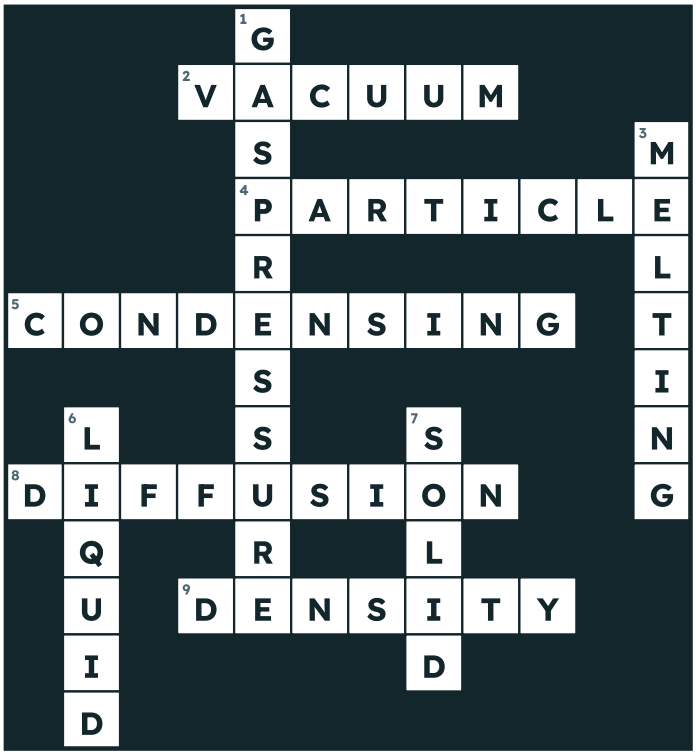
Particles and states of matter

Answers

Word search



Crossword



Across

2 Vacuum
A space with no particles in it (6)

4 Particle
A tiny piece of matter, far too small to see (8)

5 Condensing
Changing from a gas to a liquid (10)

8 Diffusion
Particles spreading out from where there are many to where there are few (9)

9 Density
The mass of one cubic centimetre of a substance (7)

Down

1 Gas pressure
Caused by gas particles hitting the walls of their container (3,8)

3 Melting
Changing from a solid to a liquid (7)

6 Liquid
Flows and takes the shape of its container, but has a fixed volume (6)

7 Solid
Has a fixed shape and a fixed volume (5)

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 1

Solids, liquids and gases

Word search

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

Find these 8 words

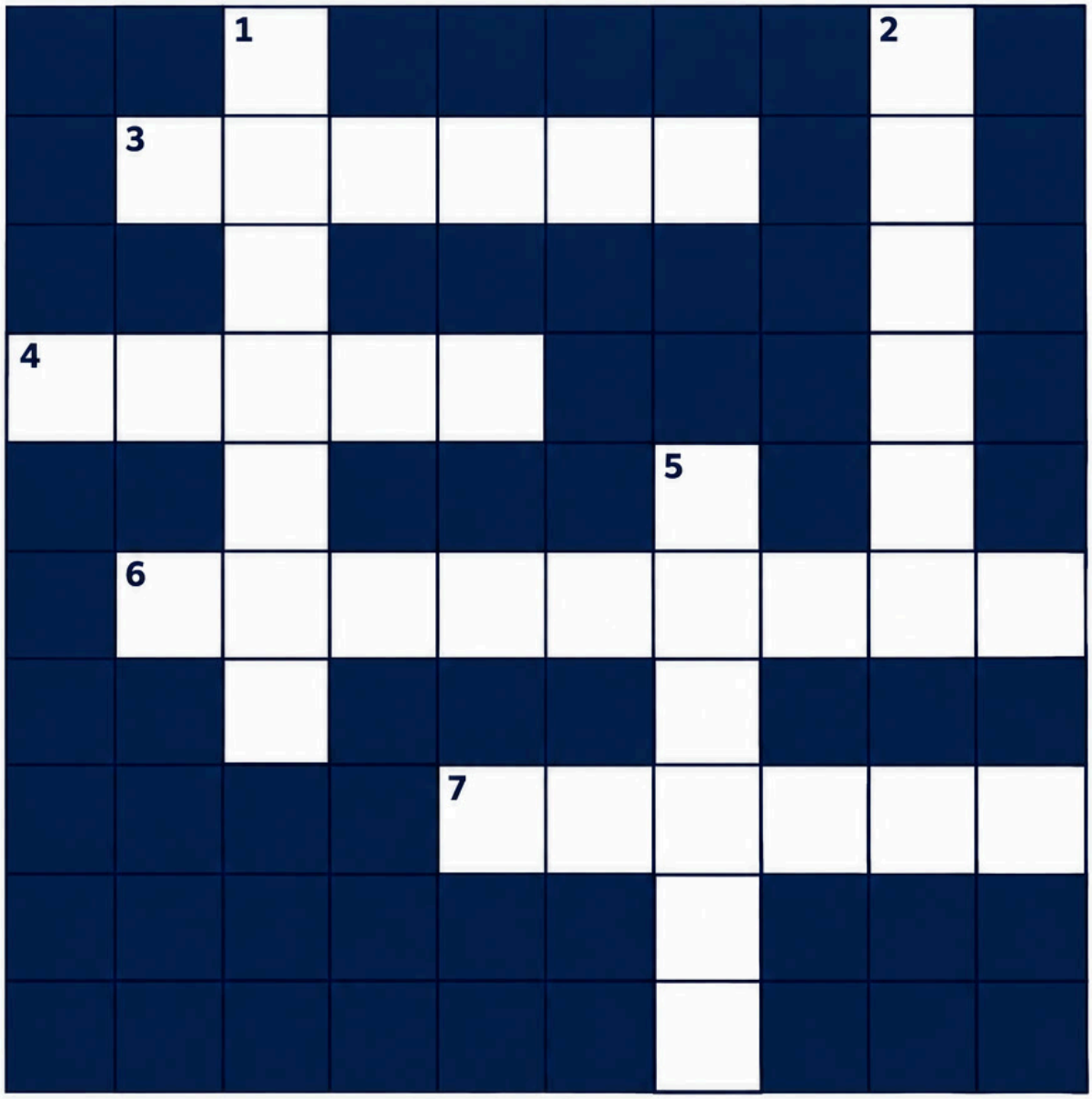
- ☐ CONTAINER
- ☐ FLOW
- ☐ GRAIN
- ☐ LIQUID
- ☐ MATTER
- ☐ SOLID
- ☐ SQUASH
- ☐ SUGAR

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 1

Solids, liquids and gases

Crossword



Across

3 The three states are states of ___ (6)

4 This state keeps its own shape wherever you put it (5)

6 A gas spreads out to fill this (9)

7 Gases are easy to ___ into a smaller space (6)

Down

1 Full of air, this can be pushed into a smaller space by two hands (7)

2 The amount of space something takes up (6)

5 Water poured from a jug into a glass is one of these (6)

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

KS3 SCIENCE · CHEMISTRY · PARTICLES AND STATES OF MATTER

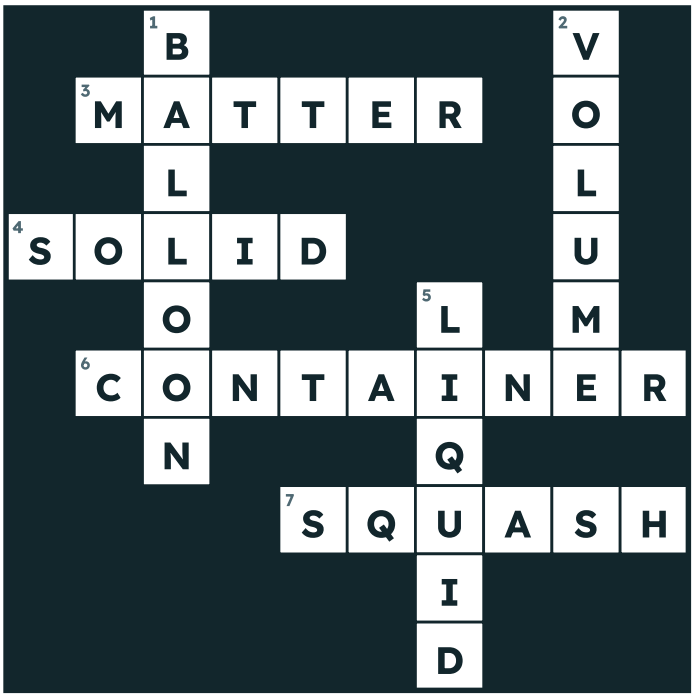
Lesson 1: Solids, liquids and gases

Answers

Word search



Crossword



Across

3 Matter
The three states are states of ___ (6)

4 Solid
This state keeps its own shape wherever you put it (5)

6 Container
A gas spreads out to fill this (9)

7 Squash
Gases are easy to ___ into a smaller space (6)

Down

1 Balloon
Full of air, this can be pushed into a smaller space by two hands (7)

2 Volume
The amount of space something takes up (6)

5 Liquid
Water poured from a jug into a glass is one of these (6)

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 2

The particle model

Word search

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

Find these 8 words

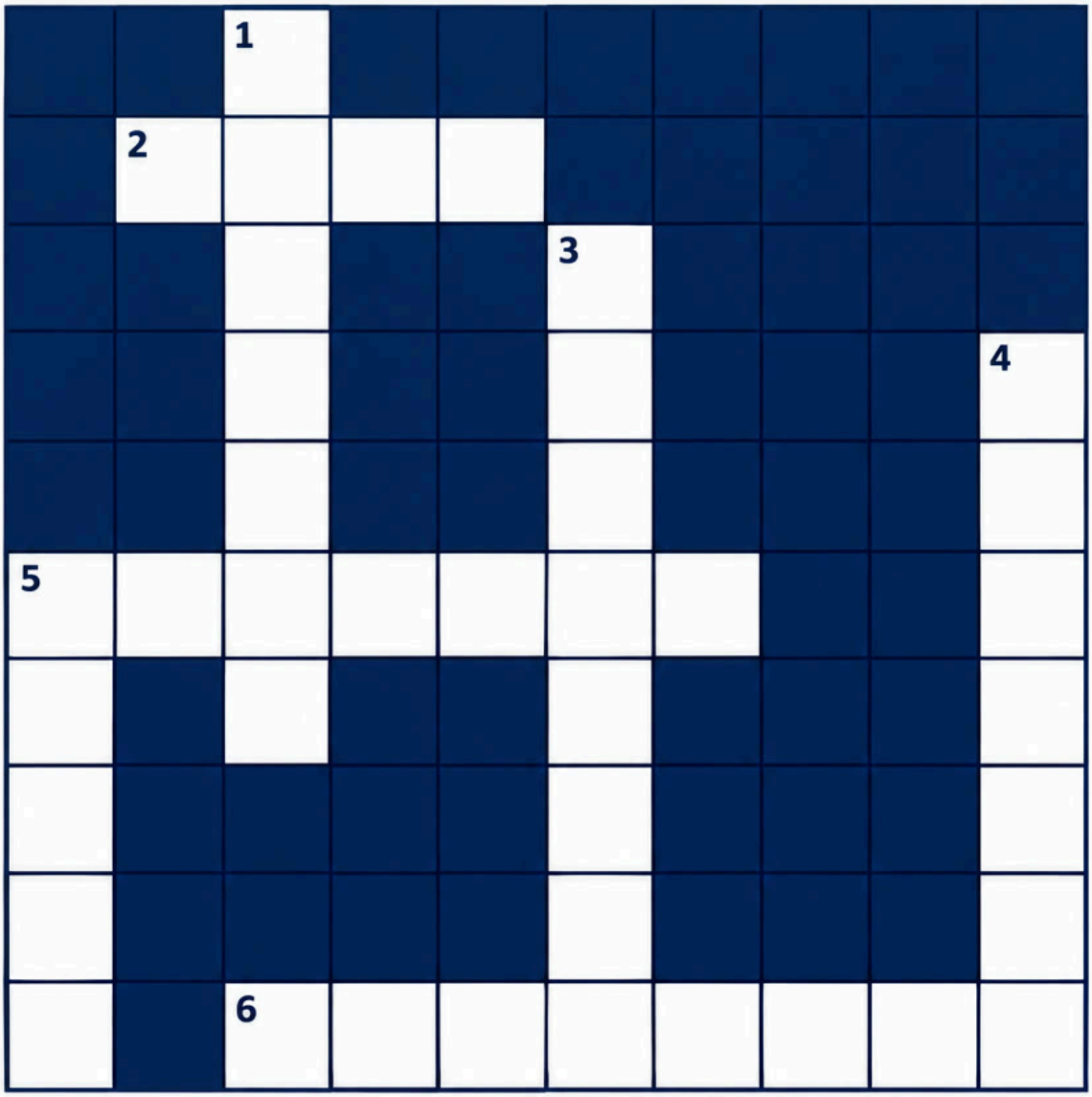
- ☐ ARRANGEMENT
- ☐ GAPS
- ☐ MARBLES
- ☐ MODEL
- ☐ MOVEMENT
- ☐ PARTICLE
- ☐ SLIDE
- ☐ VIBRATE

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 2

The particle model

Crossword



Across

2 A gas can be squashed because of these between its pieces (4)

5 Small glass balls used to represent the tiny pieces that make up matter (7)

6 The general name for one of the tiny pieces that make up everything (8)

Down

1 In a solid the tiny pieces sit in a regular ___ (7)

3 How fast and in which way the pieces travel: quick in every direction in a gas (8)

4 In a solid, the tiny pieces do this about fixed positions (7)

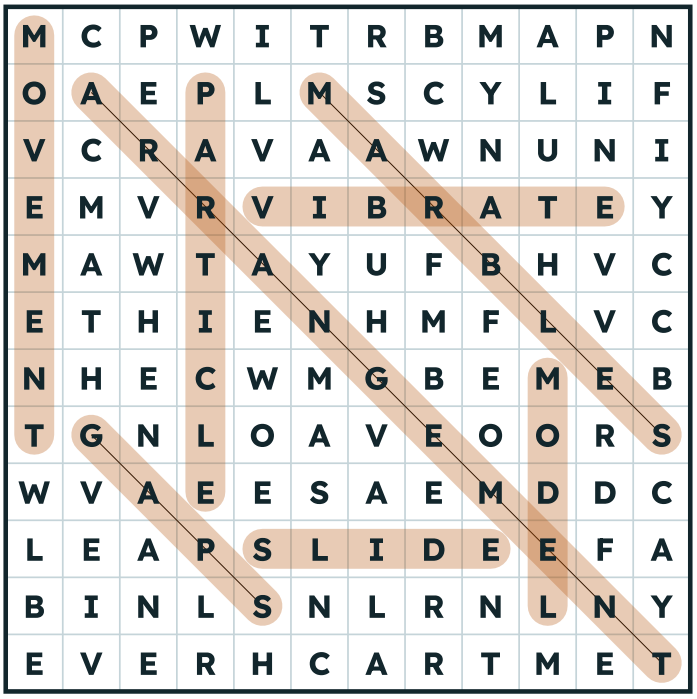
5 An idea scientists use to think about things too small to see (5)

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

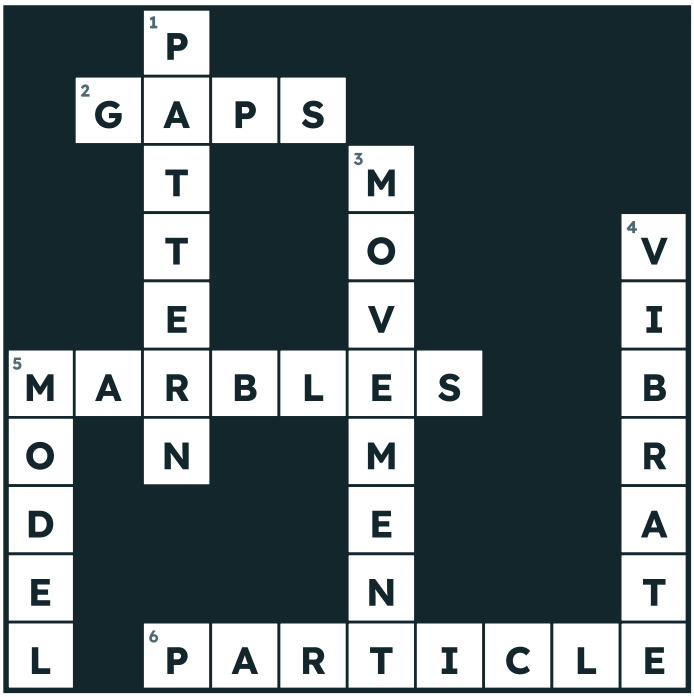
Lesson 2: The particle model

Answers

Word search



Crossword



Across

2 Gaps
A gas can be squashed because of these between its pieces (4)

5 Marbles
Small glass balls used to represent the tiny pieces that make up matter (7)

6 Particle
The general name for one of the tiny pieces that make up everything (8)

Down

1 Pattern
In a solid the tiny pieces sit in a regular ___ (7)

3 Movement
How fast and in which way the pieces travel: quick in every direction in a gas (8)

4 Vibrate
In a solid, the tiny pieces do this about fixed positions (7)

5 Model
An idea scientists use to think about things too small to see (5)

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 3

Changes of state

Word search

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

Find these 8 words

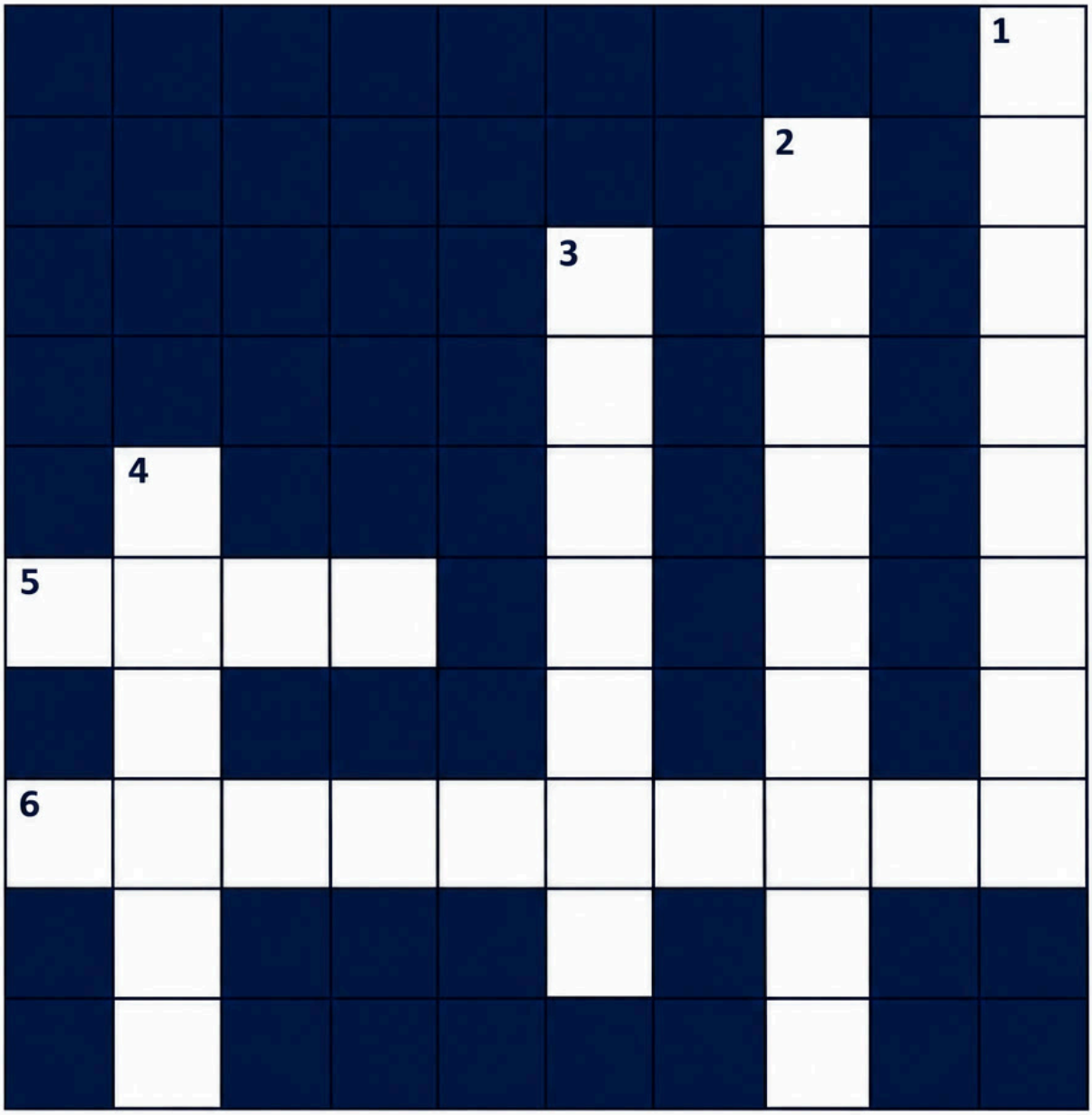
- ☐ BOILING
- ☐ CONDENSING
- ☐ EVAPORATING
- ☐ MASS
- ☐ MELTING
- ☐ SUBLIMING
- ☐ TEMPERATURE
- ☐ VAPOUR

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 3

Changes of state

Crossword



Across

5 10 g of ice melts into 10 g of water, so this stays the same (4)

6 Gas to liquid, like drops forming on a cold glass (10)

Down

1 The change from liquid to solid (8)

2 Solid straight to gas (9)

3 A solid turns to a liquid at its ___ point (7)

4 Water as a gas, in the air, is called water ___ (6)

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

KS3 SCIENCE · CHEMISTRY · PARTICLES AND STATES OF MATTER

Lesson 3: Changes of state

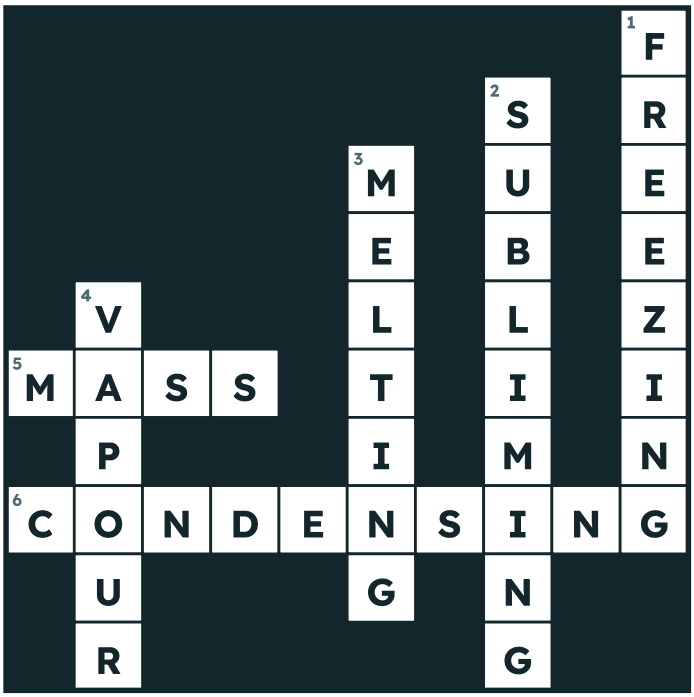
Answers

Word search



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

Crossword



Across

5 Mass
10 g of ice melts into 10 g of water, so this stays the same (4)

6 Condensing
Gas to liquid, like drops forming on a cold glass (10)

Down

1 Freezing
The change from liquid to solid (8)

2 Subliming
Solid straight to gas (9)

3 Melting
A solid turns to a liquid at its ___ point (7)

4 Vapour
Water as a gas, in the air, is called water ___ (6)

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 4

Energy and changes of state

Word search

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

Find these 8 words

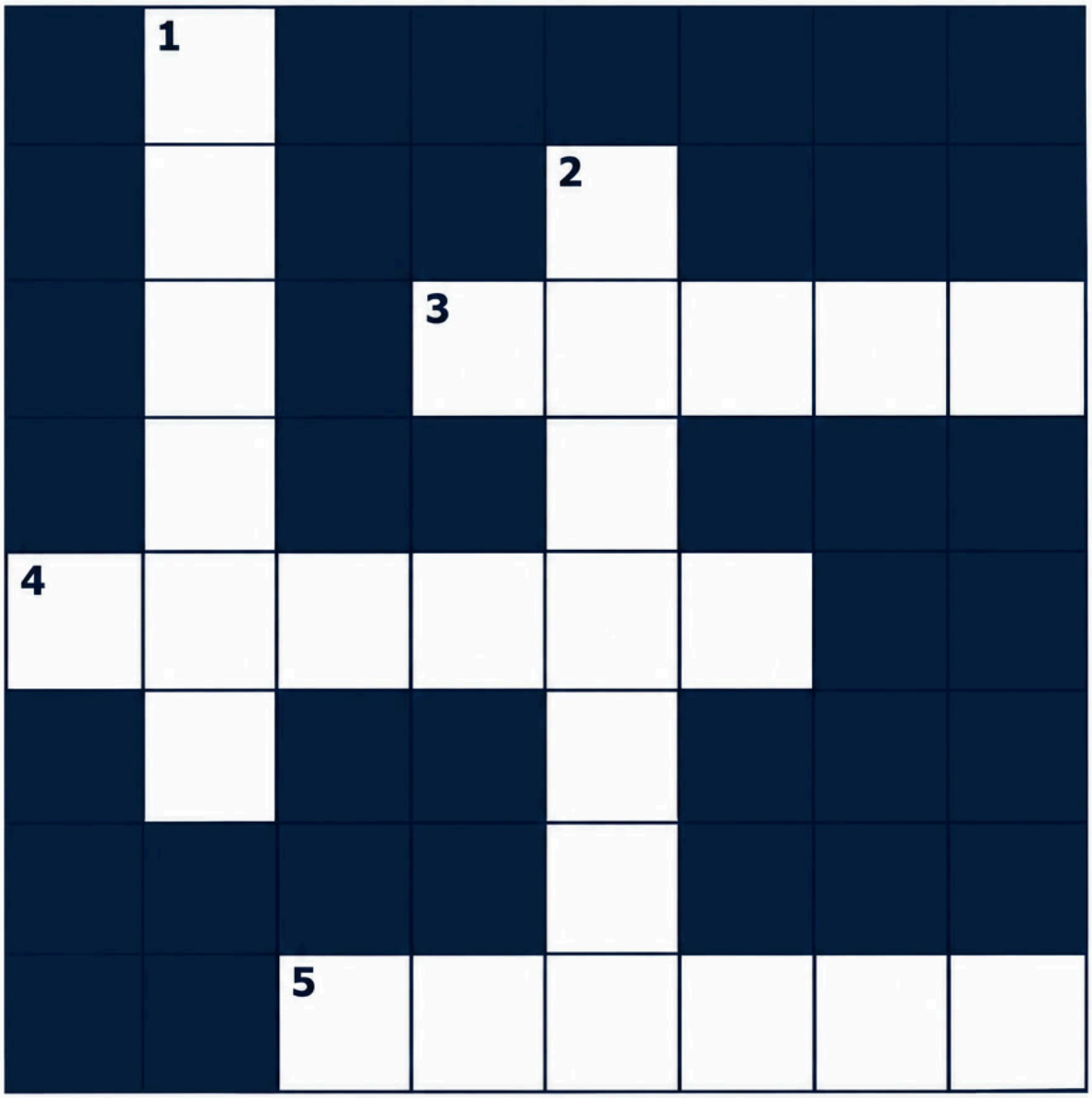
- ☐ BEAKER
- ☐ BOILING POINT
- ☐ BURNER
- ☐ ENERGY
- ☐ LEVEL
- ☐ MELTING POINT
- ☐ SURROUNDINGS
- ☐ THERMOMETER

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 4

Energy and changes of state

Crossword



Across

3 Flat, with no rise or fall: the temperature stays ___ while it melts (5)

4 Glass vessel of hot water that holds the tube of solid (6)

5 Heating gives particles more of this (6)

Down

1 It produces the flame under the hot water (6)

2 Cooling is the ___ of heating (7)

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

KS3 SCIENCE · CHEMISTRY · PARTICLES AND STATES OF MATTER

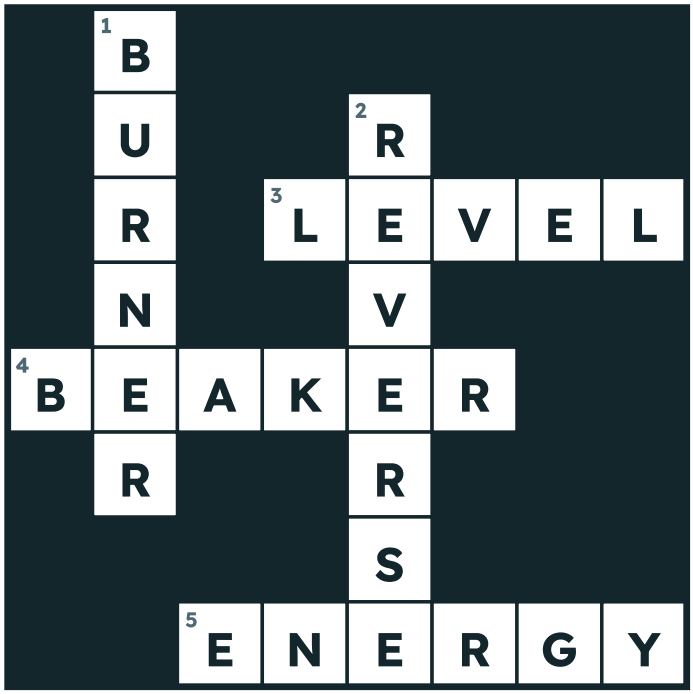
Lesson 4: Energy and changes of state

Answers

Word search

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

Crossword



Across

3 Level
Flat, with no rise or fall: the temperature stays ___ while it melts (5)

4 Beaker
Glass vessel of hot water that holds the tube of solid (6)

5 Energy
Heating gives particles more of this (6)

Down

1 Burner
It produces the flame under the hot water (6)

2 Reverse
Cooling is the ___ of heating (7)

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 5

Gas pressure

Word search

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

Find these 8 words

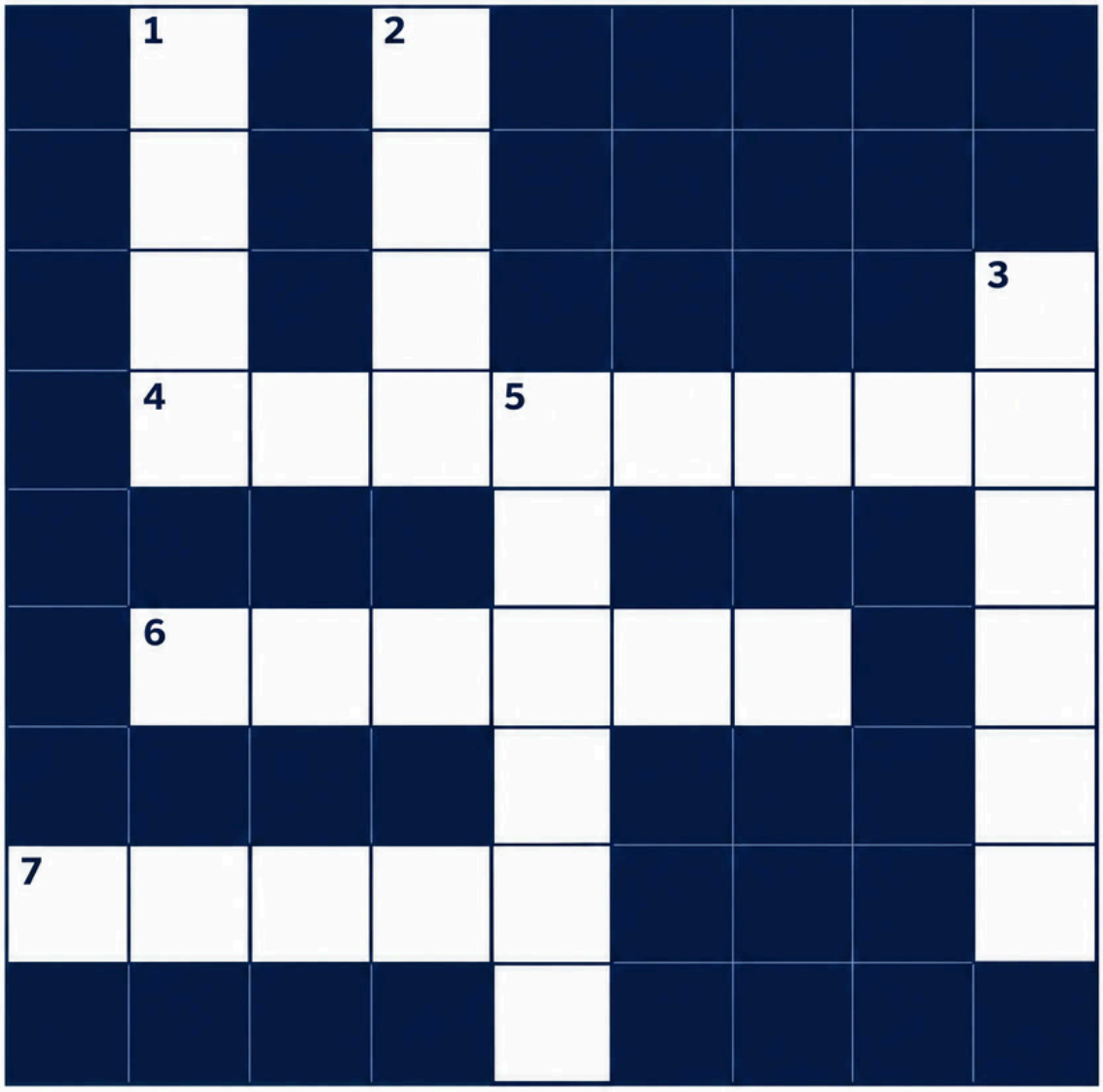
- ☐ CONTAINER
- ☐ FOOTBALL
- ☐ PRESSURE
- ☐ SEALED
- ☐ SQUASH
- ☐ TYRE
- ☐ VACUUM
- ☐ WALLS

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 5

Gas pressure

Crossword



Across

4 Tiny pushes from gas hits add up to this (8)

6 A space with no particles in it (6)

7 Gas particles keep hitting these and give them tiny pushes (5)

Down

1 A hand tool that forces air into things (4)

2 The rubber ring around a wheel, filled with air (4)

3 Closed tightly so that no gas can escape (6)

5 To press a gas into less space, so its particles hit the sides more often (6)

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

KS3 SCIENCE · CHEMISTRY · PARTICLES AND STATES OF MATTER

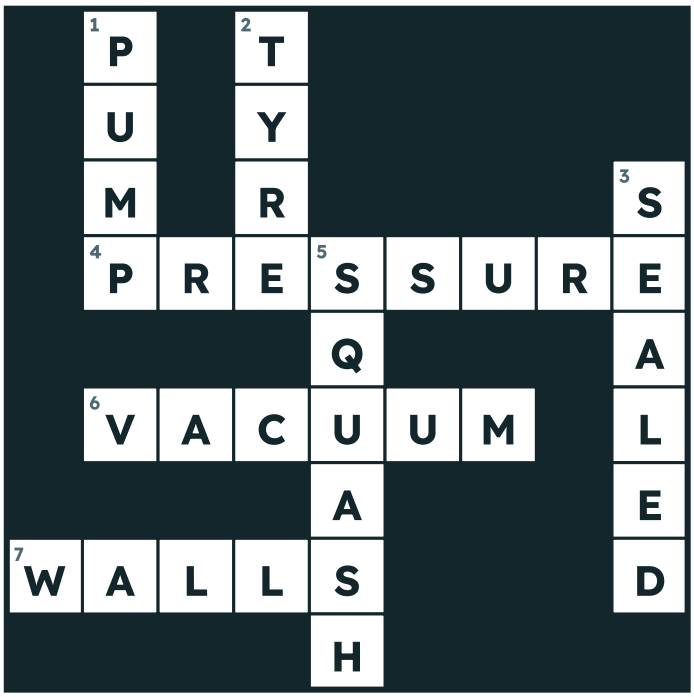
Lesson 5: Gas pressure

Answers

Word search



Crossword



Across

4 Pressure
Tiny pushes from gas hits add up to this (8)

6 Vacuum
A space with no particles in it (6)

7 Walls
Gas particles keep hitting these and give them tiny pushes (5)

Down

1 Pump
A hand tool that forces air into things (4)

2 Tyre
The rubber ring around a wheel, filled with air (4)

3 Sealed
Closed tightly so that no gas can escape (6)

5 Squash
To press a gas into less space, so its particles hit the sides more often (6)

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

KS3 CHEMISTRY • PARTICLES AND STATES OF MATTER • LESSON 6

Diffusion

Word search

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

Find these 8 words

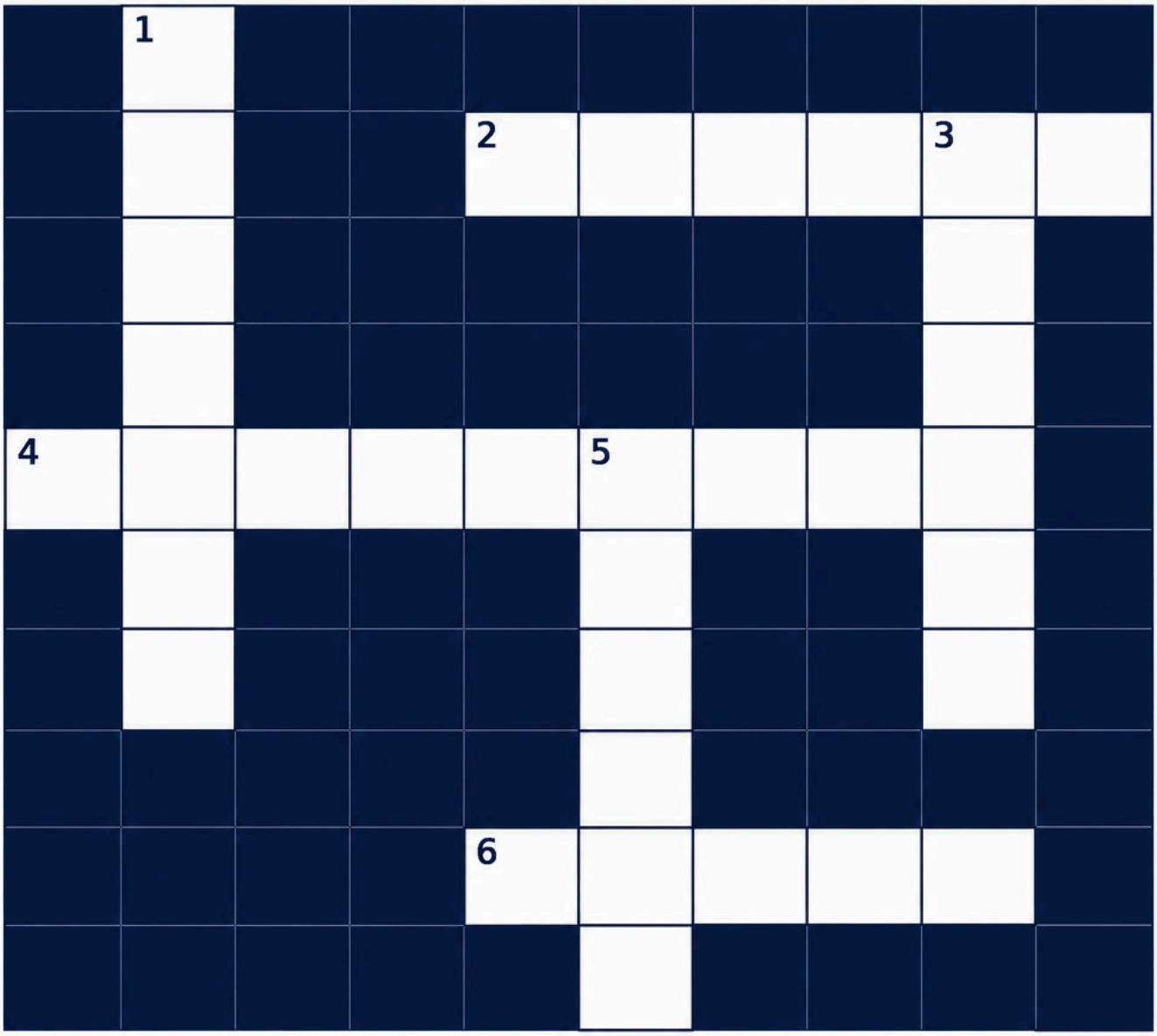
- ☐ BUMPING
- ☐ DIFFUSION
- ☐ EVENLY
- ☐ GASES
- ☐ HOTTER
- ☐ RANDOM
- ☐ SPREAD
- ☐ WATER

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 6

Diffusion

Crossword



Across

2 Particles that have been heated are ___ and move quicker (6)

4 The name for particles mixing as they move from many to few (9)

6 Tea from a tea bag mixes into hot ___ (5)

Down

1 In a liquid, the particles keep ___ into each other (7)

3 The particles end up mixed like this, the same all through (6)

5 To become scattered over a wider area as particles mix (6)

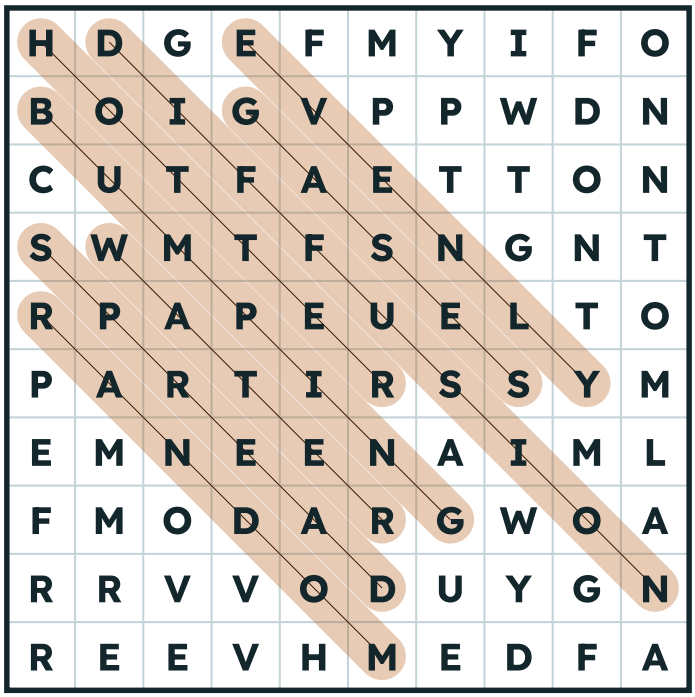
The number in brackets is how many letters the answer has.

KS3 SCIENCE · CHEMISTRY · PARTICLES AND STATES OF MATTER

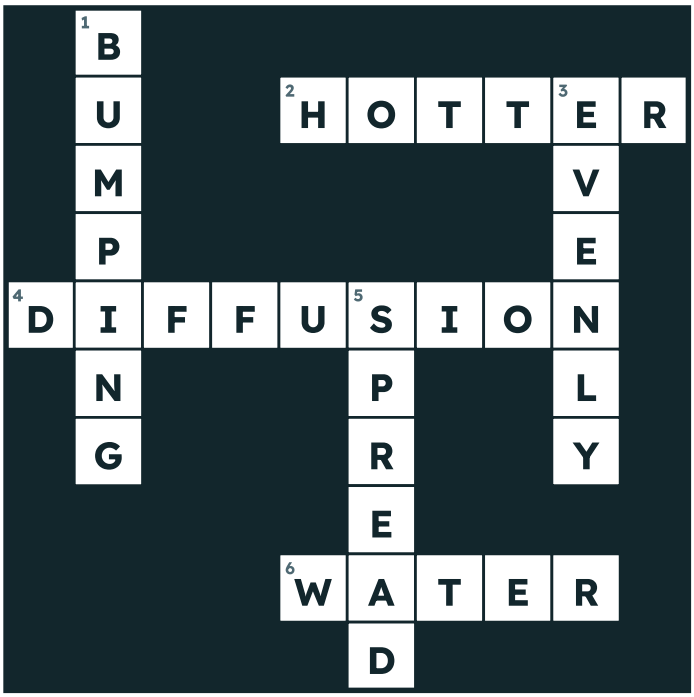
Lesson 6: Diffusion

Answers

Word search



Crossword



Across

2 Hotter
Particles that have been heated are ___ and move quicker (6)

4 Diffusion
The name for particles mixing as they move from many to few (9)

6 Water
Tea from a tea bag mixes into hot ___ (5)

Down

1 Bumping
In a liquid, the particles keep ___ into each other (7)

3 Evenly
The particles end up mixed like this, the same all through (6)

5 Spread
To become scattered over a wider area as particles mix (6)

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 7

Density

Word search

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

Find these 8 words

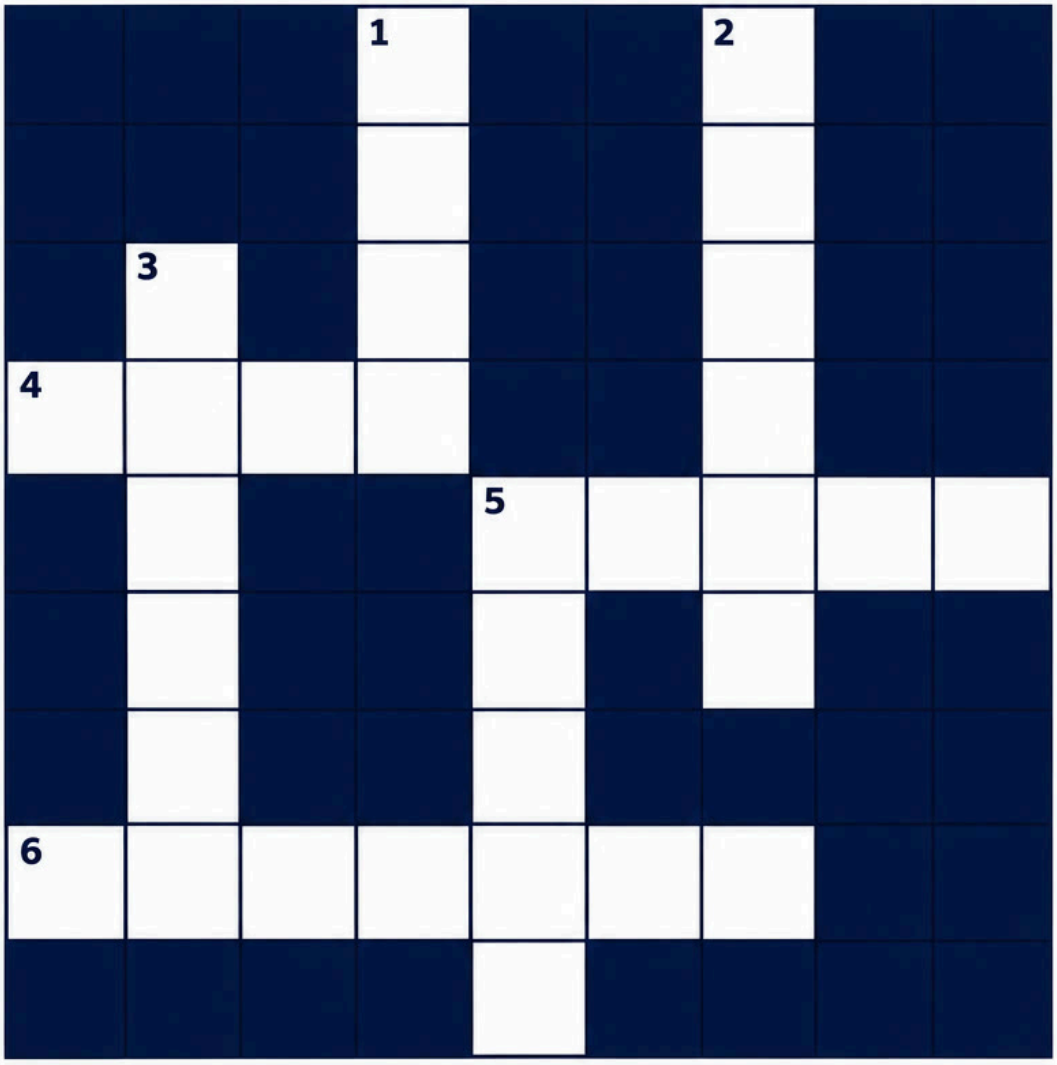
- ☐ CORK
- ☐ DENSITY
- ☐ FLOAT
- ☐ PACKED
- ☐ SINK
- ☐ SOLID
- ☐ STEEL
- ☐ VOLUME

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

KS3 CHEMISTRY · PARTICLES AND STATES OF MATTER · LESSON 7

Density

Crossword



Across

4 A material that is less dense than water, so it stays on top (4)

5 A metal that is denser than water (5)

6 The number of grams in each cubic centimetre of a substance (7)

Down

1 To go to the bottom of water, as denser things do (4)

2 Closely fitted together, with very little empty space (6)

3 The quantity measured in cubic centimetres (cm^3) (6)

5 This state is usually much denser than a gas (5)

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

KS3 SCIENCE · CHEMISTRY · PARTICLES AND STATES OF MATTER

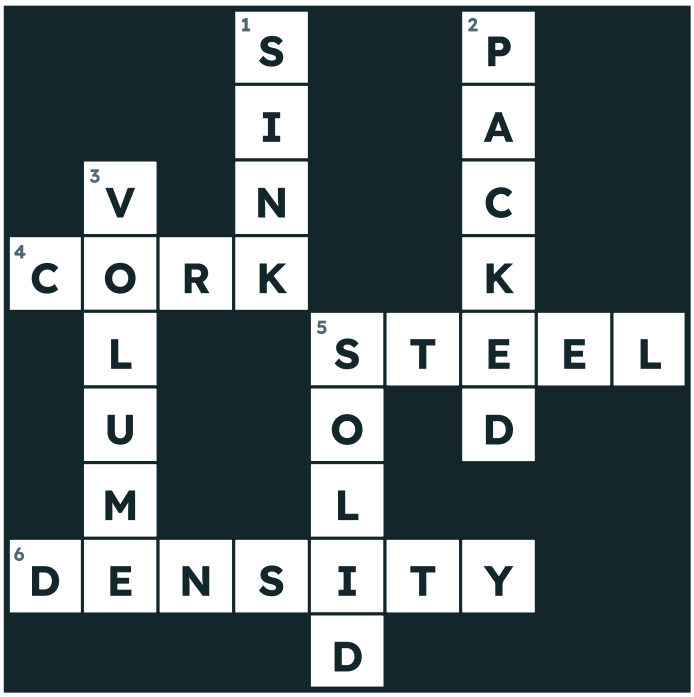
Lesson 7: Density

Answers

Word search



Crossword



Across

4 Cork
A material that is less dense than water, so it stays on top (4)

5 Steel
A metal that is denser than water (5)

6 Density
The number of grams in each cubic centimetre of a substance (7)

Down

1 Sink
To go to the bottom of water, as denser things do (4)

2 Packed
Closely fitted together, with very little empty space (6)

3 Volume
The quantity measured in cubic centimetres (cm^3) (6)

5 Solid
This state is usually much denser than a gas (5)

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