KS3 SCIENCE · CHEMISTRY

Separating mixtures

Word search

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

Find these 10 words

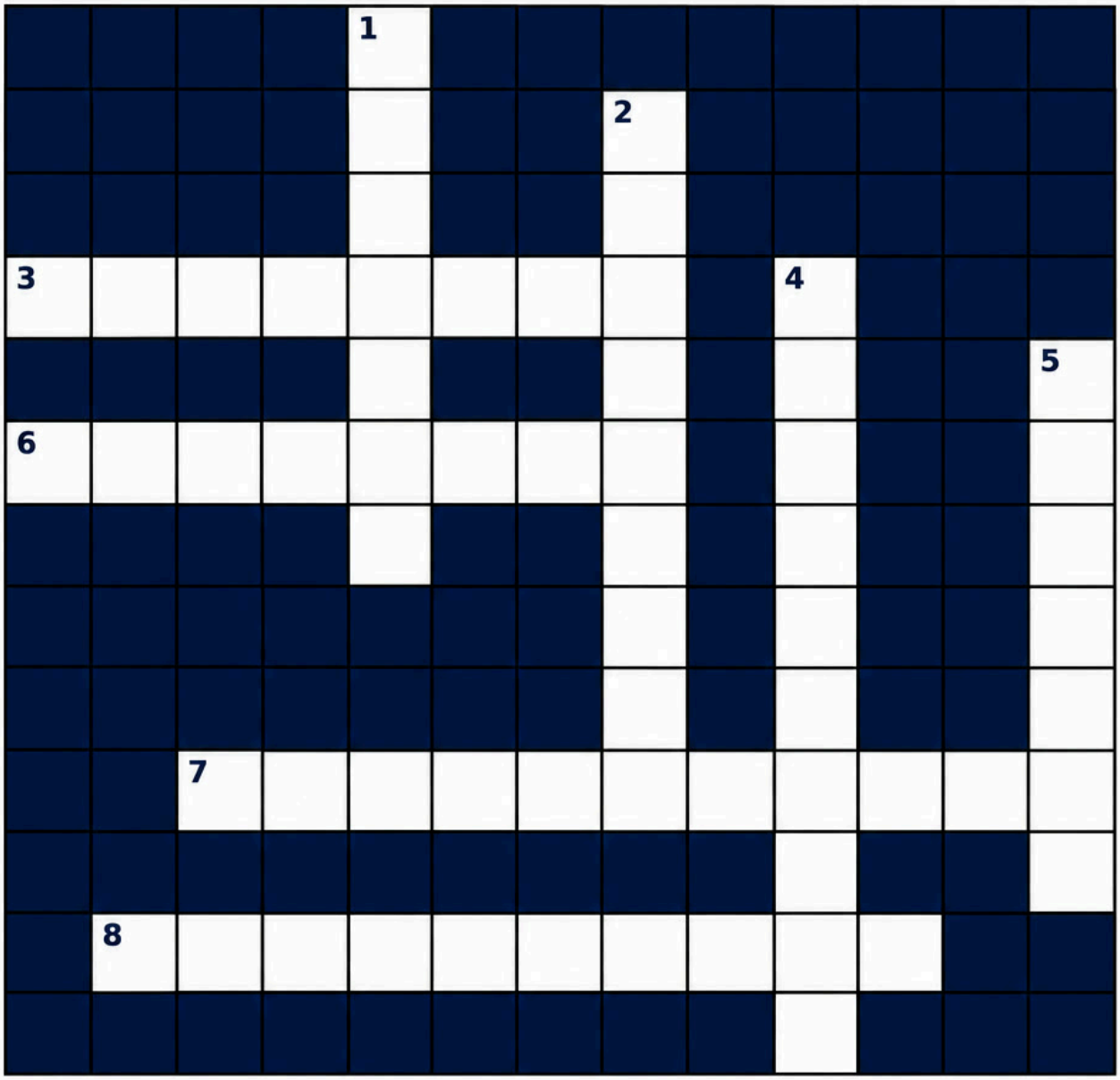
- ☐ CONDENSER
- ☐ DISTILLATION
- ☐ FILTRATE
- ☐ FILTRATION
- ☐ SOLUBILITY
- ☐ SOLUBLE
- ☐ SOLUTE
- ☐ SOLUTION
- ☐ SOLVENT
- ☐ SUSPENSION

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

KS3 SCIENCE · CHEMISTRY

Separating mixtures

Crossword



Across

3 A solute dissolved in a solvent (8)

6 The liquid that passes through the filter paper (8)

7 A liquid turning into a gas (11)

8 Bits of insoluble solid hanging in a liquid (10)

Down

1 Two or more substances mixed together, not joined (7)

2 Cools a gas so that it turns back into a liquid (9)

4 Separates an insoluble solid from a liquid (10)

5 The liquid that does the dissolving (7)

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

KS3 SCIENCE · CHEMISTRY

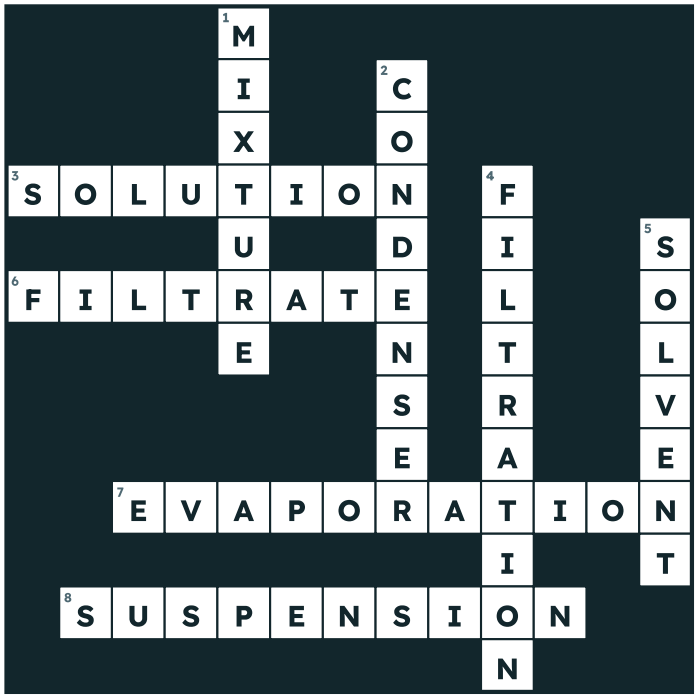
Separating mixtures

Answers

Word search



Crossword



Across

3 Solution
A solute dissolved in a solvent (8)

6 Filtrate
The liquid that passes through the filter paper (8)

7 Evaporation
A liquid turning into a gas (11)

8 Suspension
Bits of insoluble solid hanging in a liquid (10)

Down

1 Mixture
Two or more substances mixed together, not joined (7)

2 Condenser
Cools a gas so that it turns back into a liquid (9)

4 Filtration
Separates an insoluble solid from a liquid (10)

5 Solvent
The liquid that does the dissolving (7)

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 1

Pure substances and mixtures

Word search

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

Find these 8 words

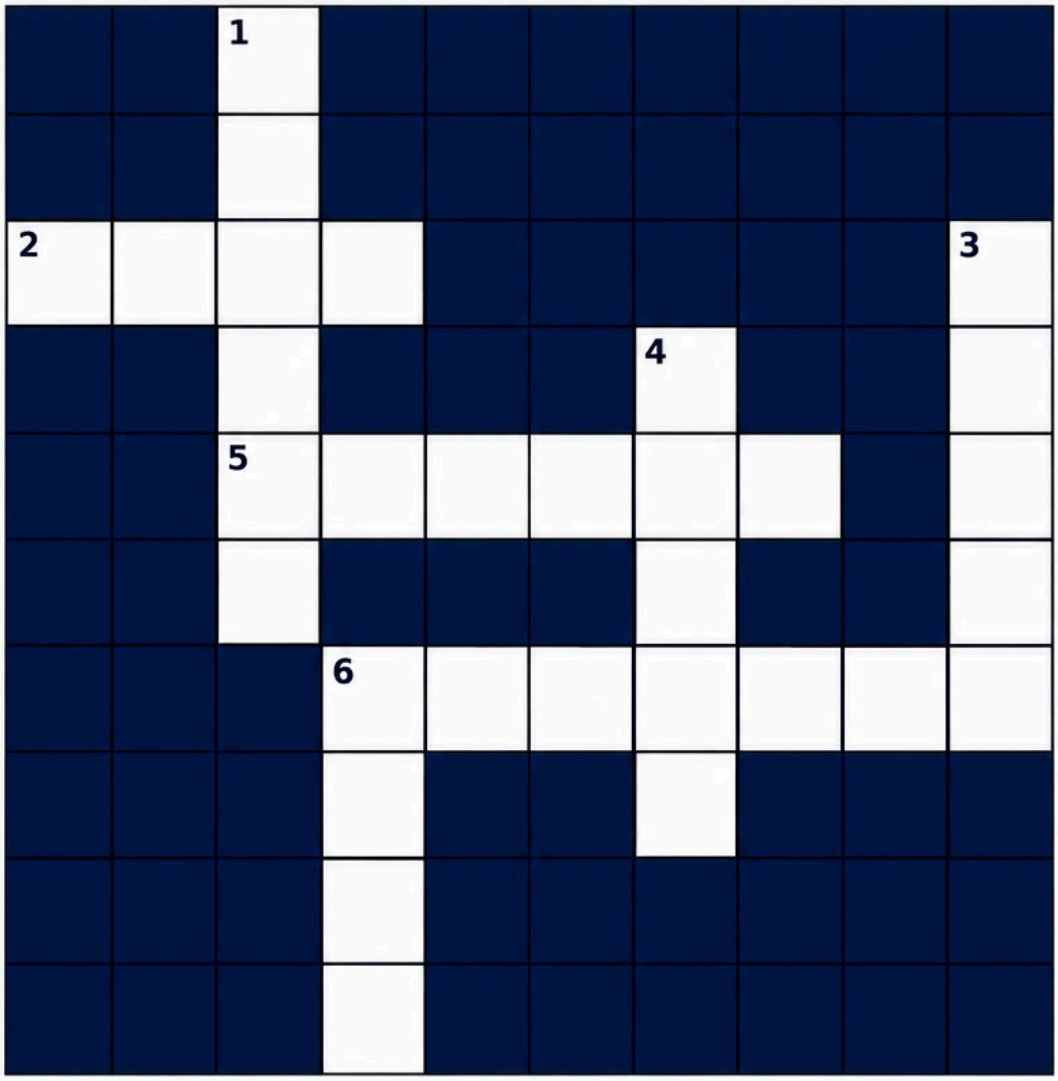
- ☐ CARTON
- ☐ GOLD
- ☐ JUICE
- ☐ MELTS
- ☐ MILK
- ☐ OXYGEN
- ☐ PURE
- ☐ RANGE

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 1

Pure substances and mixtures

Crossword



Across

2 In science, made of only one substance (4)

5 A gas in the air, made of one substance only (6)

6 Two or more substances mixed together, not joined (7)

Down

1 A pack that holds a drink (6)

3 A sample containing several substances may melt over a ___ of temperatures (5)

4 Changes from a solid to a liquid (5)

6 A white drink made of several substances (4)

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

KS3 SCIENCE · CHEMISTRY · SEPARATING MIXTURES

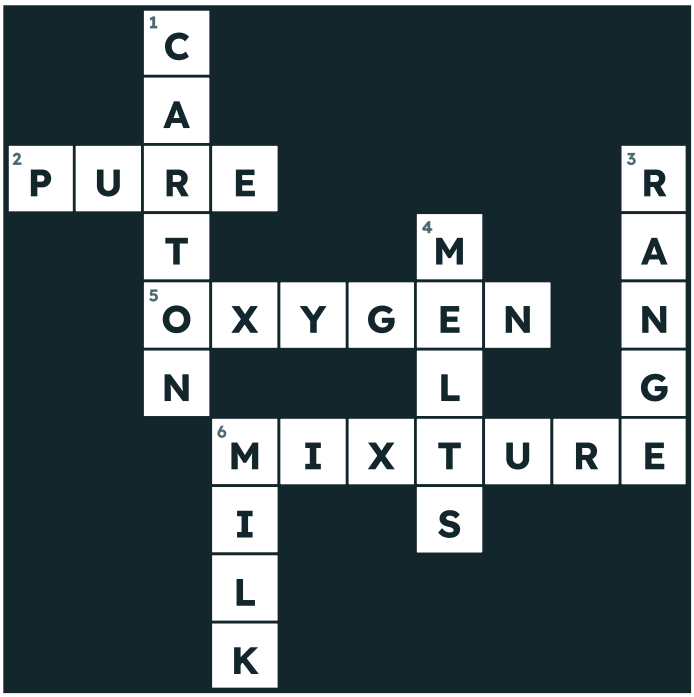
Lesson 1: Pure substances and mixtures

Answers

Word search



Crossword



Across

2 Pure
In science, made of only one substance (4)

5 Oxygen
A gas in the air, made of one substance only (6)

6 Mixture
Two or more substances mixed together, not joined (7)

Down

1 Carton
A pack that holds a drink (6)

3 Range
A sample containing several substances may melt over a ___ of temperatures (5)

4 Melts
Changes from a solid to a liquid (5)

6 Milk
A white drink made of several substances (4)

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 2

Dissolving

Word search

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

Find these 8 words

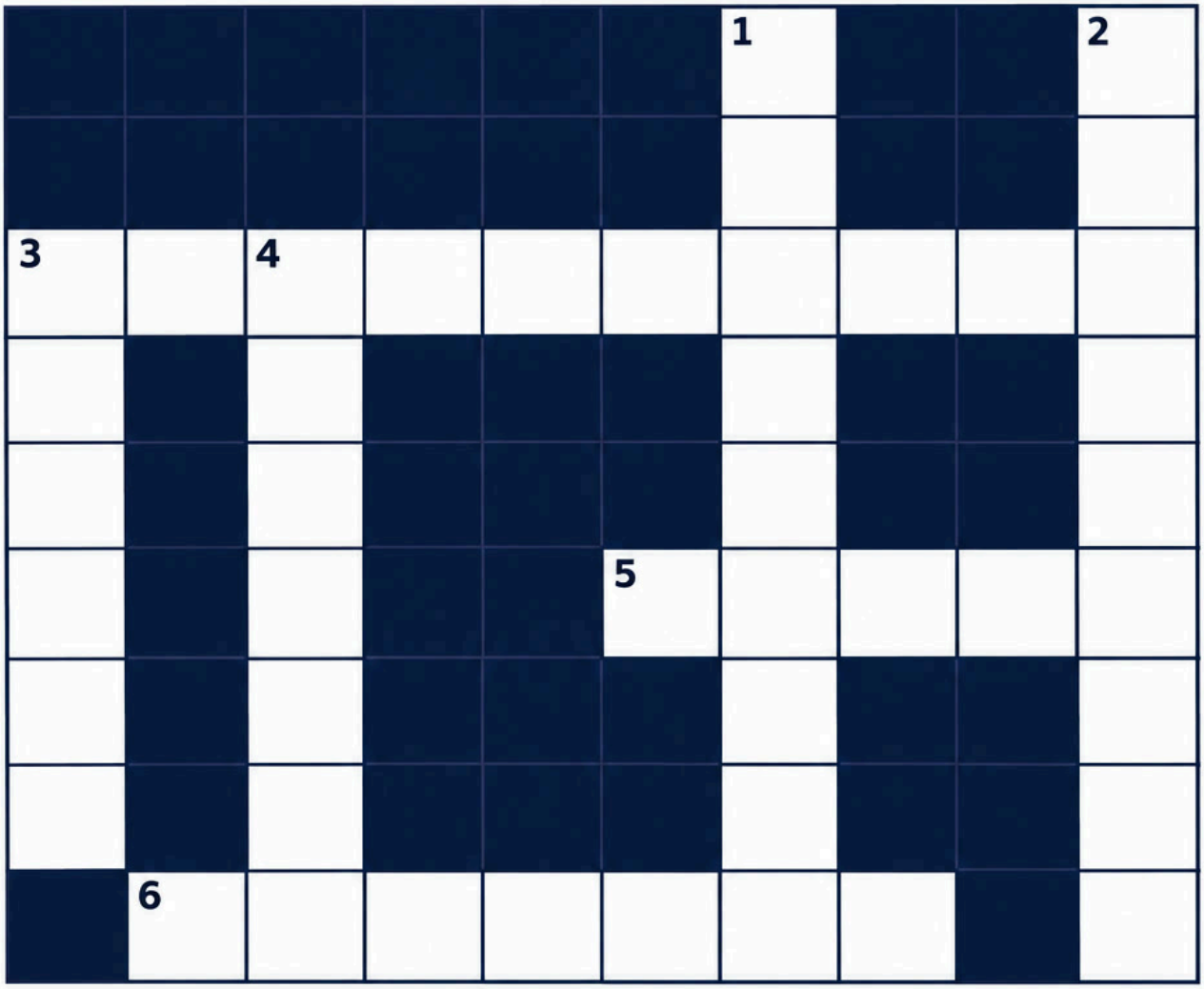
- ☐ CONCENTRATED
- ☐ CONSERVED
- ☐ SOLUBLE
- ☐ SOLUTE
- ☐ SOLUTION
- ☐ SOLVENT
- ☐ STIRRED
- ☐ SUSPENSION

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 2

Dissolving

Crossword



Across

3 Bits of solid that hang in a liquid without dissolving (10)

5 10 g of this dissolves in 200 g of water (5)

6 When sand is ___ up, its bits hang in the water (7)

Down

1 Describes a substance that will not dissolve in a liquid, such as sand in water (9)

2 Mass is ___: nothing is lost when a solid dissolves (9)

3 The substance that dissolves (6)

4 The liquid it dissolves in (7)

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

KS3 SCIENCE · CHEMISTRY · SEPARATING MIXTURES

Lesson 2: Dissolving

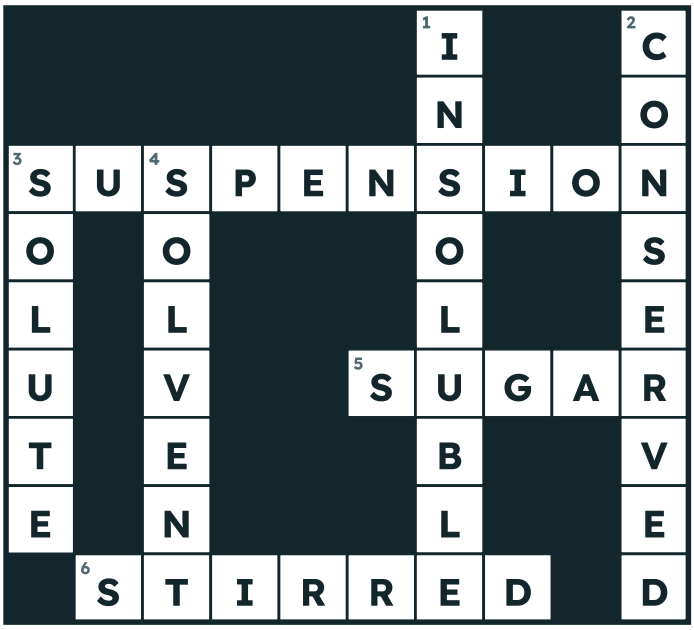
Answers

Word search



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

Crossword



Across

3 Suspension
Bits of solid that hang in a liquid without dissolving (10)

5 Sugar
10 g of this dissolves in 200 g of water (5)

6 Stirred
When sand is ___ up, its bits hang in the water (7)

Down

1 Insoluble
Describes a substance that will not dissolve in a liquid, such as sand in water (9)

2 Conserved
Mass is ___: nothing is lost when a solid dissolves (9)

3 Solute
The substance that dissolves (6)

4 Solvent
The liquid it dissolves in (7)

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 3

Solubility

Word search

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

Find these 8 words

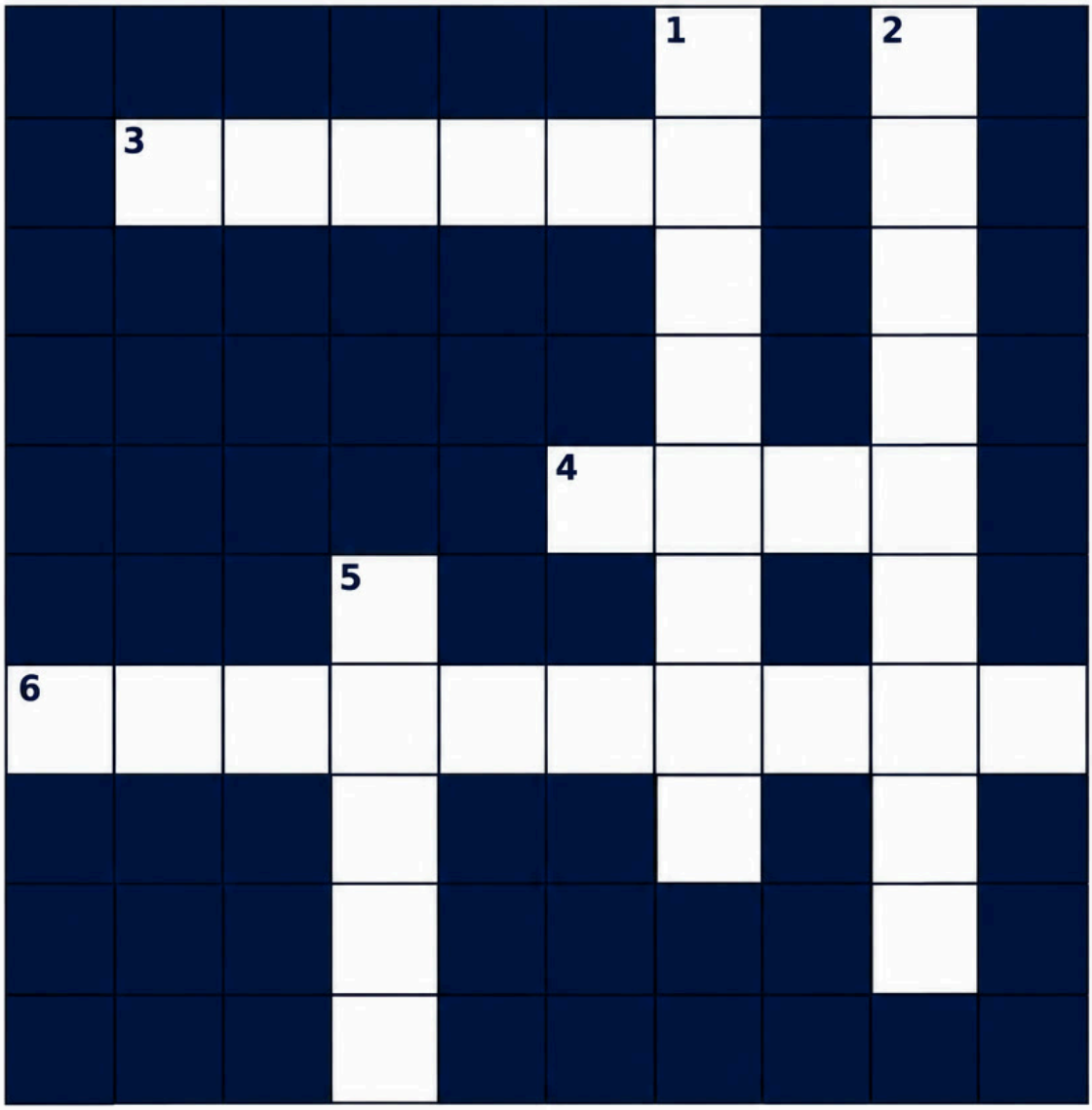
- ☐ CRYSTALS
- ☐ CURVE
- ☐ GRAPH
- ☐ LIMIT
- ☐ SATURATED
- ☐ SOLUBILITY
- ☐ STIR
- ☐ TEMPERATURE

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 3

Solubility

Crossword



Across

3 ___ sulfate makes a blue solution (6)

4 You do this with a spoon to mix, but extra solid still stays (4)

6 The most solid that will dissolve in 100 g of water, which changes with how hot it is (10)

Down

1 The solid pieces left at the bottom when no more will dissolve (8)

2 Describes a solution that can hold no more dissolved solid (9)

5 A smooth line drawn through your points, not always straight (5)

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

KS3 SCIENCE · CHEMISTRY · SEPARATING MIXTURES

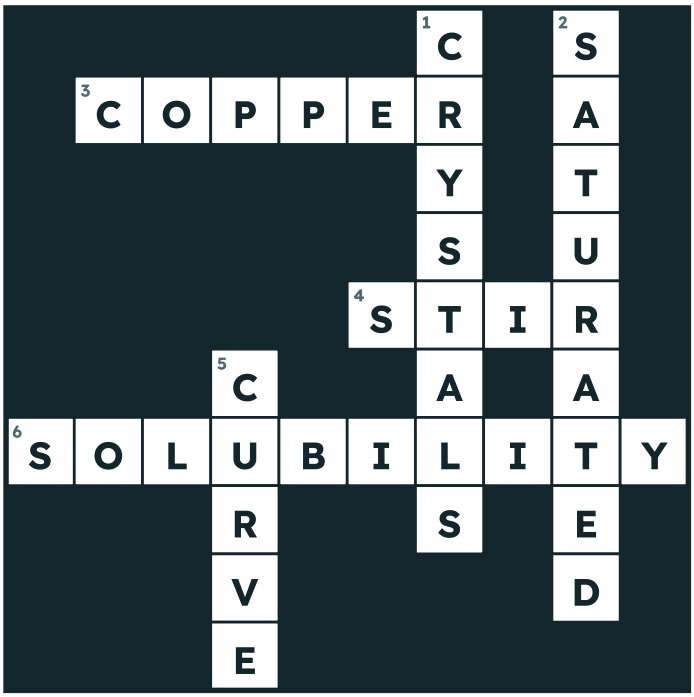
Lesson 3: Solubility

Answers

Word search



Crossword



Across

3 Copper
___ sulfate makes a blue solution (6)

4 Stir
You do this with a spoon to mix, but extra solid still stays (4)

6 Solubility
The most solid that will dissolve in 100 g of water, which changes with how hot it is (10)

Down

1 Crystals
The solid pieces left at the bottom when no more will dissolve (8)

2 Saturated
Describes a solution that can hold no more dissolved solid (9)

5 Curve
A smooth line drawn through your points, not always straight (5)

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 4

Filtration

Word search

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

Find these 8 words

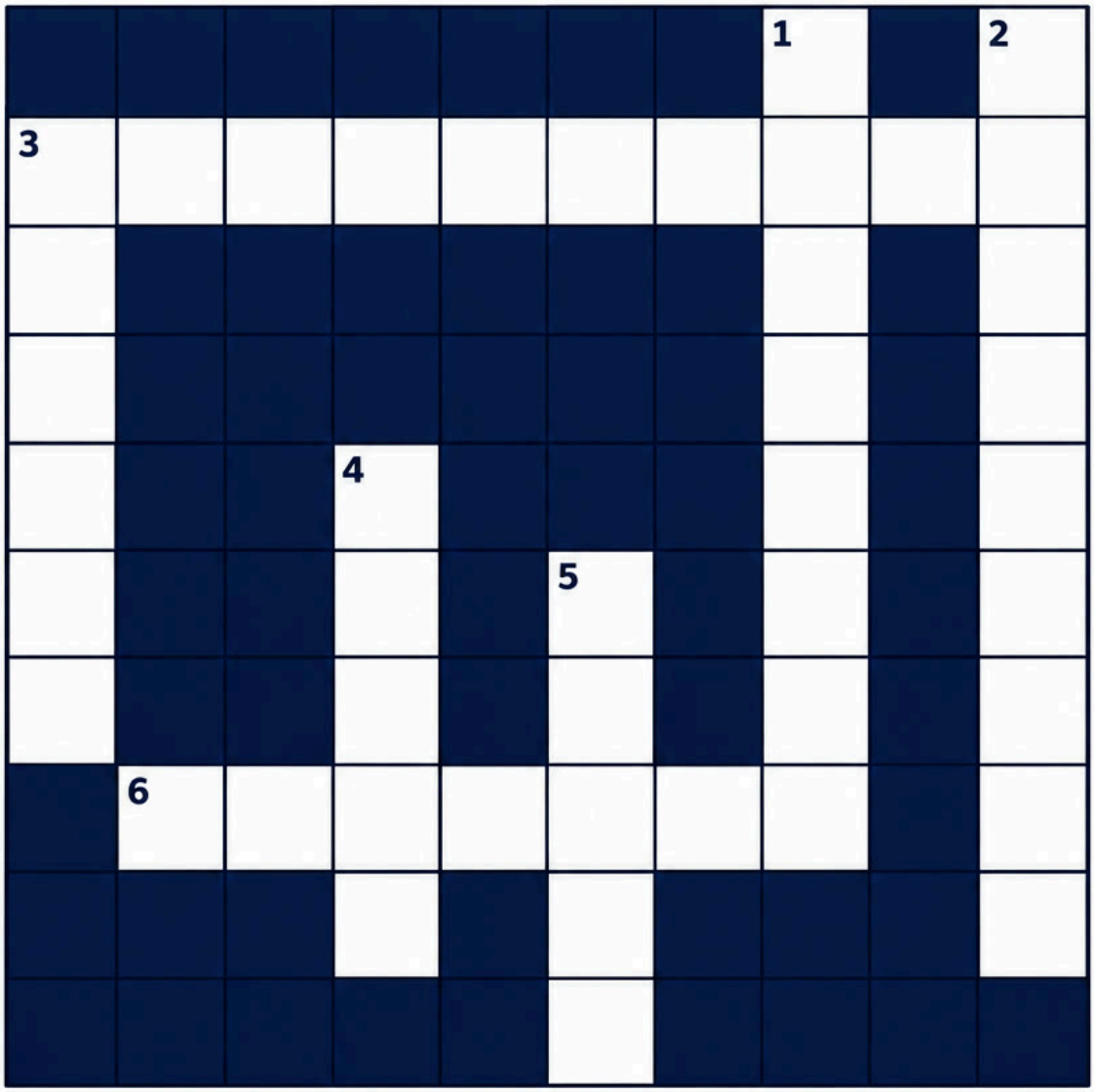
- ☐ DISSOLVED
- ☐ FILTRATE
- ☐ FILTRATION
- ☐ FLASK
- ☐ HOLES
- ☐ INSOLUBLE
- ☐ MUDDY
- ☐ RESIDUE

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 4

Filtration

Crossword



Across

3 A way to separate bits of solid from a liquid by pouring through a filter (10)

6 The solid left in the paper (7)

Down

1 The liquid that goes through (8)

2 A solid that will not dissolve is this (9)

3 A cone-shaped tool that holds the filter paper (6)

4 The glass container that collects the clear liquid (5)

5 ___ water has bits of earth in it, before filtering (5)

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

KS3 SCIENCE · CHEMISTRY · SEPARATING MIXTURES

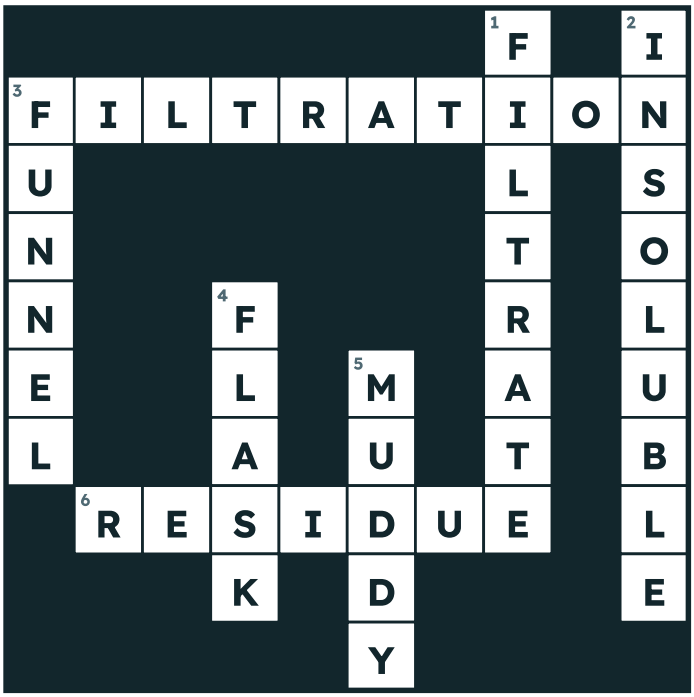
Lesson 4: Filtration

Answers

Word search



Crossword



Across

3 Filtration
A way to separate bits of solid from a liquid by pouring through a filter (10)

6 Residue
The solid left in the paper (7)

Down

1 Filtrate
The liquid that goes through (8)

2 Insoluble
A solid that will not dissolve is this (9)

3 Funnel
A cone-shaped tool that holds the filter paper (6)

4 Flask
The glass container that collects the clear liquid (5)

5 Muddy
___ water has bits of earth in it, before filtering (5)

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 5

Evaporation and crystallisation

Word search

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

Find these 8 words

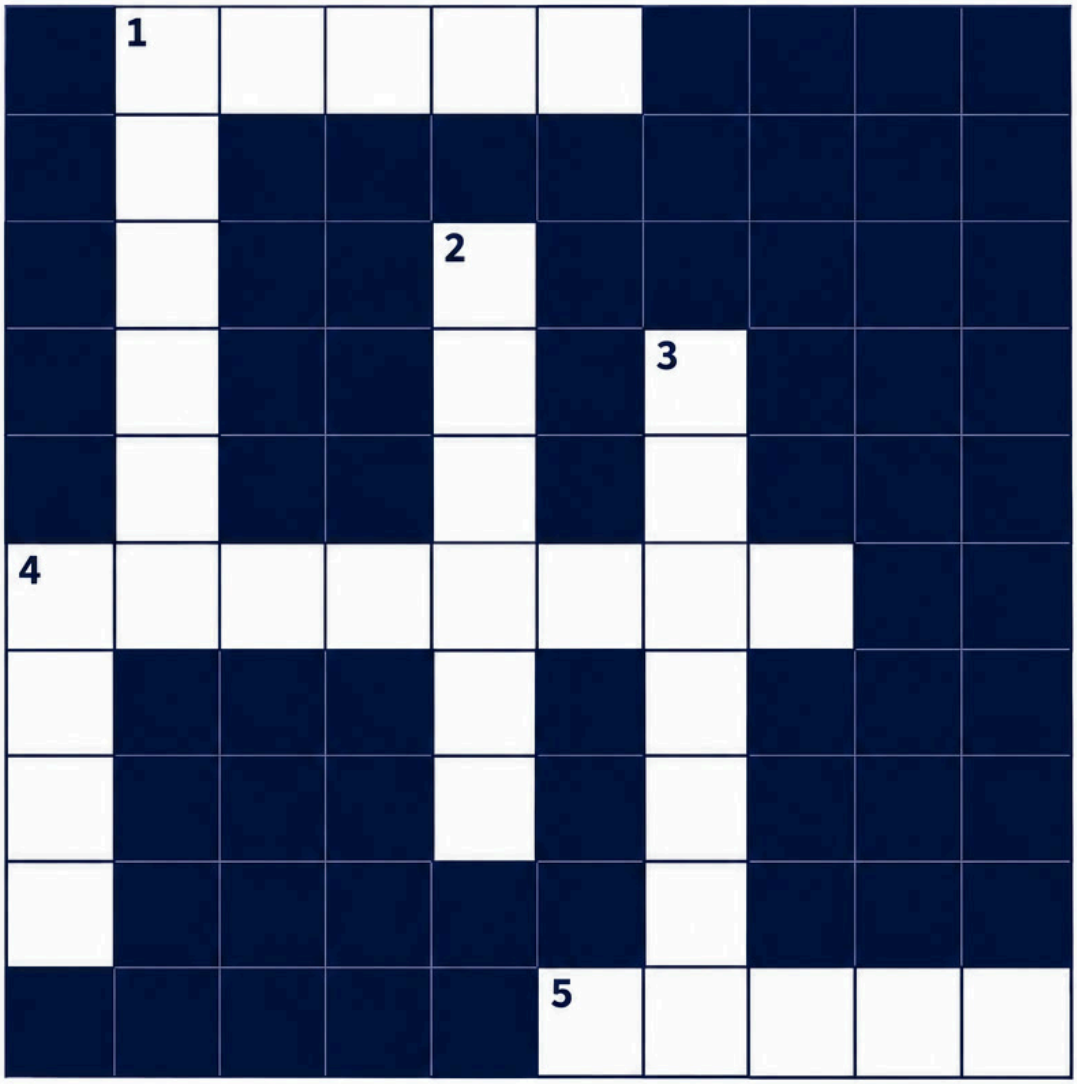
- ☐ BASIN
- ☐ BIGGER
- ☐ BOILS
- ☐ COOL
- ☐ CRYSTALS
- ☐ GENTLY
- ☐ SOLVENT
- ☐ STEPS

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 5

Evaporation and crystallisation

Crossword



Across

1 If you keep heating, the container ___ dry and hot solid can fly out (5)

4 The solid pieces that form from a solution as it loses heat (8)

5 The actions in a method, to be put in order (5)

Down

1 Another word for larger, describing pieces grown by slow drying (6)

2 Complete the instruction: heat it ___ (6)

3 The liquid part of a solution, which is driven off (7)

4 Leave the hot liquid to ___ down (4)

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

KS3 SCIENCE · CHEMISTRY · SEPARATING MIXTURES

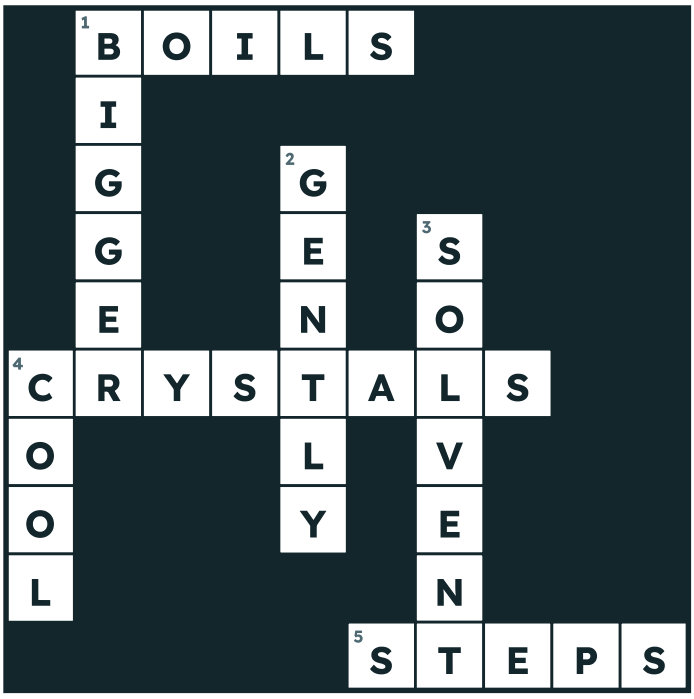
Lesson 5: Evaporation and crystallisation

Answers

Word search



Crossword



Across

1 Boils
If you keep heating, the container ___ dry and hot solid can fly out (5)

4 Crystals
The solid pieces that form from a solution as it loses heat (8)

5 Steps
The actions in a method, to be put in order (5)

Down

1 Bigger
Another word for larger, describing pieces grown by slow drying (6)

2 Gently
Complete the instruction: heat it ___ (6)

3 Solvent
The liquid part of a solution, which is driven off (7)

4 Cool
Leave the hot liquid to ___ down (4)

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

KS3 CHEMISTRY • SEPARATING MIXTURES • LESSON 6

Distillation

Word search

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

Find these 8 words

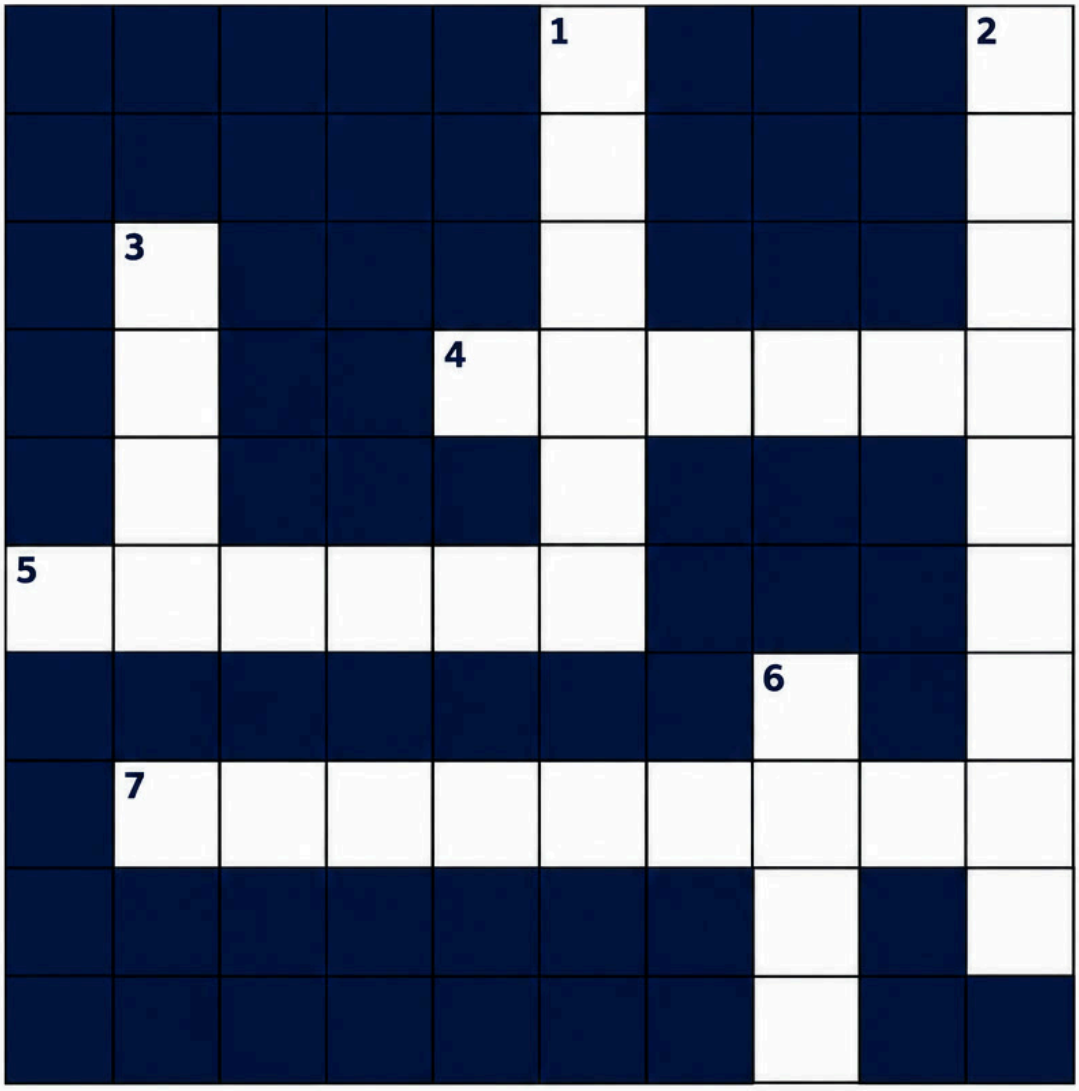
- ☐ BEAKER
- ☐ BOILED
- ☐ DISTILLATION
- ☐ EVAPORATE
- ☐ FLASK
- ☐ PURE
- ☐ SALT
- ☐ VAPOUR

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 6

Distillation

Crossword



Across

4 The liquid is heated until it is ___ and turns to gas (6)

5 The glass that collects the clear liquid at the end (6)

7 To change from a liquid into a gas (9)

Down

1 Water as a gas (6)

2 The apparatus that cools a gas so that it turns back into a liquid (9)

3 Water collected at the end has nothing else mixed in, so it is ___ (4)

6 The dissolved solid in sea water that stays behind (4)

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

KS3 SCIENCE · CHEMISTRY · SEPARATING MIXTURES

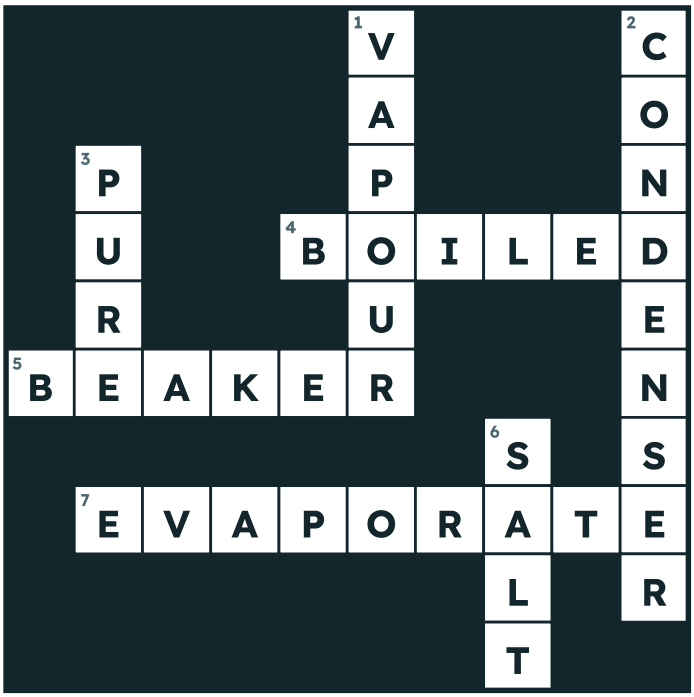
Lesson 6: Distillation

Answers

Word search



Crossword



Across

4 Boiled
The liquid is heated until it is ___ and turns to gas (6)

5 Beaker
The glass that collects the clear liquid at the end (6)

7 Evaporate
To change from a liquid into a gas (9)

Down

1 Vapour
Water as a gas (6)

2 Condenser
The apparatus that cools a gas so that it turns back into a liquid (9)

3 Pure
Water collected at the end has nothing else mixed in, so it is ___ (4)

6 Salt
The dissolved solid in sea water that stays behind (4)

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 7

Chromatography

Word search

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

Find these 8 words

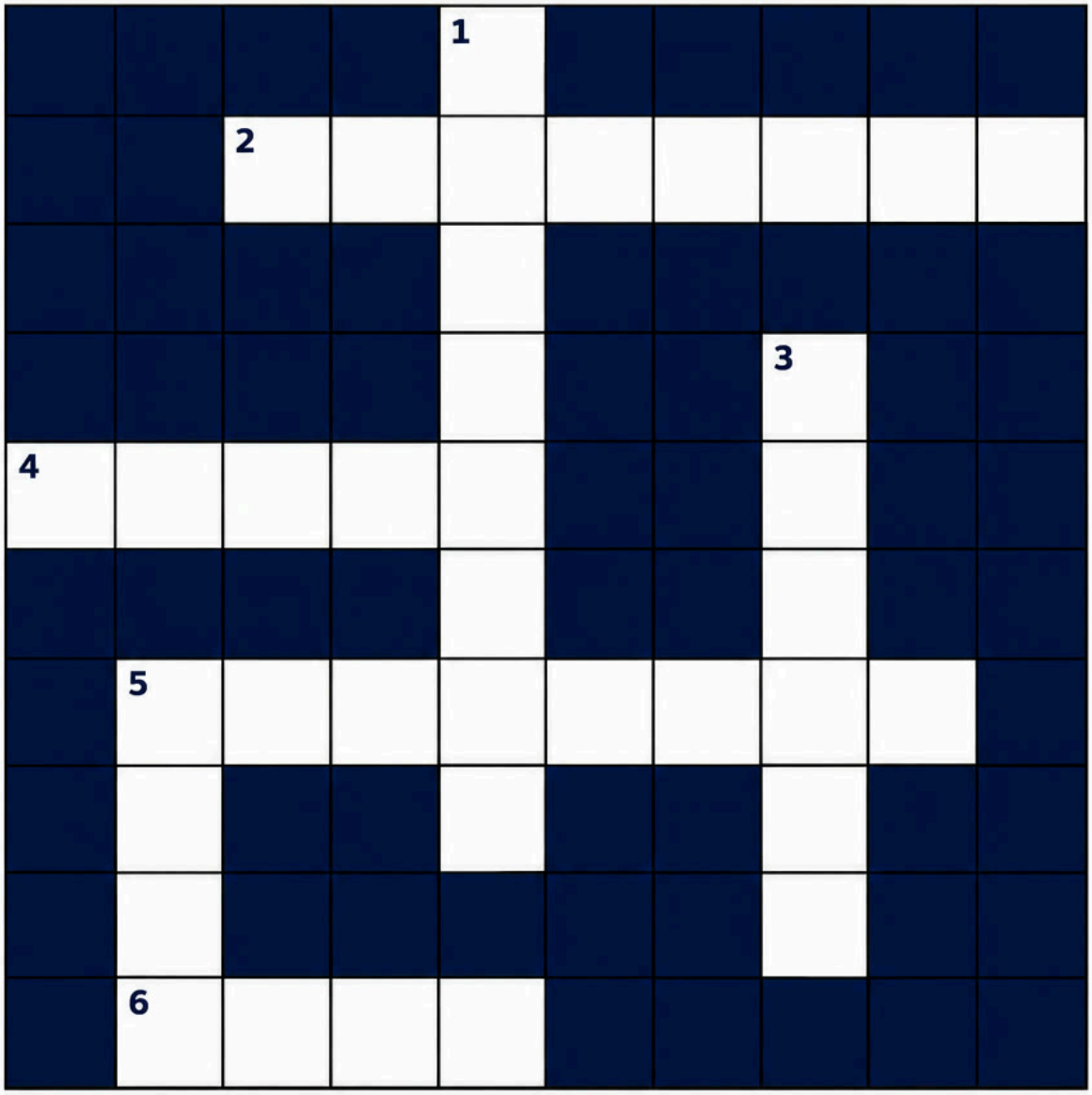
- ☐ CHROMATOGRAM
- ☐ DISTANCE
- ☐ DYES
- ☐ IDENTIFY
- ☐ PENCIL
- ☐ SEPARATE
- ☐ SOLVENT
- ☐ SPOT

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 7

Chromatography

Crossword



Across

2 To find out what an unknown substance is by matching (8)

4 The strip that is soaked by the moving liquid (5)

5 How far a coloured substance travels from the starting line (8)

6 A small round mark that is put on the start line (4)

Down

1 To split a mixture into the substances it contains (8)

3 You draw the start mark with this because it does not dissolve (6)

5 The coloured substances in an ink (4)

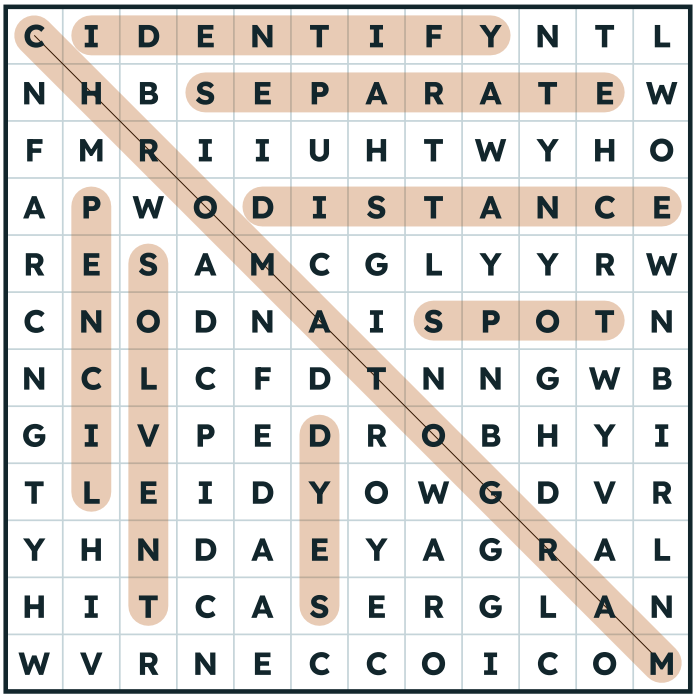
The number in brackets is how many letters the answer has.

KS3 SCIENCE · CHEMISTRY · SEPARATING MIXTURES

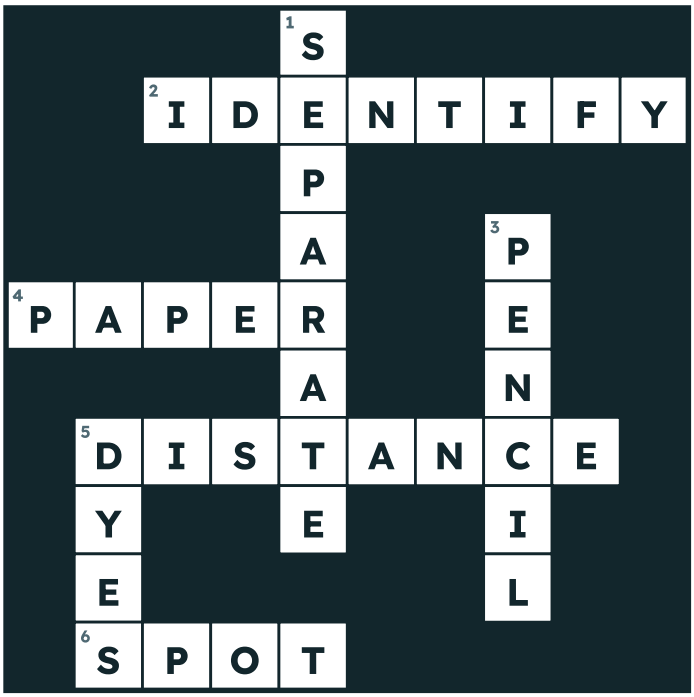
Lesson 7: Chromatography

Answers

Word search



Crossword



Across

2 Identify
To find out what an unknown substance is by matching (8)

4 Paper
The strip that is soaked by the moving liquid (5)

5 Distance
How far a coloured substance travels from the starting line (8)

6 Spot
A small round mark that is put on the start line (4)

Down

1 Separate
To split a mixture into the substances it contains (8)

3 Pencil
You draw the start mark with this because it does not dissolve (6)

5 Dyes
The coloured substances in an ink (4)

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 8

Choosing a method

Word search

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

Find these 8 words

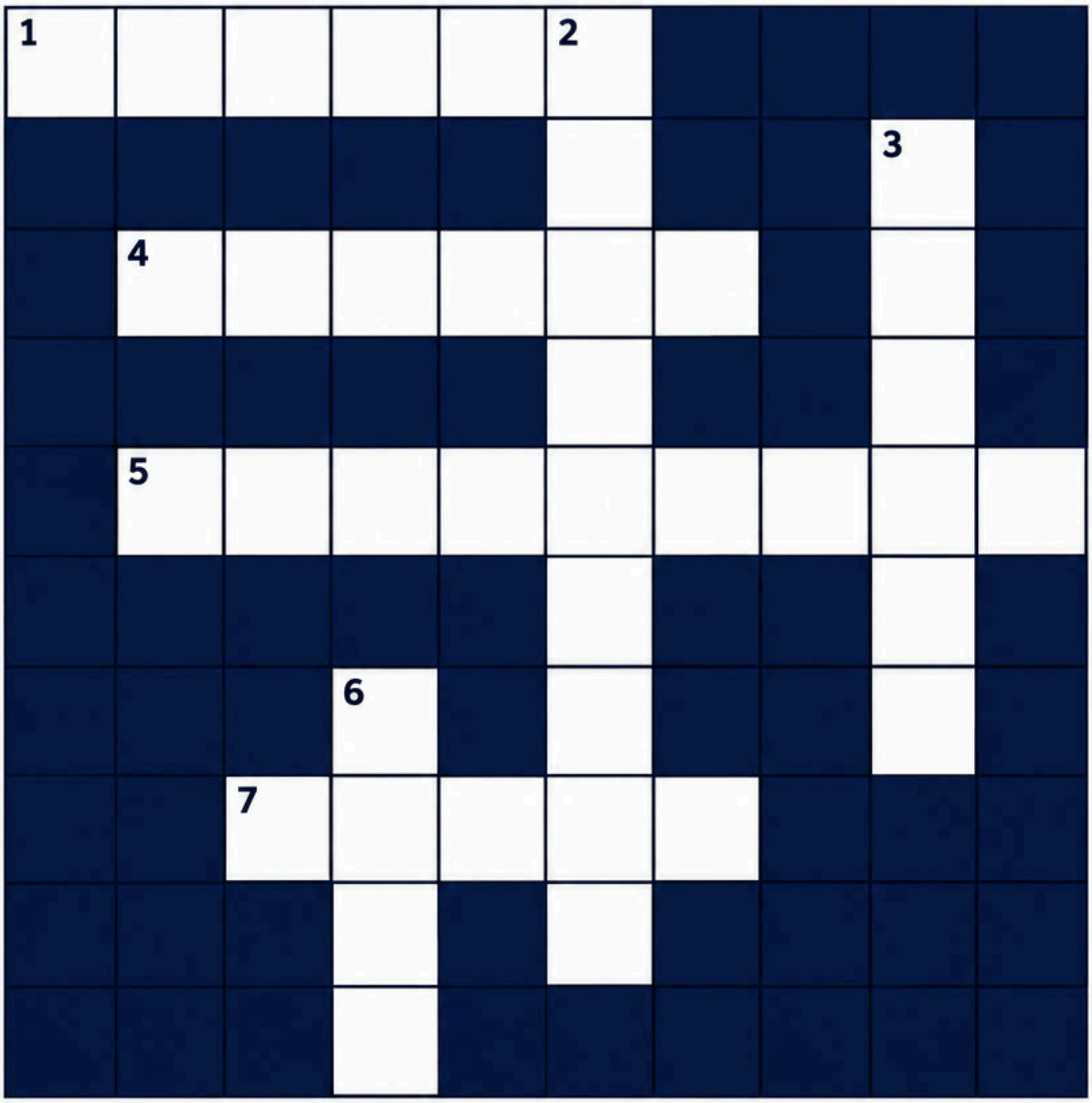
- ☐ CHOOSE
- ☐ DISSOLVED
- ☐ DISTILLATION
- ☐ EVAPORATE
- ☐ FILTER
- ☐ INSOLUBLE
- ☐ SALT
- ☐ WATER

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

KS3 CHEMISTRY · SEPARATING MIXTURES · LESSON 8

Choosing a method

Crossword



Across

1 A particular way of separating a mixture (6)

4 Another word for select, used when picking the right technique (6)

5 Heat the liquid so it turns to gas and the solid is left behind (9)

7 The liquid in the mixture, which you get back by distilling (5)

Down

2 A solid that has formed a solution is ___ (9)

3 Do this first to remove bits of solid that cannot dissolve (6)

6 The solid that is taken out first from a mixture of three things (4)

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

KS3 SCIENCE · CHEMISTRY · SEPARATING MIXTURES

Lesson 8: Choosing a method

Answers

Word search

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

Crossword



Across

1 Method
A particular way of separating a mixture (6)

4 Choose
Another word for select, used when picking the right technique (6)

5 Evaporate
Heat the liquid so it turns to gas and the solid is left behind (9)

7 Water
The liquid in the mixture, which you get back by distilling (5)

Down

2 Dissolved
A solid that has formed a solution is ___ (9)

3 Filter
Do this first to remove bits of solid that cannot dissolve (6)

6 Sand
The solid that is taken out first from a mixture of three things (4)

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