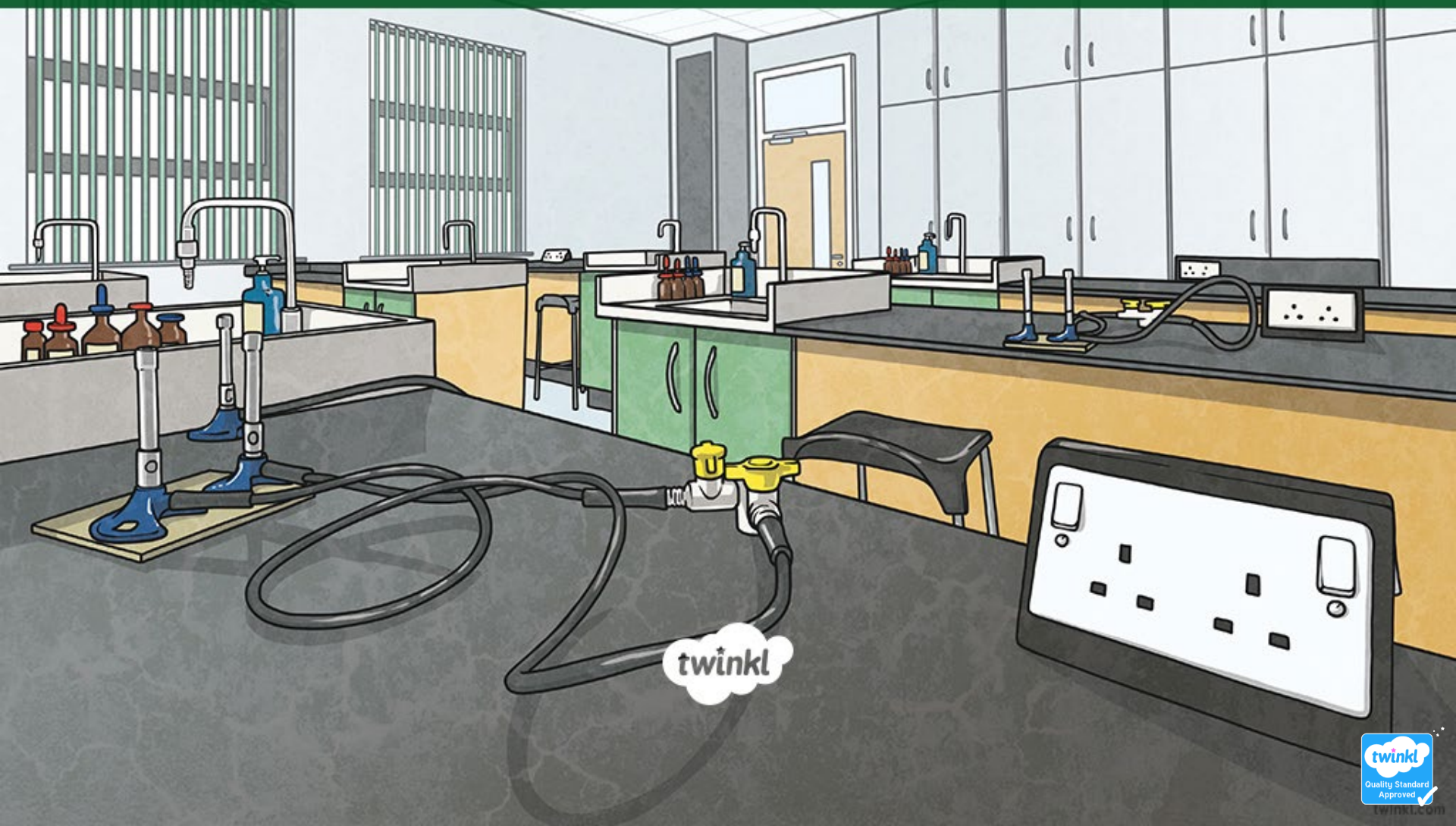


Escape the Science Lab



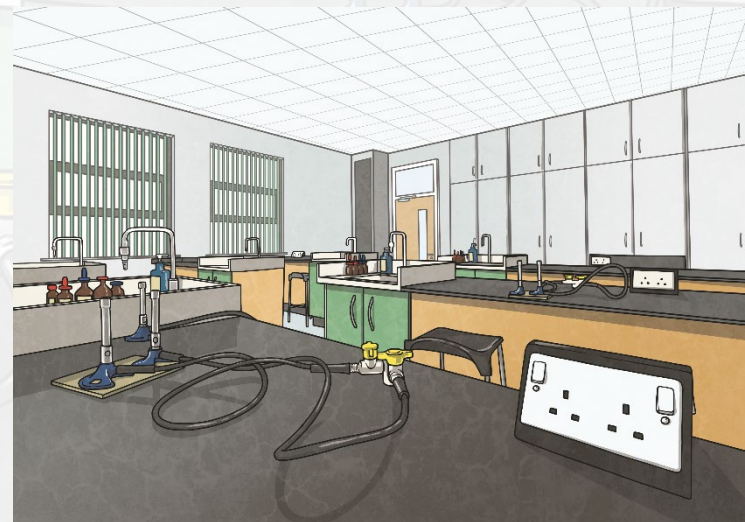
twinkl

Escape the Science Lab

Your class are visiting the local secondary school to find out all about life in Key Stage 3. In small groups, you explore the gym, the language department and the huge cafeteria. Your last stop of the day is to the science labs.

You gaze around at the strange scientific equipment. You recognise test tubes and Bunsen burners but you don't have a clue what some of the other things are. It makes you feel excited about the day you will start Year 7.

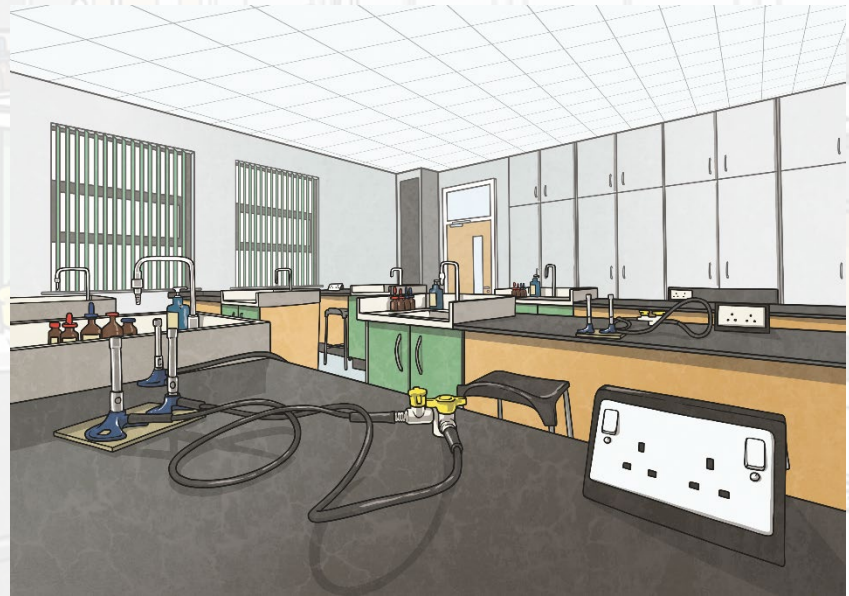
The school bell rings and you know that it is time to meet your teacher in the hall. You walk to the door and turn the handle but nothing happens. You try again. It's locked!



Escape the Science Lab

While trying to open the door, you notice a keypad next to the lock. Someone must have left the lock on the latch. Without the code to the keypad, you are trapped in the lab. The corridor outside is quiet. You realise that your rescue may take a while so it is down to you.

Solve the clues and puzzles to discover the keypad code and escape the science lab. The clues could be anywhere, so you need to keep your eyes peeled and your mind sharp!



Escape the Science Lab

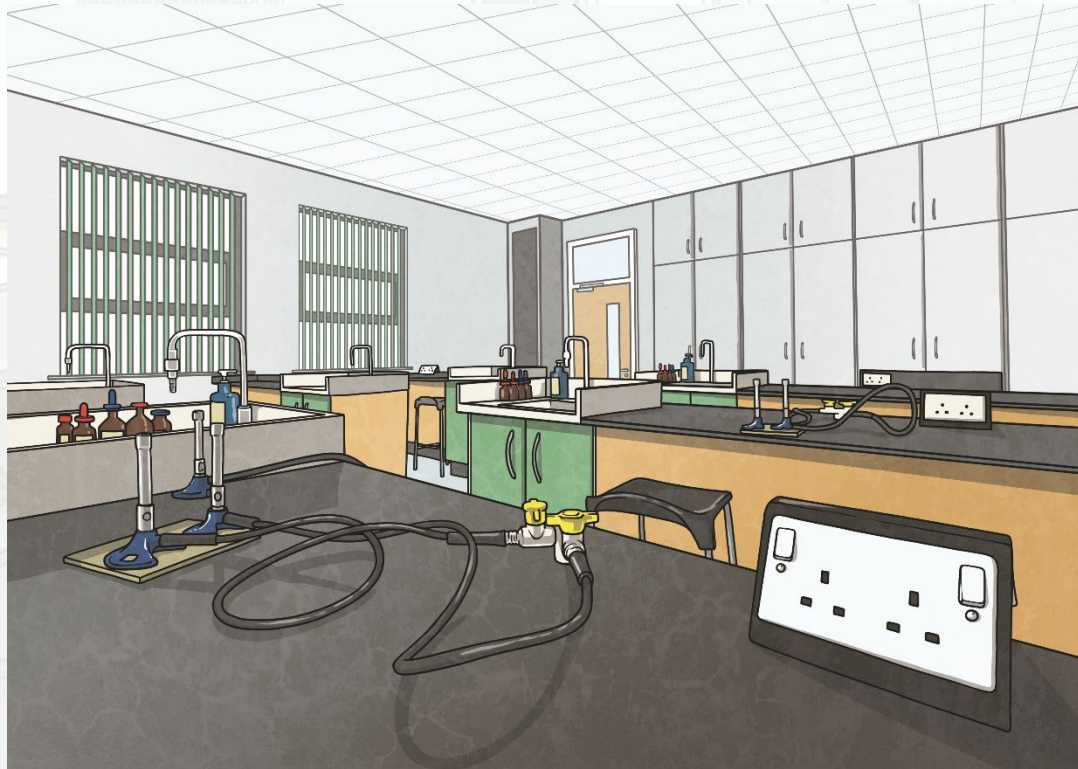
The Rules

- You can work in small groups.
- When you find a clue, work together to solve the puzzle.
- Write your answer down on your answer sheet.
- Once you have discovered the number for the keypad, check it with your teacher to discover if you can escape the science lab!



Escape the Science Lab

Answers to the Clues



Escape the Science Lab – Clue 1

Groups these things into solids, liquids and gases.

Solids



wood



plastic



brick



metal

Liquids



water



lemonade

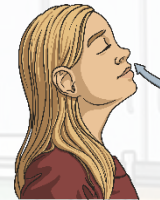


orange juice



milk

Gases



oxygen



carbon dioxide

Metal, wood, plastic and brick are all solids.

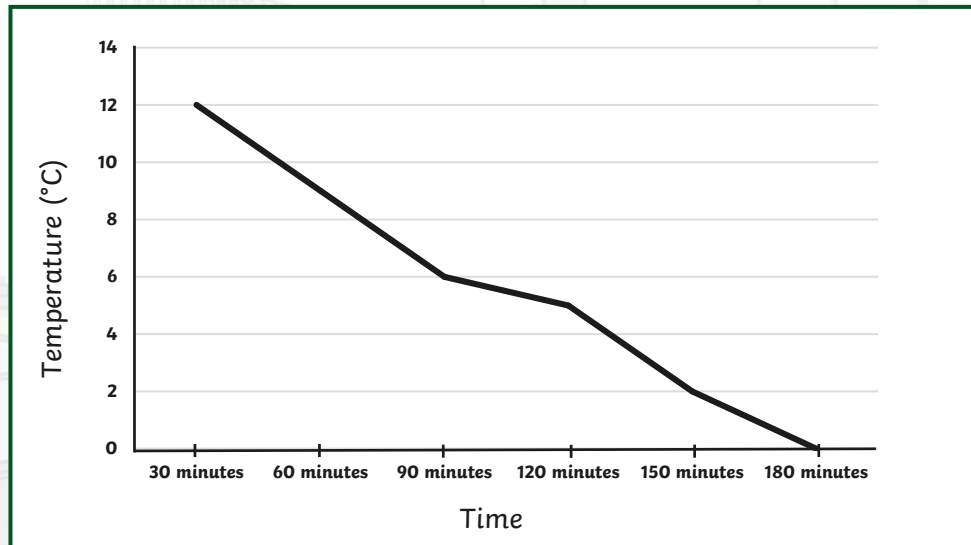
The first digit on the keypad is four.



4

Escape the Science Lab – Clue 2

Class 4 did an experiment about changing states. They recorded the temperature of water as it changed from a liquid to a solid.



The temperature at 30 minutes was 12°C and at 120 minutes was 5°C. The difference between the temperatures was 7°C.

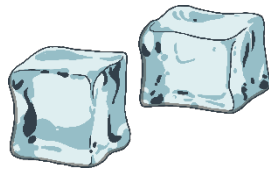
The second digit on the keypad is seven.



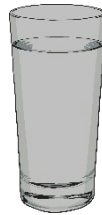
7

Escape the Science Lab – Clue 3

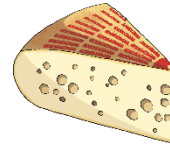
Some materials change state when they are heated. The number of materials that will melt when heat is applied is the third digit on the keypad.



ice



water



cheese



chocolate



egg



wax

Ice, cheese, chocolate and wax will all melt when heat is applied.

The third digit on the keypad is four.



4

Escape the Science Lab – Clue 4

Read these statements about states of matter.

	True	False
Gases can't be squashed.		✗
Solids can change shape on their own.		✗
A liquid will take on the shape of the container it is in.	✓	
Gravity keeps liquids at the bottom of a container.	✓	
Gases don't weigh anything.		✗
When a liquid changes shape, its volume changes too.		✗

There are four false statements.

The fourth digit on the keypad is four.



4

Escape the Science Lab – Clue 5

Read the clues about changing states and write the answer with one letter in each box. The letters in the orange boxes spell the next number on the keypad.

The scientific name for rain, snow, hail and sleet.

p	r	e	c	i	p	i	t	a	t	i	o	n
---	---	---	---	---	---	---	---	---	---	---	---	---

The process when water turns from a liquid into a solid.

f	r	e	e	z	i	n	g
---	---	---	---	---	---	---	---

The process when water leaves the sea and goes up into the sky.

e	v	a	p	o	r	a	t	i	o	n
---	---	---	---	---	---	---	---	---	---	---

The process when water turns from a solid into a liquid.

m	e	l	t	i	n	g
---	---	---	---	---	---	---

The process when water vapour turns back into water.

c	o	n	d	e	n	s	a	t	i	o	n
---	---	---	---	---	---	---	---	---	---	---	---

The letters e, e, v, n, s rearranged spells 'seven'.

The fifth digit on the keypad is seven.



7

Escape the Science Lab – Clue 6

The number of the drink which contained the most carbon dioxide is the sixth digit on the keypad.

Drink	Mass before Shaking (g)	Mass after Shaking (g)	Mass of Carbon Dioxide (g)
1	173.5	171	2.5
2	210	208.5	1.5
3	225.5	222	3.5
4	164.5	164	0.5



Drink 3 contained the most carbon dioxide.

The sixth digit on the keypad is three.



3

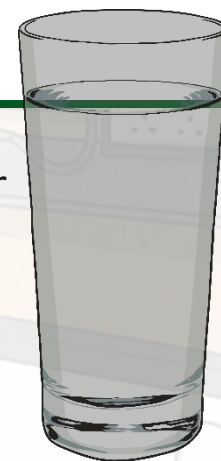
Escape the Science Lab – Clue 7

Fill in the gaps to complete the sentence correctly.

Evaporation is when a **liquid**, such as water, turns into a **gas**.

Add together the number of letters in each word to find the seventh digit for the keypad.

Liquid has six letters. Gas has three letters. $6 + 3 = 9$



The seventh digit on the keypad is nine.

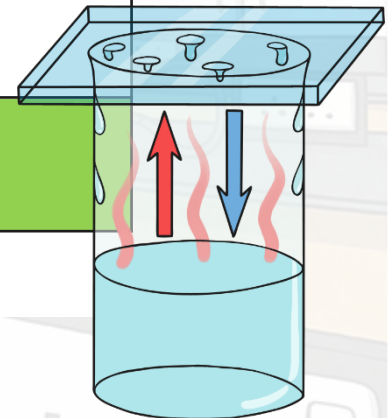


9

Escape the Science Lab – Clue 8

Which of these processes follows evaporation in the water cycle? The number of the next process is the eighth number on the keypad.

- 1. collection
- 2. precipitation
- 3. condensation



Condensation is the process that follows precipitation.

The eighth digit on the keypad is three.




3

Escape the Science Lab

Now you've solved all the clues, it's time to enter the code into the keypad and escape the science lab!

Digit 1	Digit 2	Digit 3	Digit 4	Digit 5	Digit 6	Digit 7	Digit 8
4	7	4	4	7	3	9	3



All About

