

Clue for Digit 1

Sort these into solids, liquids and gases.

Solids



oxygen



carbon dioxide

Liquids



orange juice



metal



wood



water



plastic



brick



lemonade

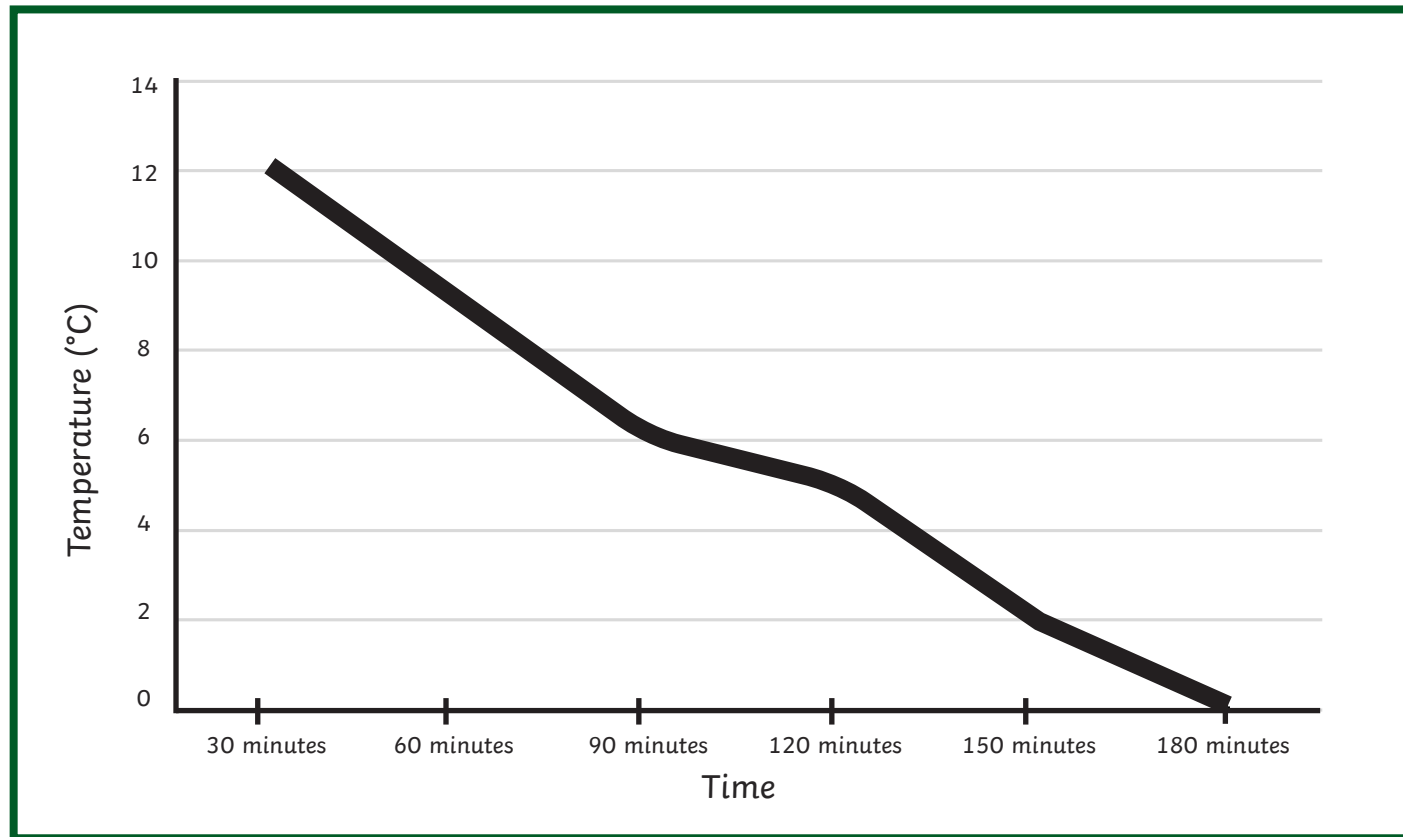


milk

The number of solids is the first digit on the keypad.

Clue for Digit 2

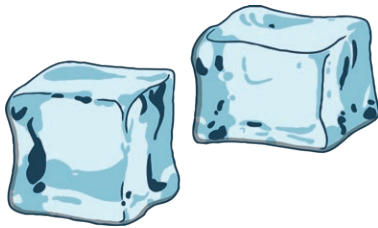
Class 4 did an experiment about changing states. They recorded the temperature of water as it changed from a liquid to a solid.



The difference in temperature between 30 minutes and 120 minutes is the second digit on the keypad.

Clue for Digit 3

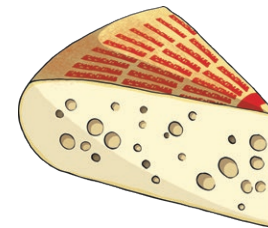
Some materials change state when they are heated. The number of materials that will melt when heat is applied is the third digit on the keypad.



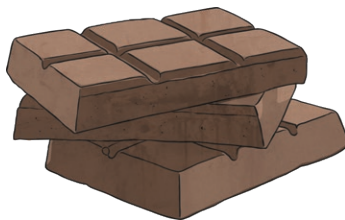
ice



water



cheese



chocolate



egg



wax

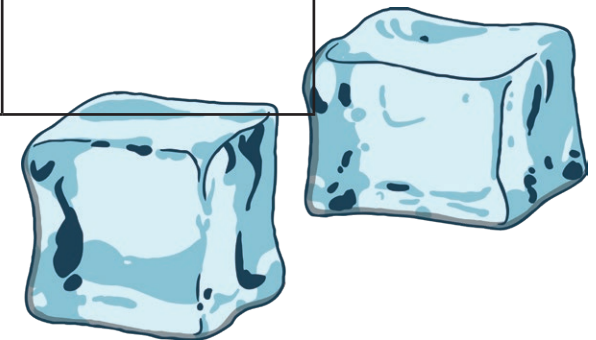
The number of materials that melt when heat is applied is the third digit on the keypad.

Clue for Digit 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.		

The number of false statements is the fourth digit on the keypad.



Clue for Digit 5

Read the clues about changing states and write the answer with one letter in each box.

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

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

--	--	--	--	--	--	--	--

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

--	--	--	--	--	--	--	--	--	--	--	--

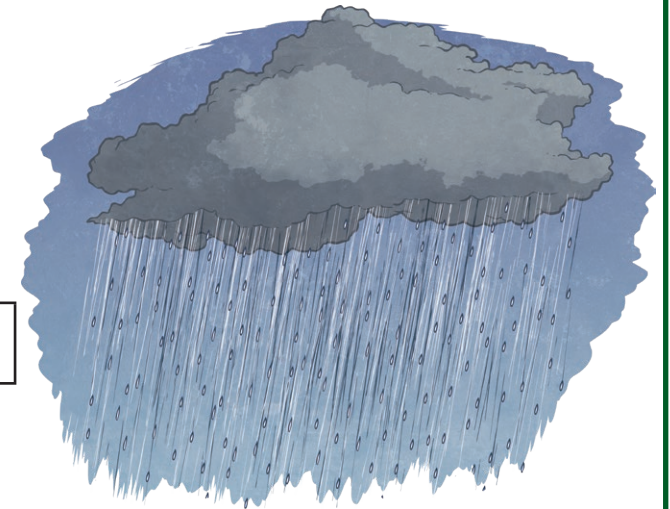
The process when water turns from a solid into a liquid.

--	--	--	--	--	--	--

The process when water vapour turns back into water.

--	--	--	--	--	--	--	--	--	--	--	--

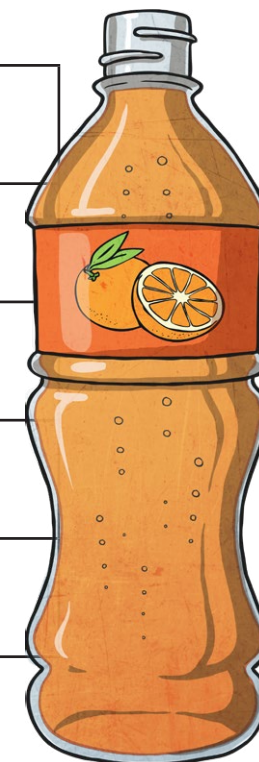
Rearrange the letters in the orange boxes to spell the fifth digit on the keypad.



Clue for Digit 6

Class 4 wanted to see which drink contained the most carbon dioxide. They placed each bottle of fizzy drink onto a balance and measured the mass. Then, they shook up each drink, took off the lid and measured the final mass. The change in mass showed how much carbon dioxide had been in each drink.

Drink	Mass before Shaking (g)	Mass after Shaking (g)
1	173.5	171
2	210	208.5
3	225.5	222
4	164.5	164

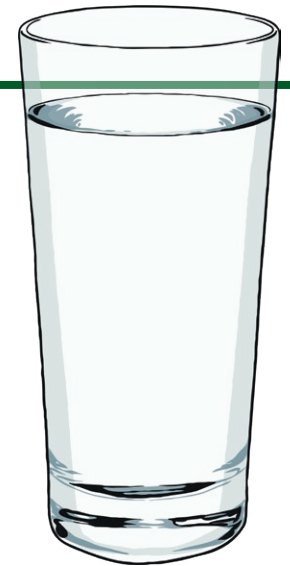


The number of the drink which contained the most carbon dioxide is the sixth digit on the keypad.

Clue for Digit 7

Fill in the gaps to complete the sentence correctly.

Evaporation is when a _____, such as water, turns into a _____.



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

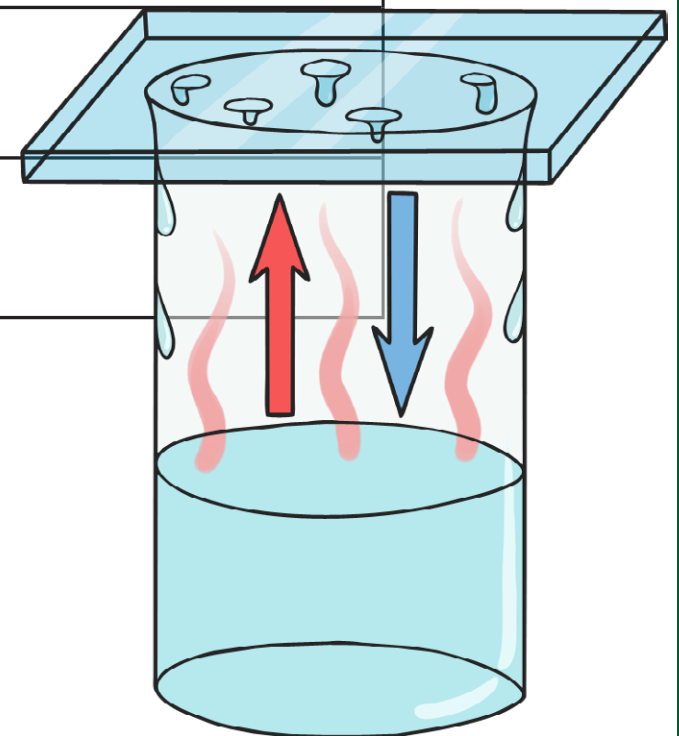
Clue for Digit 8

Which of these processes follows evaporation in the water cycle?

1. collection

2. precipitation

3. condensation



The number of the next process is the eighth number on the keypad.