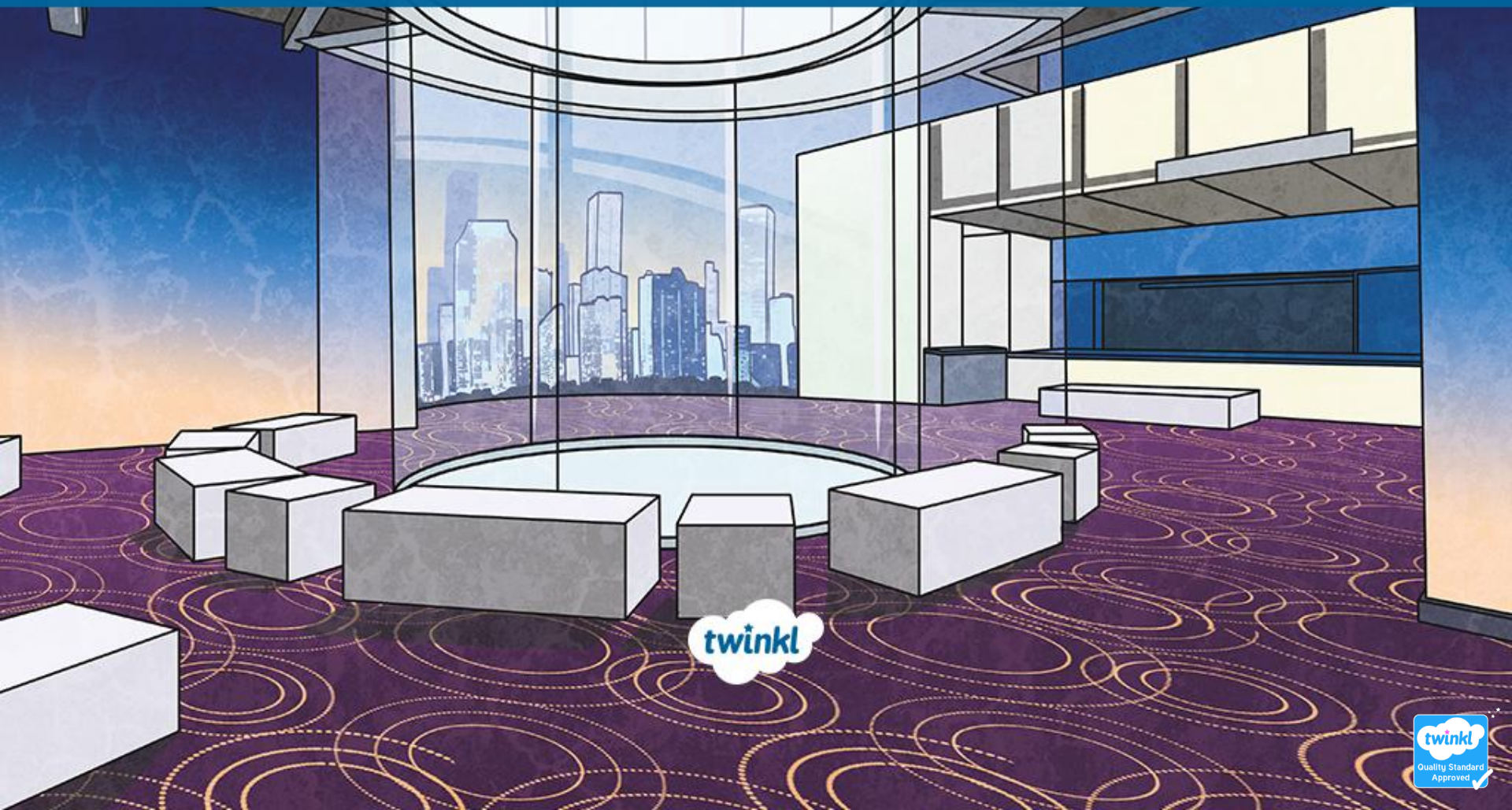


Escape the Wind Tunnel



twinkl

Escape the Wind Tunnel

Answers to the Clues



Escape the Wind Tunnel – Clue 1

Gravity is an invisible force that pulls everything towards the centre of Earth.

Class 5 did an experiment to test if objects with different masses fall at different speeds. They dropped objects of different masses from a height. They used a stopwatch to record how quickly each object fell to the ground.



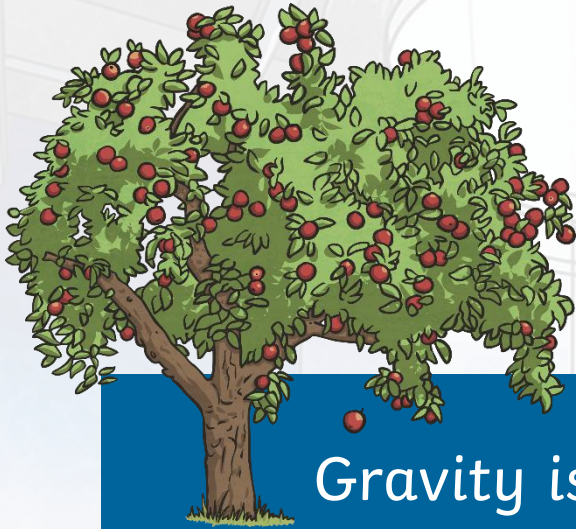
Class 5 changed one variable, which was the mass of the objects.

The **first** digit on the keypad is one.



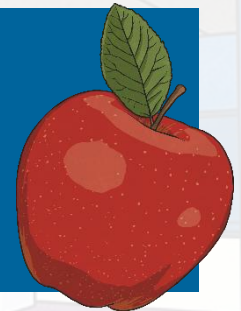
1

Escape the Wind Tunnel – Clue 2



The number of letters in the missing word is the second digit on the keypad.

Gravity is an invisible force that pulls objects **towards** each other.



The missing word is towards. It has seven letters.

The **second** digit on the keypad is seven.

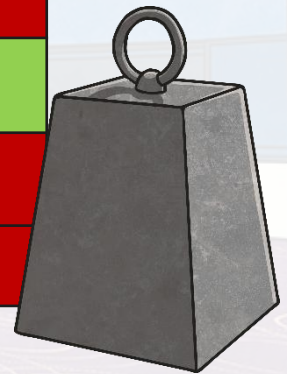


7

Escape the Wind Tunnel – Clue 3

Read these statements.

Mass is a force.	False
Force is measured in Newtons.	True
Weight is a force.	True
Length is a force.	False
A force is a push or a pull.	True
Friction is a force which makes moving things go faster.	False
Upthrust is a type of friction.	False



There are three true statements.

The **third** digit on the keypad is three.



3

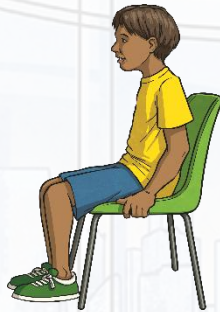
Escape the Wind Tunnel – Clue 4

Look at these forces.

balanced



A bike resting next to its rider



Someone sitting on a chair

unbalanced



Someone skydiving accelerating



A car

There are two balanced forces.

The **fourth** digit on the keypad is two.



2

Escape the Wind Tunnel – Clue 5

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

The force when a magnet pulls towards a metal or another magnet.

m	a	g	n	e	t	i	s	m
---	---	---	---	---	---	---	---	---

The force that slows a moving object down.

f	r	i	c	t	i	o	n
---	---	---	---	---	---	---	---

The force that pulls Earth and other planets towards the Sun.

g	r	a	v	i	t	y
---	---	---	---	---	---	---

The scientist who discovered that gravity existed.

N	e	w	t	o	n
---	---	---	---	---	---

The force that acts upwards in a fluid.

u	p	t	h	r	u	s	t
---	---	---	---	---	---	---	---

i, t, g, e, h rearranged spells 'eight'.

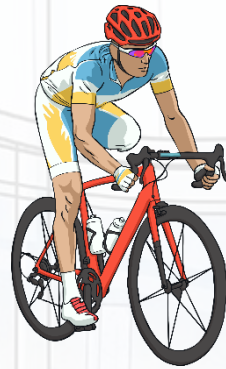
The **fifth** digit on the keypad is eight.



8

Escape the Wind Tunnel – Clue 6

Look at these pictures where friction is occurring.



Friction is useful to stop us slipping over when walking, to stop car tyres from skidding, when someone is climbing up a rope, to stop bike tyres from skidding.

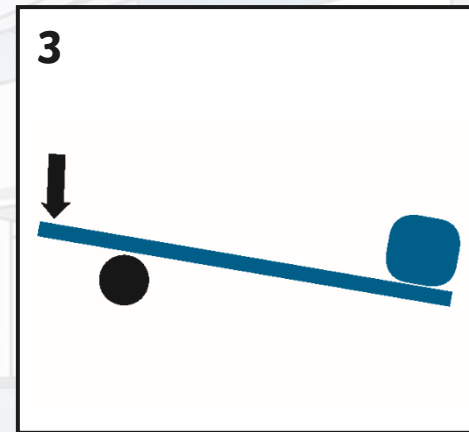
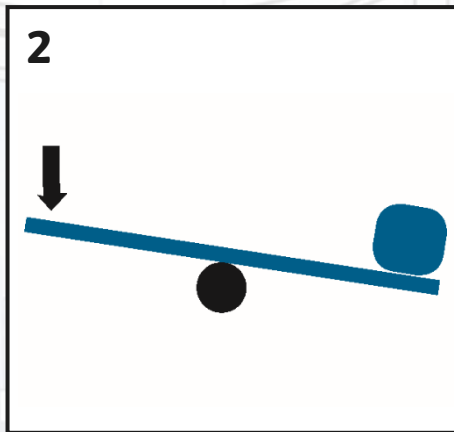
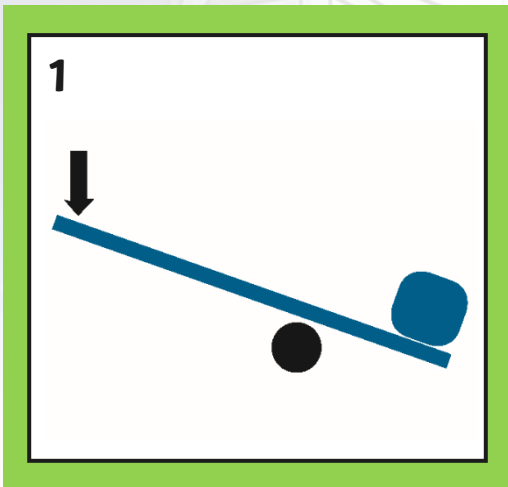
The **sixth** digit on the keypad is four.



4

Escape the Wind Tunnel – Clue 7

Which lever will make lifting the block the easiest?



Lever 1 will make lifting the block easiest.

The **seventh** digit on the keypad is one.

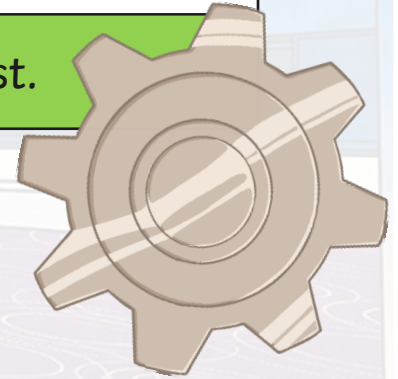


Escape the Wind Tunnel – Clue 8

Which one of these statements best describes how turning a small gearwheel will affect the speed of a larger gearwheel?

1. The second gearwheel will turn more quickly than the first.
2. Both gearwheels will turn at the same speed.
3. The second gearwheel will turn more slowly than the first.

The second (bigger) gearwheel doesn't have to move as quickly to keep up with the smaller gearwheel.



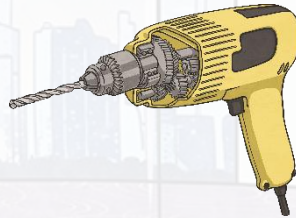
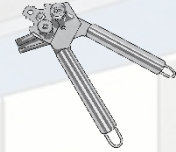
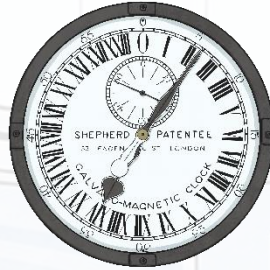
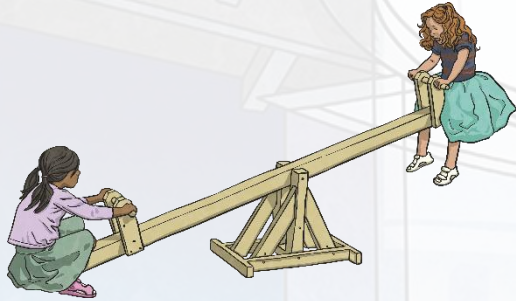
The **eighth** digit on the keypad is three.



3

Escape the Wind Tunnel – Clue 9

All these objects use either levers, pulleys or gears.



See-saws and bike brakes use levers. Flag poles and blinds use pulleys. Drills, hand held can openers and clocks use gears.

The **ninth** digit on the keypad is three.

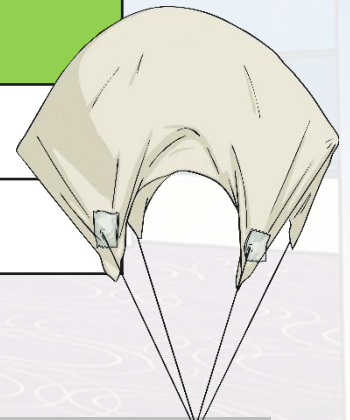


3

Escape the Wind Tunnel – Clue 10

Class 5 did an experiment to see whether the size of a parachute affects the speed in which it falls. They put their results into a table.

Size of Parachute (cm)	1 st Drop (seconds)	2 nd Drop (seconds)	3 rd Drop (seconds)
4 × 4	8.23	1.25	1.29
8 × 8	2.5	2.66	5.08
16 × 16	3.32	1.56	3.4
32 × 32	4.41	7.43	4.58



There are four results that look like anomalies.

The **tenth** digit on the keypad is four.



4

Escape the Wind Tunnel

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

Digit 1	Digit 2	Digit 3	Digit 4	Digit 5	Digit 6	Digit 7	Digit 8	Digit 9	Digit 10
1	7	3	2	8	4	1	3	3	4





twinkl