

Visit Trail

Key Stage 2/3



Forces in the Universe

Name:

Date:



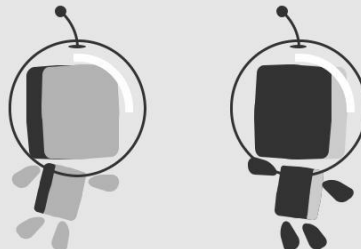
Look in the **Into Space** gallery

Find the "Living without up or down" board

Question 1

Write down three things you might find hard to do in space.

(Remember there is no gravity to pull things down)





Question 2

What happens when astronauts play tug of war in space?

(Hint use the touch screen in micro gravity part of the gallery to help you)

Question 3

Is this the same or different to what would happen on Earth?

Question 4

What affect does weightlessness have on astronaut's legs in space?

(Find the display titled the effects of weightlessness and circle the correct answer)

The bones waste away
as they have nothing
to support

The bones in the legs
expand making you taller

The bones become
much stronger



Question 5

How is the way astronauts exercise in space different to how we do on earth?

Why?

Question 6

How does a rocket use forces to take off?





Question 7

Can you label the arrows with the forces acting on the rocket?

Use some of the words in the box to help you.

gravity

up

thrust

twist

friction

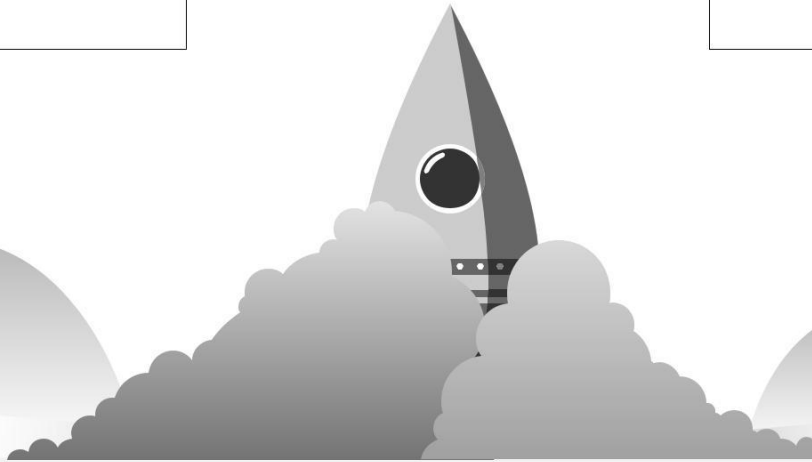
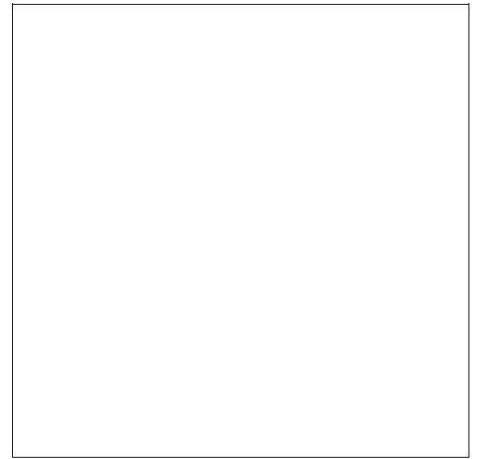
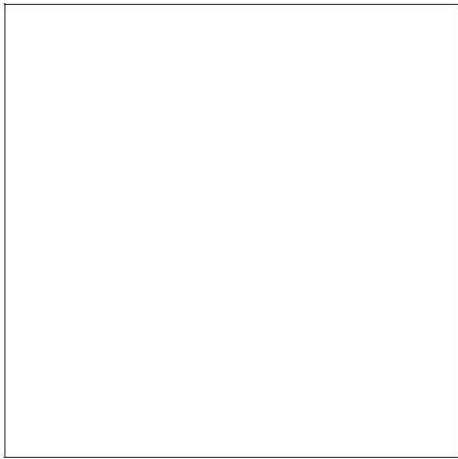
force

down

magnetic

turn

air-resistance



Question 8

Have you tried the water rockets in the rocket tower yet?

What forces are acting on them?



Question 9

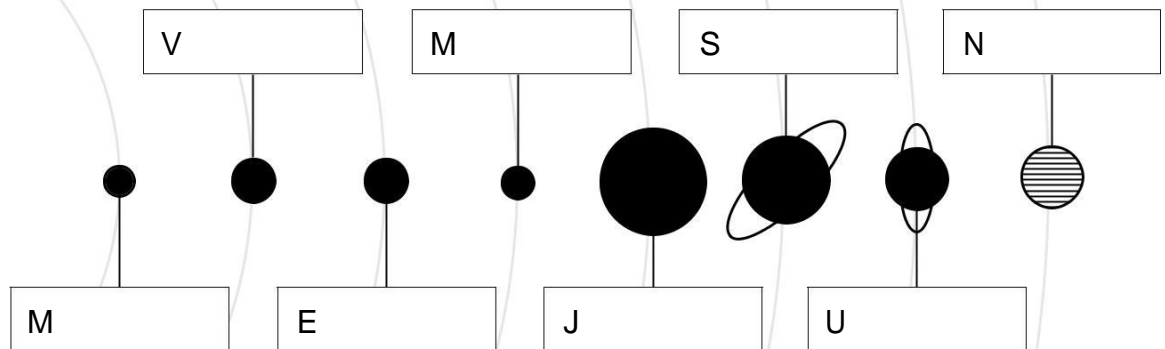
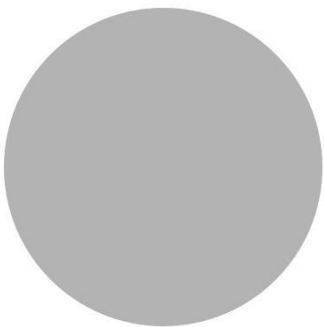
Why did the early Venera probes on Venus get squashed?

Question 10

Can you find Saturn in a bath tub?
Why is it here?

Question 11

Can you label the planets below?





Question 12

Look in the planets gallery to find out more facts about each planet and their gravity to fill in the table below (*circle your answer, Look at the baked bean exhibit for gravity information.*)

Planet	Gravity compare to Earth			How many moons?				
	Lighter	Heavier	Same	0	1	2	3	More
Mercury	Lighter	Heavier	Same	0	1	2	3	More
Venus	Lighter	Heavier	Same	0	1	2	3	More
Earth	Lighter	Heavier	Same	0	1	2	3	More
Mars	Lighter	Heavier	Same	0	1	2	3	More
Jupiter	Lighter	Heavier	Same	0	1	2	3	More
Saturn	Lighter	Heavier	Same	0	1	2	3	More
Uranus	Lighter	Heavier	Same	0	1	2	3	More
Neptune	Lighter	Heavier	Same	0	1	2	3	More



Question 13

Use the gravity well.

How many times can you get the ball to go around the well?

Question 14

What do you notice about the speed of the ball?