Joyful Maths With Ruth

Maths In ~~Motion~~ SPACE

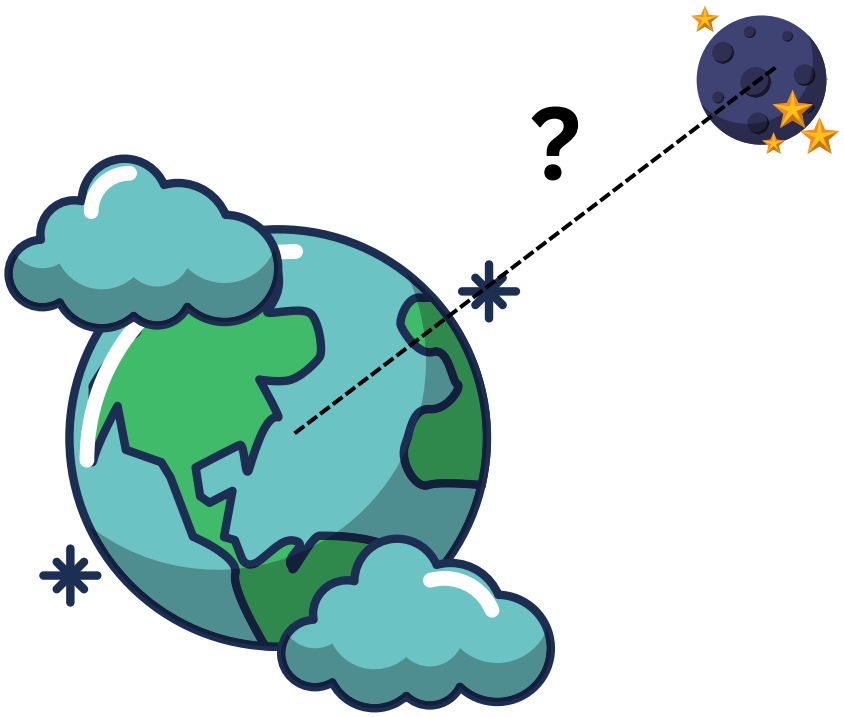
Workbook

Lesson 2: The Moon

To join in please bring:

Playdough, piece of string (at least 50cm long), and egg (can make one out of playdough), a calculator

How far is it to the moon?



What shape did you create with your palydough and string?

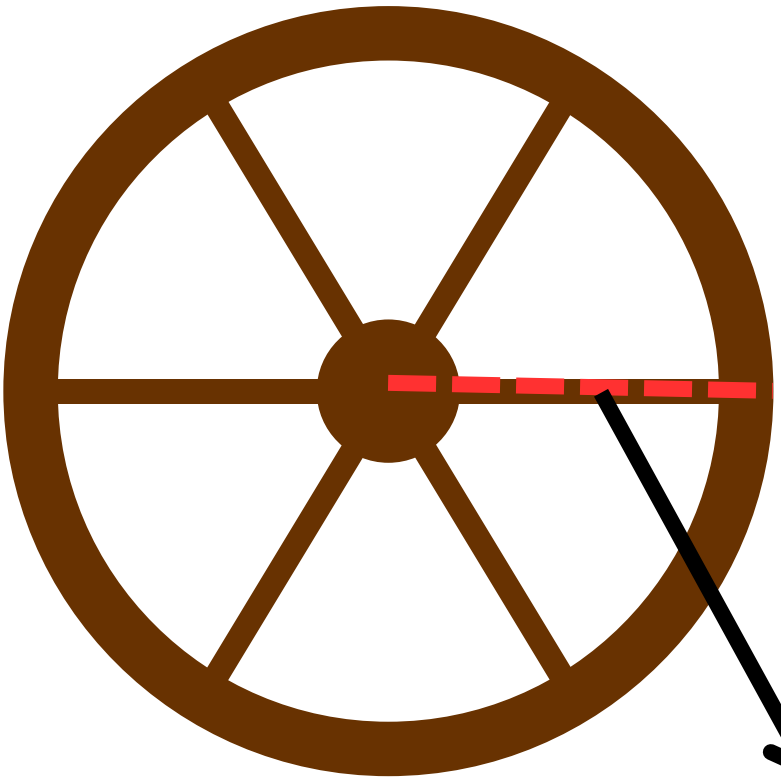
Draw it:

Circles

The **radius** is the distance from the ..... to the ..... of the circle.

It is the same length, no matter which direction is it going.

Measure the radius:



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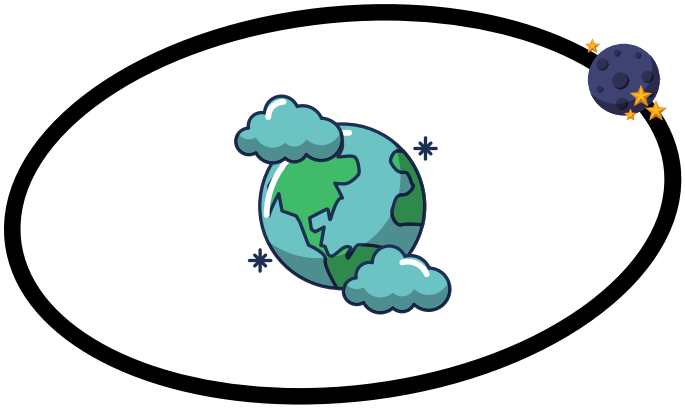
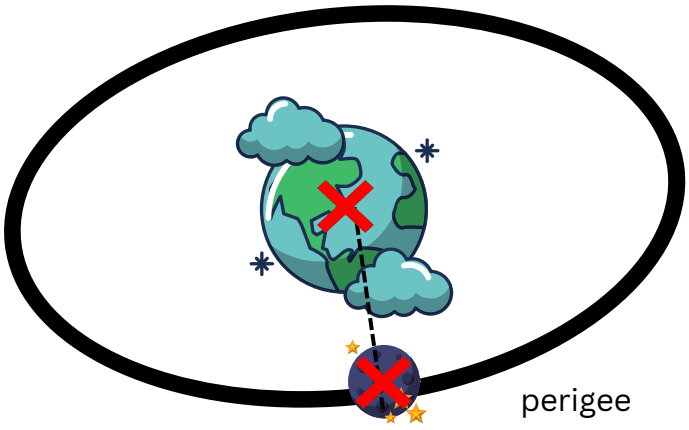
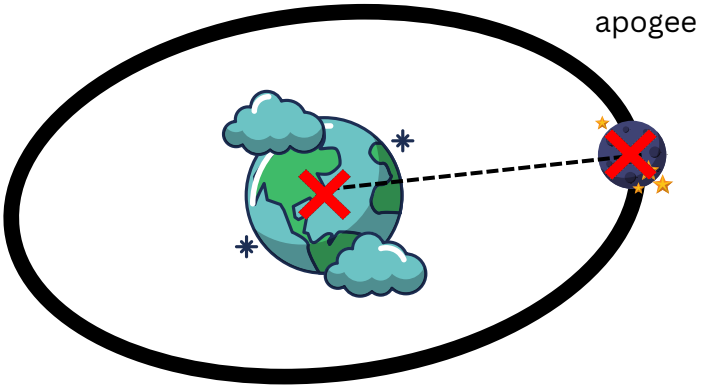
The moon’s orbit



The moon orbits in an .....



At the **perigee** (closest point) it is ..... km from the earth



At the **apogee** (furthest point) it is ..... km from the earth

Apollo 11's flight path

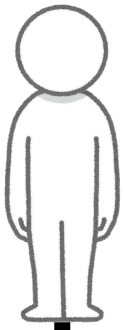
Why do you think it didn’t go directly to the moon?

Weight

Weight = Mass x g

g = acceleration
due to gravity

50 kg



Earth:

Mass =

Weight =

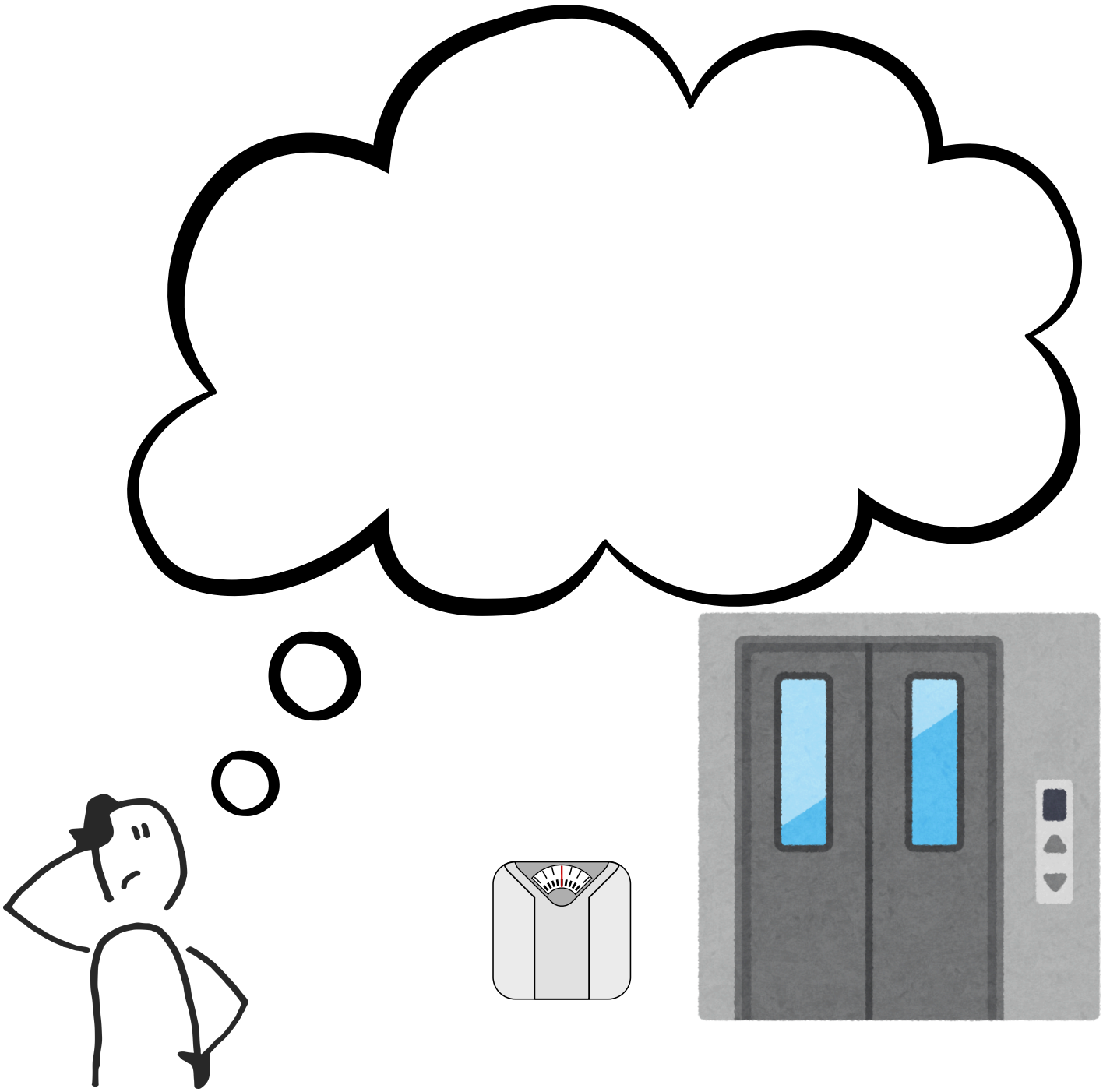
Moon:

Mass =

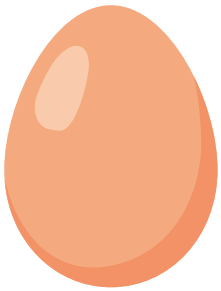
Weight =

Weight in a lift/elevator

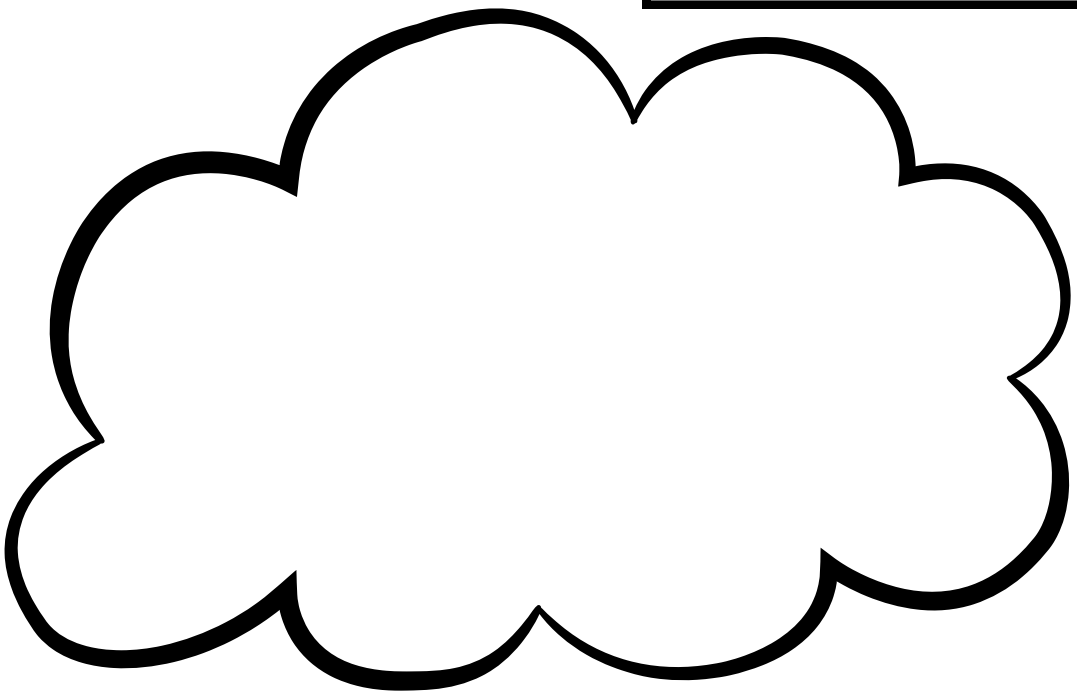
What do you think would happen if you weight yourself whilst in a lift/elevator?

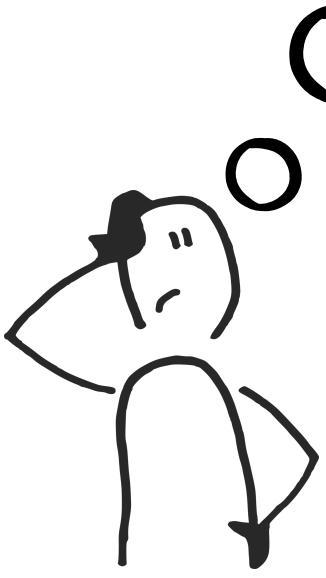


Shape of the moon

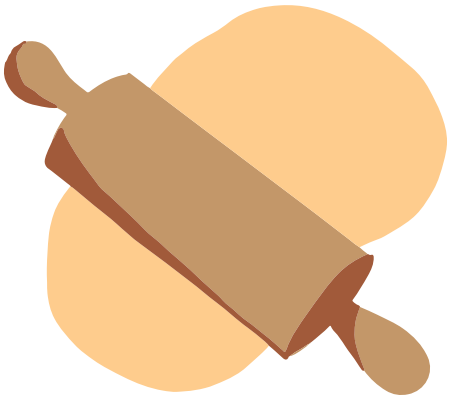


Why does the moon look round?





What would happen to some dough if you held it in the air? Why?



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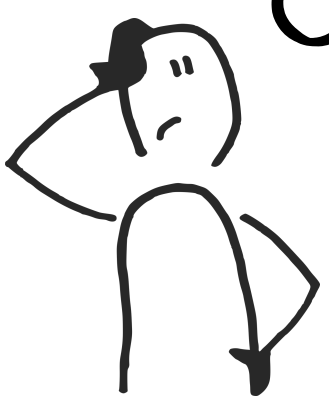
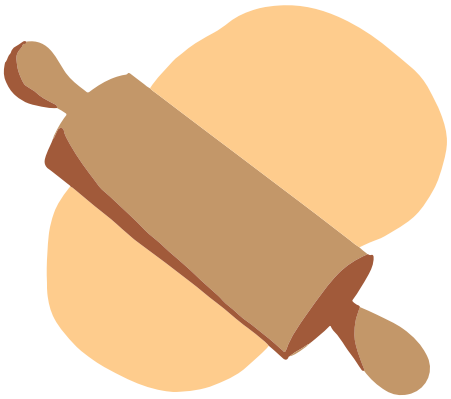
Thought experiment





At home challenge:

Measuring the radius

Find as many circular objects as you can.
Measure the radius.
What units will you use? (cm, inches, m???)

Object:	Radius:

Create your own Moon Quiz:

Question 1

True **False**

.....

.....

Question 2

True **False**

.....

.....

Question 3

True **False**

.....

.....

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Create your own Gravity Quiz:

Question 4

True **False**

.....

.....

Question 5

True **False**

.....

.....

Question 6

True **False**

.....

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