

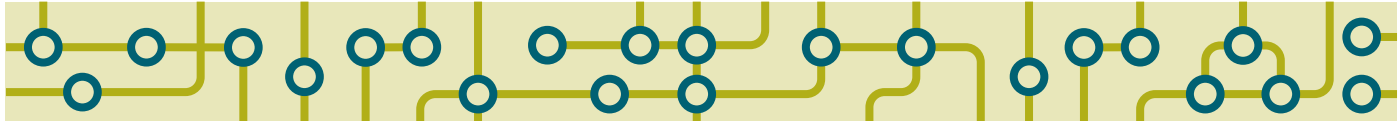


Engineering Challenge

for upper primary



Name: _____



Discover how everything around you has been developed, designed and made.

Start on Level 5 – Energise

Find the wind turbine blade section.

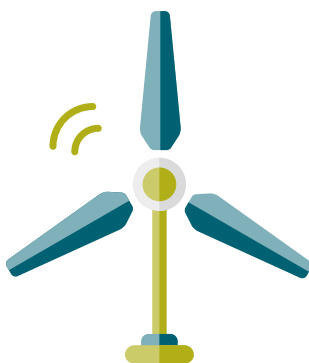
Scotland aims to produce 100% of its electricity from renewable sources such as wind turbines and solar panels by 2020.

We need people to work in engineering to make this happen.

Which engineer invented the first wind turbine?

How many bulbs did the first wind turbine power?

How many homes can a modern wind turbine power?



Find the Energy at Home display.

Engineers are working to make our household objects use less energy.

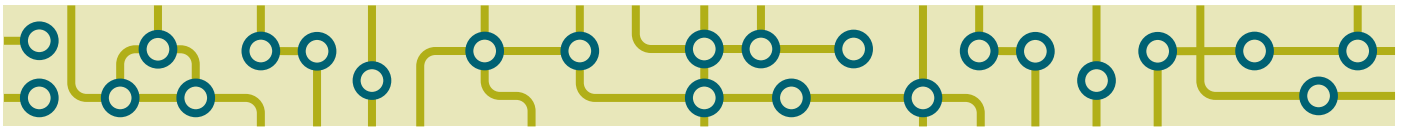
Choose one object from the display.

What is it?

What does it do?

There will be thousands of engineering jobs in renewable energy in the future



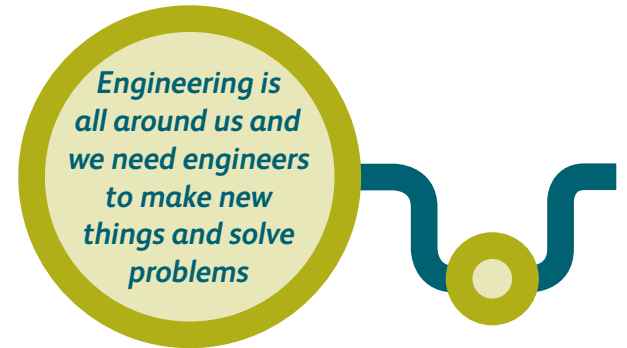


Go to Level 3 – Technology by Design

Find the display of bicycles

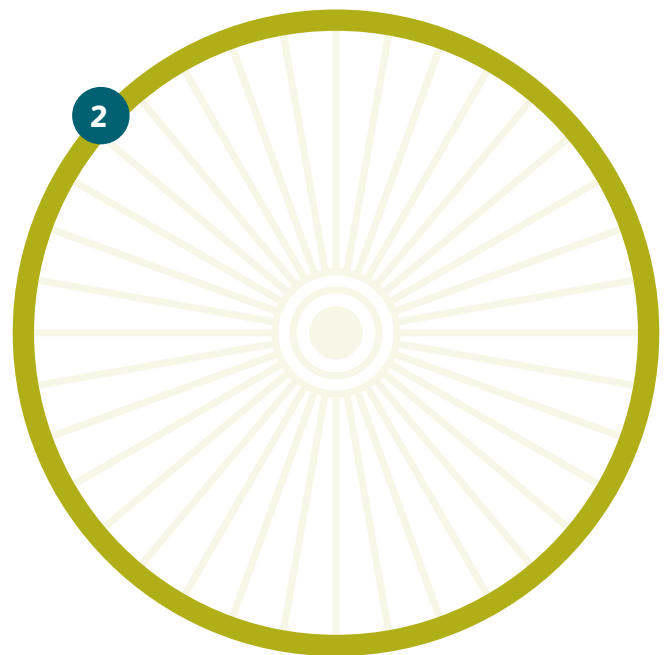
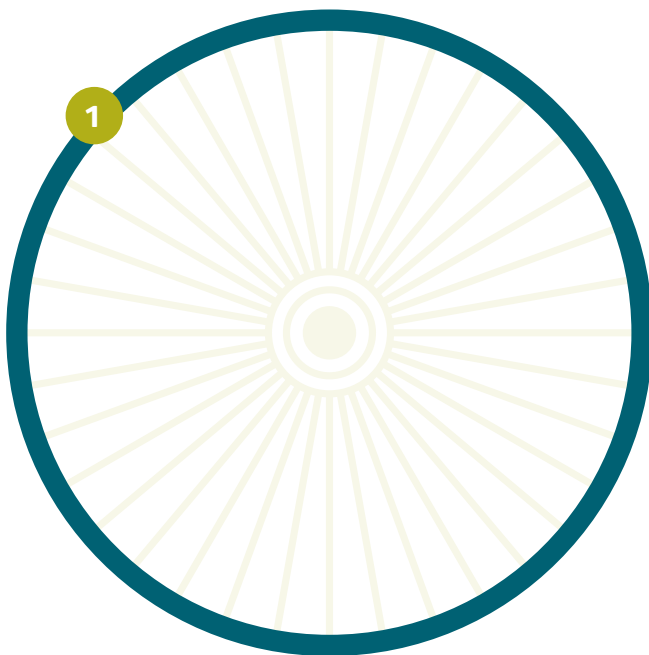
All the bicycles on this wall were made during the 1800s. Can you find the oldest and newest to discover how much bikes changed during that time?

Can you complete the table below?



	Name	Year
Oldest		
Newest		

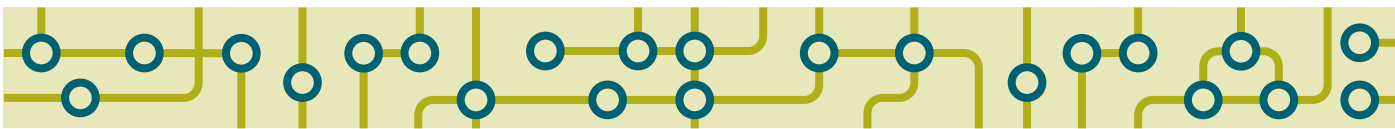
Name two differences in the way the bicycles are designed



Find the statue of John Boyd Dunlop's head.

He invented the first bicycle tyre to have air in it. What is it called?





Go to Level 1 – Making It

Find the red Argyll car.

Think about the cars we use today. Name three changes engineers have made to improve cars today:

1 _____

2 _____

3 _____

Go to Level 1 – Explore

Find the Boulton and Watt engine.

James Watt used his engineering skills to improve steam engines to make this type which was sold around the world.

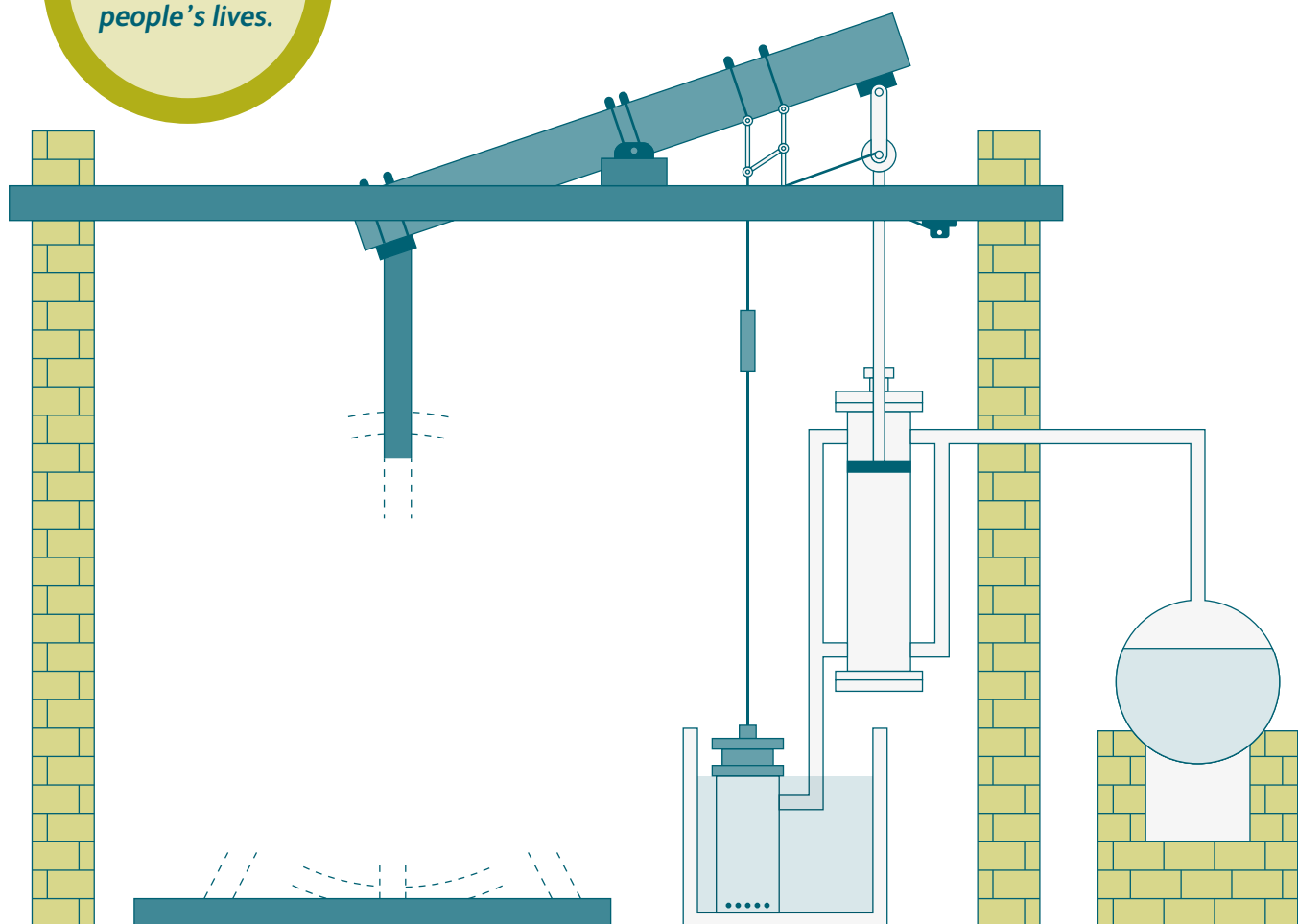
Can you find out two facts about it?

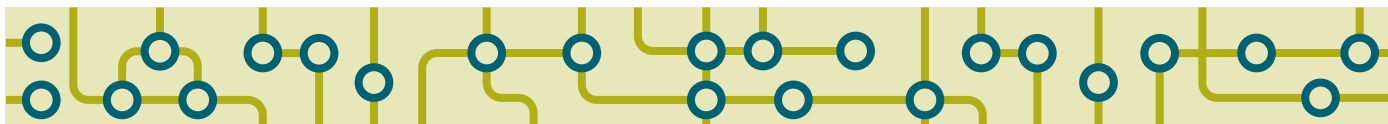
1 _____

2 _____

Complete the drawing below.

Engineers create things that help improve people's lives.

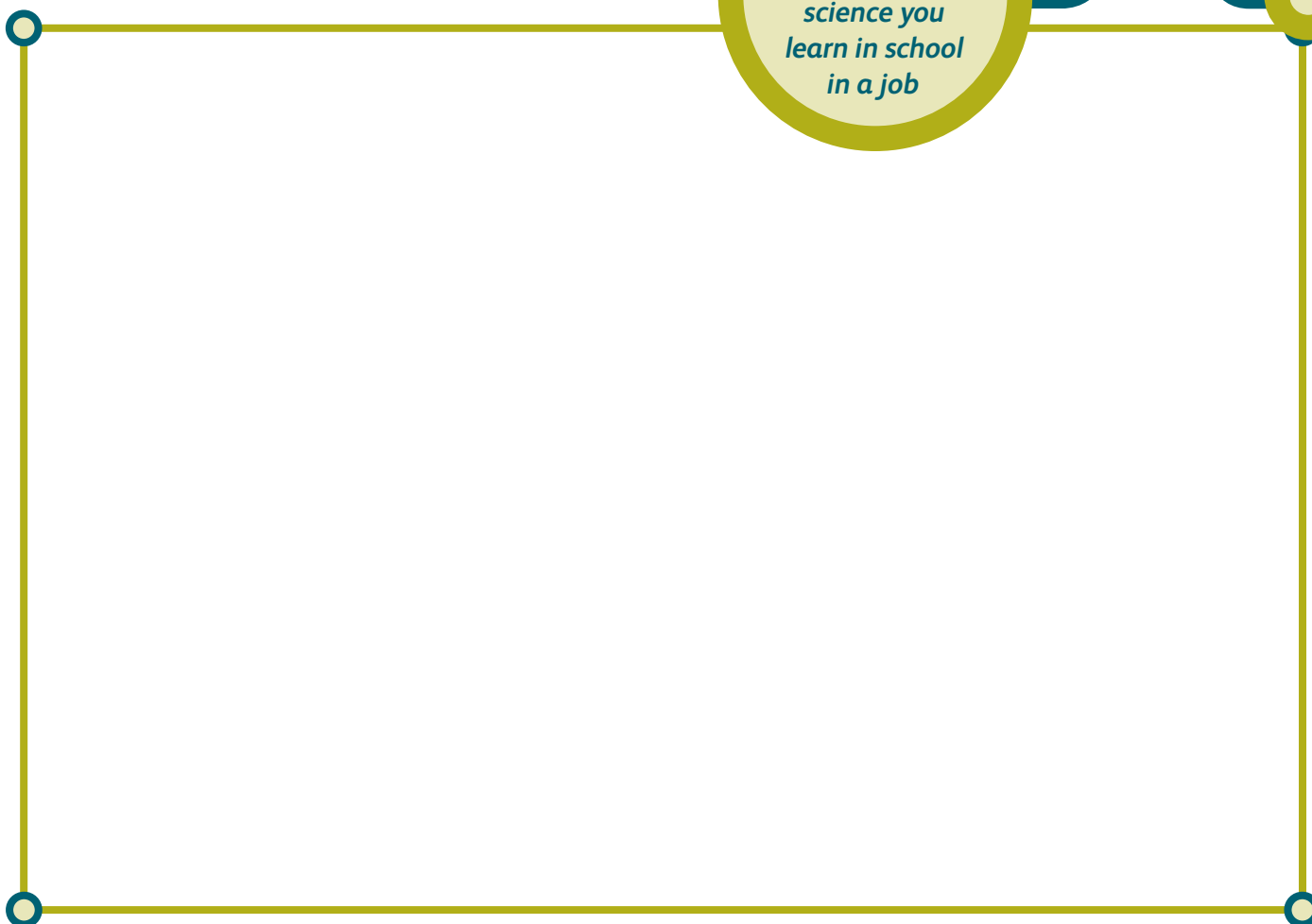




Drawing challenge:

Draw your favourite object you've seen today and show how you would make it even better.

Engineering lets you use the maths and science you learn in school in a job



So now you know more about: **Engineering**

Would you like to improve something that exists already or invent something new in the future. There are lots of different types of engineer including civil, chemical, mechanical and electrical.

Find out more at www.myworldofwork.co.uk.

Find out what subjects you need to study at school, what skills you need, how many jobs there may be in the future and lots more.



National
Museums
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