Look down into the *Grand Gallery* from the Level 5 balcony.

Inchkeith Lighthouse Lens

Giant Deer Skeleton

Cockcroft Walton Voltage Multiplier

A B C D E F G H I J K L

1 2 3 4
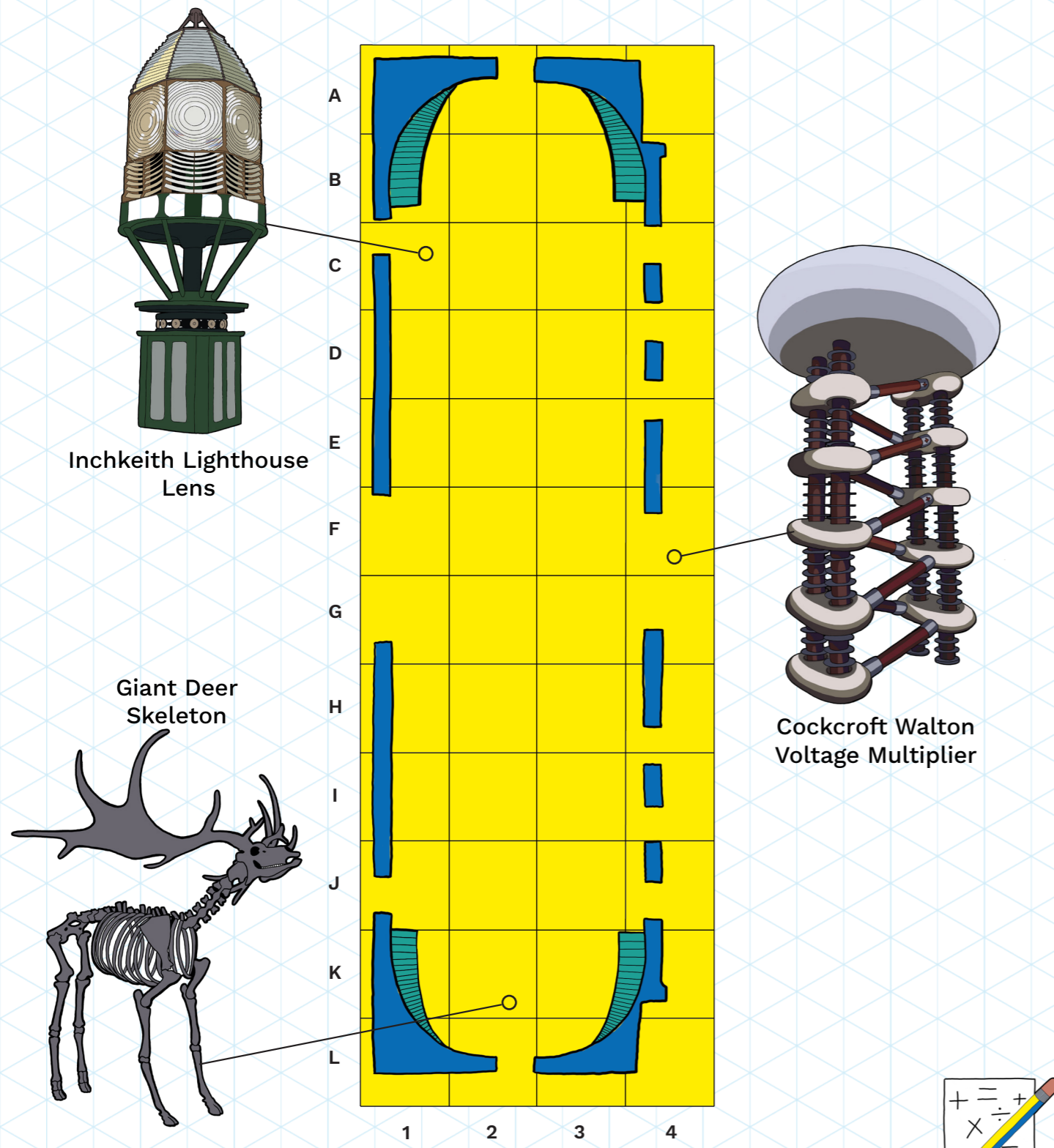
Using the map above locate the coordinates for the objects:

Inchkeith Lighthouse Lens:

Cockcroft Walton Voltage Multiplier:

Giant Deer Skeleton:

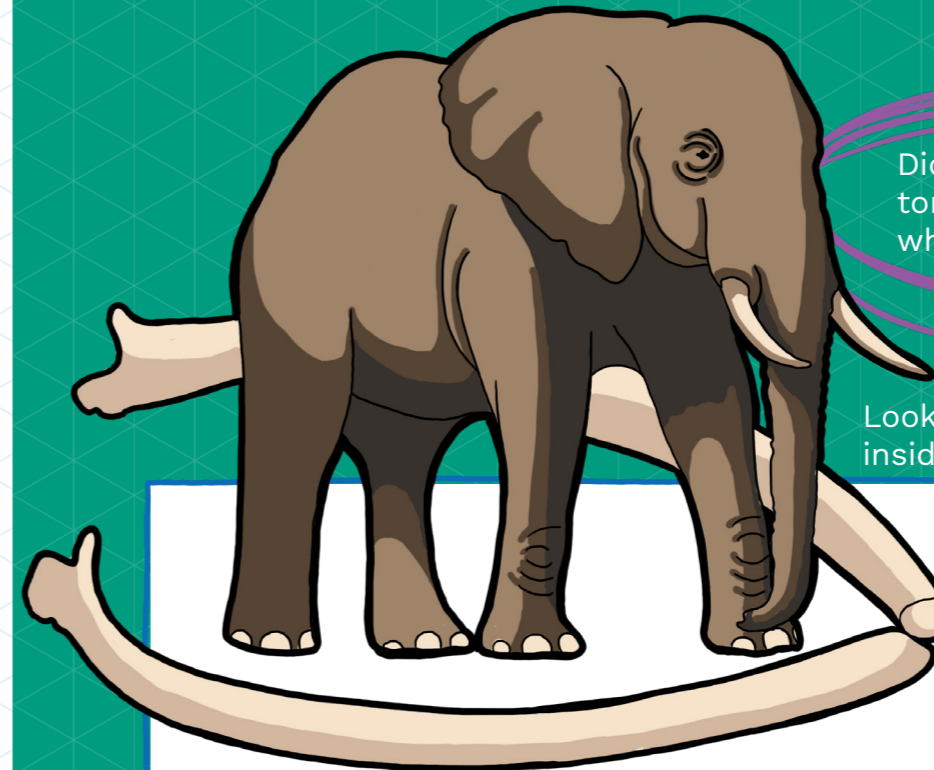National Museums Scotland

A World of Maths

Maths Week Scotland

Follow the trail to explore our world and beyond with the help of marvellous maths!

Our journey begins in *Animal World* on Level 1.

Did you know that the blue whale's tongue has the same mass as the whole of this enormous land animal?

Look for the African elephant standing inside a blue whale's jawbone.

If the elephant has a mass of 6 tonnes and the blue whale has a mass of 200 tonnes, how many elephants would be equal to a blue whale?
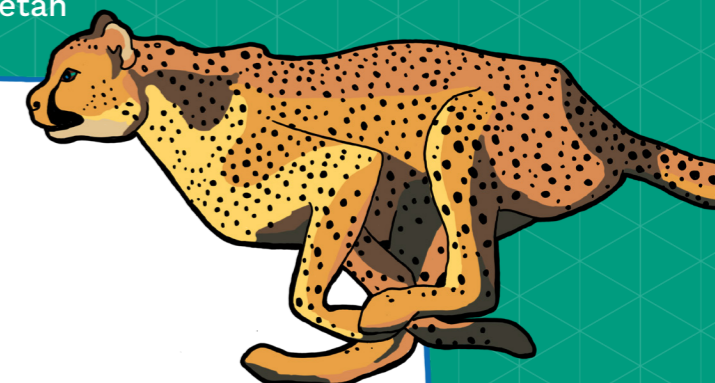
Find the Animal weigh-in behind the elephant. Step on the scales to see how your mass compares to that of the other animals in the natural world.

I weigh the same as a

From the largest to the fastest! Spot the cheetah on the wall beside the elephant.

If it runs at a speed of 112 km/h, how many kilometres could it cover in 30 minutes?

Discuss how you solved this.

Walk back into the *Grand Gallery*

Find the model of the Europa iii satellite launcher and base on the *Window on the World*. This model is at a scale of 1mm:10mm and is 3630mm tall.

How tall would the real launcher be?

Why do you think we have a model rather than the real thing?

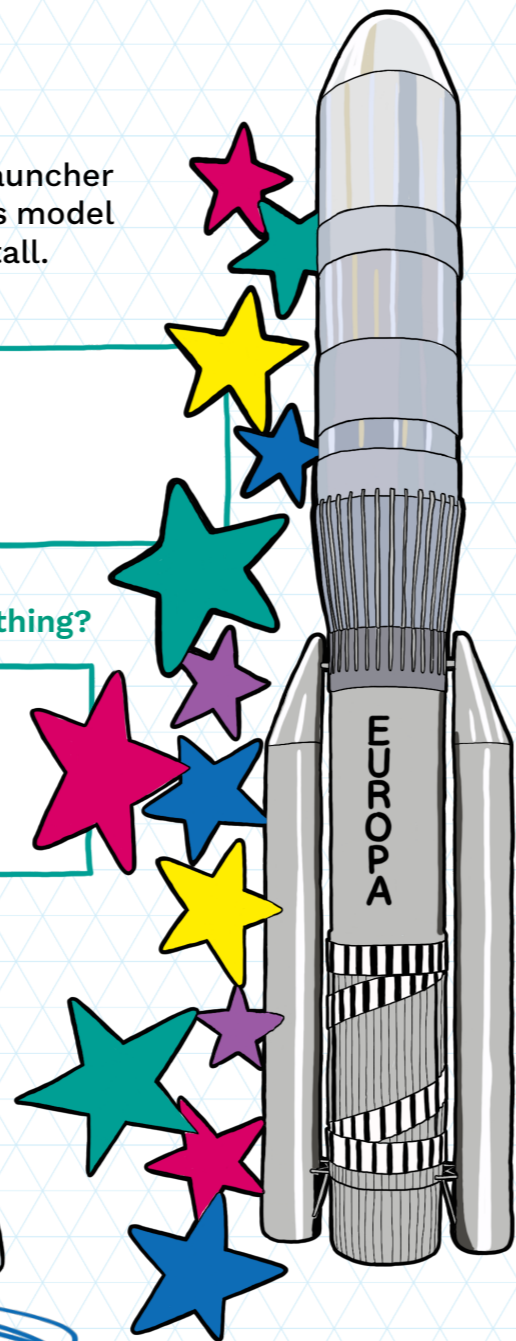### Cross the *Grand Gallery* and head up to *Technology by Design* on Level 3.

Engineers are great at using maths to help us investigate our environment.

Look for the model bridges.
What shape is used in the Warren Girder Model Bridge?

Can you think why it has been designed like this?

Can you seen any other bridges in the gallery which use the same shape?

EUROPA

Head around to *Communicate* on Level 3.

There are many ways in which we communicate with people who are far away from us, for example by telephone.
**How many other ways can you find or think of to communicate with someone on the other side of the world?**

All of these rely on communication networks.
Label the diagram with people you have communicated with in the last week. Add more lines for more people.

hello!

Move up to *Energise* on Level 5.
Look for the information on Sources of energy.

Discover some amazing innovations related to the generation of energy from renewable sources. See how these can provide real solutions to our present climate emergency.

Choose one example of renewable technology and think about how maths has been helpful in creating it.
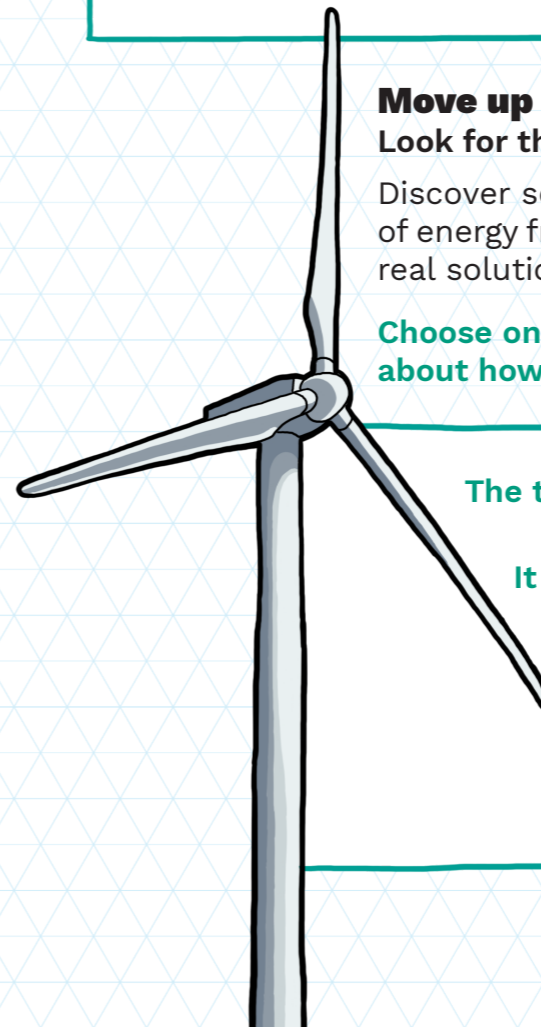
The technology I chose is

It uses maths to