

Monday

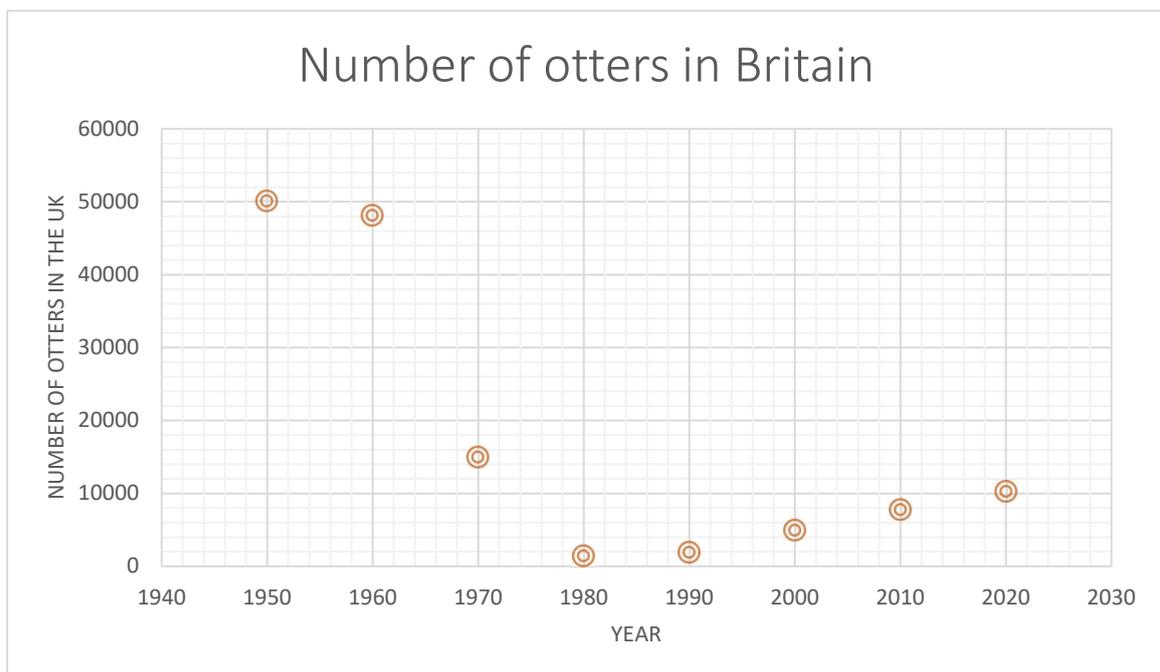
06.07.2020

Good morning Longboats, how are you today? Well done to the 6 people who finished all their Athletics last week! Great work!

Main activities

This is called a **scatter graph**. Bar charts are usually used to show data for a different categories (e.g. types of vehicle, colour of car, type of cereal). Each category gets its own bar in the graph.

On a scatter graph, you're usually showing data for one thing but maybe how it changes over time. For example, this chart shows the number of otters living wild in the UK from 1950 until today.



It will be quite useful to you to work through these boxes one at a time today so, even if you usually start on triangle or square, do the circle box today as well.



1. Approximately how many otters are living in the UK today?

2. When was the otter population at its lowest?

3. How many otters were living in the UK in 1950?

4. A huge number of otters died out because of dangerous chemicals which were put on farms and then ended up in the rivers, killing the otters. These chemicals are banned now but we when do you think they started being used? How do you know?



1. How many otters do you think were living in the UK in 2010? Why did you estimate this amount?
2. I made this graph on the computer – so it decided the scale for me! Why do you think it has used a scale of 10, 000? Would you use this scale? Explain why or why not.
3. Approximately how much has the otter population risen by since 1990?
4. Think about what you know about this graph. When do you think the pesticide (chemical) that was killing the otters got banned? Why is that a sensible guess?



Remember that data in categories works best in a bar graph and data with more numbers works best in a scatter graph. Can you sort these graph titles into ones that would work better as a bar chart and ones that would work better as a scatter graph?

Height of children in class 4B	Time taken to walk to swimming each week	Tiger population in the last 20 years
Distance from planets in the solar system to the sun	Height of a sunflower from March to August	favourite fruits in year 6
favourite ice creams of my extended family	Colours of football kits in the premier league	Number of people in the Tesco queue during the day

1. Sort these graph titles into bar graphs and scatter graphs.
2. Max says “I’m going to do the height of children in class 4B as a scatter graph because if the crosses move in a diagonal line upwards as you look at the graph – it shows the children are growing.” Do you agree? Explain why or why not.



Another useful thing about scatter graphs is that they can help you make reasonable estimates about data that you don’t have. One good way to do this is to treat the information you **do** have kind of like a dot to dot. This helps you see how the information is moving along over time (the technical word for this is the **correlation**).

1. Join all the dots on the scatter graph together so you have a long line of data (try and join each dot to the next one with a straight line but your line can zig zag up and down as the data does).
2. How many otters do you estimate there were living in the UK in 1965?
3. How many otters do you estimate will be living in the UK in 2030, if we keep taking good care of them?
4. What do you estimate that the otter population was in 1940? Why?