



**TIME SERIES
GRAPHS**
(CHILDREN WITH LIFE
LIMITING DISEASE IN
THE UK)

MATHS LESSON PLAN



DURATION: 60 MINUTES



**forget me not
children's hospice**

Charity No. 1110457

THE BIG PICTURE

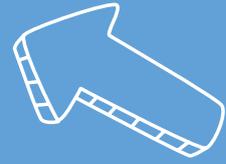
THIS WILL HELP PUPILS TO UNDERSTAND

- ➔ To read and compare time series graphs.
- ➔ To understand how a time series graph may be used to make predictions based on trends (dependant on reliability).
- ➔ To plot time series graphs.



FOR THIS LESSON YOU WILL NEED:

- SMART notebook lesson slides
- Worksheet 1: Reading, explaining and making predictions based on time series graphs.
- Worksheet 2: Plotting time series graphs.
- Extension bar chart data
- Data provided by University of Leeds.



STARTER:

Reading time series graphs. Brief discussion around what this graph shows and how the data is displayed. Talk about positive trends (as independent increases so does the dependent) and negative trends (as independent increases the dependent decreases). Be clear about time along the x-axis always being the independent variable in a time series graph. The y-axis will be the dependent because it is what is being effected or tested over time.

TALKING POINT:

Short silent reading activity where students are posed the question that will be revisited later in the lesson "Should Forget Me Not Children's Hospice employ more carers to best support the families of children with life limiting diseases".

WORKSHEET 1:

Interpreting time series graphs on children with life limiting diseases in (1) England and (2) Scotland.

CHECKING UNDERSTANDING:

Class mark question 1. Students responses should include; Positive trend in the data, reasonable prediction and prediction is outside the data so it can not be 100% reliable (talk about why this may be the case).

Plotting time series graphs: Teacher models plotting time series graph

WORKSHEET 2:

- Students work through plotting Wales data on children with life limiting disease. Differentiation: Some students will be given axis while those with more advanced understanding should set up their own.
- Students plot Northern Ireland data onto graph with England, Wales and Scotland already on it.
- Students answer question "Should Forget Me Not Children's Hospice employ more carers to best support the families of children with life limiting diseases" based on data they've plotted and trends they've observed.

EXTENSION

Percentages: Have students find the percent increase for each part of the UK and decide which part has increased the most over the given time period.

Bar charts: Have students look at the provided deprivation data presented in a bar chart for Scotland. Have students compare the any trends in both this data and in the data they have graphed.