Year 2 Unit 5: Graphs (1 week)
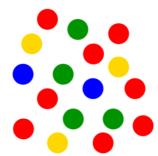
colour of aliens

Which colour is most common?
Which colour is least common?
How do you know?

aliens	total
purple	
yellow	
green	
red	
blue	

colour	tally	total
red	||||| |||	
blue		
green		
yellow		

red	blue	green	yellow

This unit's Big Picture is based on the occupation of an astronaut and provides lots of opportunities for data collection. For example, there are lots of different coloured aliens with different numbers of eyes and legs. Make time to explore these opportunities at the start of the unit.
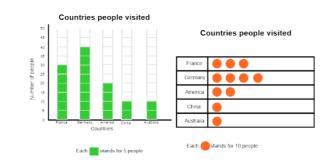
Representing data using a table, pictogram and block diagram
L1 Represent and interpret data using a pictogram and table
L2 Represent and interpret data using a block diagram and table

Pupils develop an understanding of what is meant by data (information) and begin to gather data first from each other (e.g. collecting data about eye colour), then using the alien resource sheet. Pupils organise their data into a pictogram before interpreting their data and recording in a table. In Lesson 2, pupils move on to organising data in a block diagram and build on their conceptual understanding of data through further discussion and interpretation of the data.

? *What opportunities will you give pupils for informal and formal talk?*
? *When modelling, what thinking will you share aloud to support pupils to construct their pictogram/block diagram correctly?*

Representing data using a tally chart, pictogram and block diagram
L3 Represent and interpret data using a tally chart and scaled pictogram
L4 Represent and interpret data using a tally chart and scaled block diagram

Pupils are introduced to tallies as another way of recording data: ensure pupils have opportunity to make sense of the structure of tallies with the diagonal mark representing the fifth item and the purpose of tallies to support them to count efficiently in groups of five. They will transfer data collected using a tally chart into a scaled pictogram and then a block diagram. Again, spend time discussing and interpreting the data collected, drawing attention to the scale used in each representation.

? *When constructing and interpreting a scaled pictogram, what concrete resources could you use to support pupils understanding of the value of each picture? What thinking will you model aloud?*
? *What transitions will you use during these lessons to support pupils with fluency in counting in 2s and 5s?*

To deepen pupils' understanding, expose pupils to tally charts, pictograms or block diagrams with mistakes included, or model a mistake when representing data. Ask pupils to explain what mistake was made and why someone might make that mistake. E.g. counting each picture as 'one' when each picture represents 'two'.

Video: *Understanding pictograms*

Countries people visited

Interpreting data
L5 Interpret data from scaled pictograms and block diagrams

Pupils develop an understanding of the purpose of data representations through describing the information shown by various pictograms and block diagrams. Mathematical thinking is developed by asking them to look at two data representations and sort questions according to what can and cannot be answered using each representation. Throughout the lesson pupils will be exposed to different scales that will require them to apply strategies for counting in 2s, 5s and 10s.

? *How will you draw pupils' attention to the scale of each chart?*