School Trip to Dunluce Castle

Teacher Notes

Introduction

Pupils can work on this problem individually or with others.

- They can discuss how to use the two bar charts to determine which day Mr Wilson should choose.
- They can compare, challenge approaches, and adapt as necessary.

This problem deals with a pupil's ability to read bar charts and use them to develop a strategy for finding a suitable solution.

What I know (think)

The pupils should know from the given problem:

- Mr Wilson wants to choose a day to take his pupils on a school trip to Dunluce Castle.
- He asks them two questions: which day they would most like and least like to go on the trip.
- There is a bar chart that shows the number of 'most like' replies for each day.
- There is another bar chart that shows the number of 'least like' replies for each day.
- They should decide on a day that Mr Wilson should choose, and explain why.

What I need to know (identify)

Pupils need to identify:

- the number of 'most like' replies and 'least like' replies for each day;
- how they will use the number of replies to select a day Mr Wilson should choose;
- which day they think would best reflect the replies provided; and
- whether their approach provides a good justification for choosing a day.
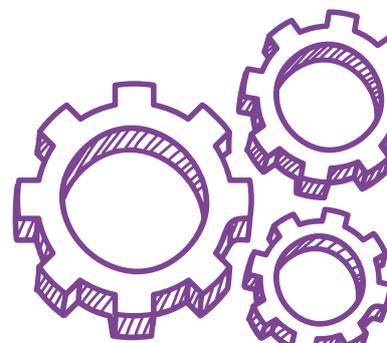
What I need to do (employ)

Pupils could read both charts and arrive at a conclusion based on the heights of the bars:

- For example, Wednesday has the biggest number of 'most like' replies, so most people want to go on that day; however, they need to consider both bar charts and the fact that Wednesday also has the biggest number of 'least like' replies.
- Therefore, pupils need to also justify their chosen day by comparing the number of replies for each day in both bar charts.
- This could mean that pupils provide a ranking of biggest/smallest for both types of replies, and see which day is most suitable overall.

Another strategy is to give all 'most like' replies a positive number and all 'least like' replies a negative number. Pupils could:

- add the number of positive 'most like' replies to the number of negative 'least like' replies for each day.

Therefore, the day with the biggest positive number would be the day Mr Wilson should choose.

What I did (review)

Pupils will use self-assessment, peer assessment or teacher feedback to decide whether they have approached the problem as intended.

- How did they approach the problem and what strategy did they use?
- Did they compare both bar charts when looking at the days?
- Did they use the number of replies from both bar charts for each day?
- Were they able to choose a suitable day based on the information they have?
- Do they think that there is a better strategy or did they use the most effective strategy?
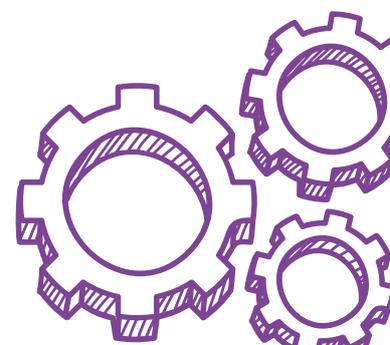
Curriculum Objectives

This problem should enable pupils to demonstrate their knowledge, understanding and skills through:

Developing pupils as individuals	Demonstrate an ability and willingness to develop logical arguments • Pupils explain how they have solved the problem by developing a strategy to identify the best day to go on the school trip.

Thinking Skills and Personal Capabilities

This problem can provide an opportunity for pupils to demonstrate a variety of the following Thinking Skills and Personal Capabilities:

Managing Information	• Plan and set goals and break a task into sub-tasks • Select, classify, compare and evaluate information • Select the most appropriate method for a task
Thinking, Problem-Solving and Decision Making	• Sequence, order, classify and make comparisons • Justify methods, opinions and conclusions • Generate possible solutions, try out alternative approaches and evaluate outcomes
Being Creative	• Seek out questions to explore and problems to solve • Experiment with ideas and questions • Challenge the routine method
Working with Others	• Listen actively and share opinions • Suggest ways of improving their approach to working collaboratively
Self-Management	• Seek advice when necessary • Compare their own approach with others' and in different contexts • Organise and plan how to go about a task

Cross-Curricular Skills

This problem should enable pupils to demonstrate a variety of the following Cross-Curriculum Skills:

Using Mathematics