

Lesson Plan 5

Organising Your Tree House Data



Lesson Description

Make design decisions about your tree house by representing and interpreting data in tables, charts, graphs and diagrams.

Lesson Objectives

- To use previously systematically gathered and recorded data
- To produce a line and bar graph using the data using pen and paper
- To make observations and conclusions from the graphs
- Suggest a different method to present the data

Teaching Strategy

Starter (5 minutes)

Ask pupils to give a brief description of the questionnaire task
Ask the pupils to record the data into tables so that it can be represented in a graphical format. (They should have several questions that can be represented in graph format)

Main Activity 1 (40 mins)

Hand out any resources needed.

Show and discuss the naming of axis for the bar chart allow time for pupils to draw the axis and name them.

Discuss the idea of intervals and give pupils time to work out for themselves the intervals on the sheet.

Show pupils how to use their chart to plot the results.

Allow time for pupils to plot their data, and colour in bars.

Make sure pupils give the graph a title and give an explanation at the bottom of the graph.

Help pupils to review and refine their work.

Plenary (10 minutes)

Gather pupils together and discuss key words and ask them to compare the presentation of data in table format with bar chart format

Homework

Produce a bar chart for one other question.

National Primary Strategy

Mathematics Problem solving

Pupils use the data to solve the design problem

Mathematics Unit B Handling Data

Discuss the chance or likelihood of particular events.

Solve a problem by representing and interpreting data in tables, charts, graphs and diagrams, including those generated by a computer.

ICT Applications

Discuss with pupils the possibility of producing a bar chart using the computer.

Resource Requirements

- Pens
- Pencils
- Graph paper
- Ruler
- Table construction

Assessment Criteria

Pupils will be assessed by their ability to

- Represent and interpret data in a bar chart
- Use colour and design to make the chart interesting
- Draw conclusions from the represented data

Differentiation and Expectations

Most pupils will have gathered data and used closed questions; they will be able to use the data to prepare a table of results. They will produce a bar chart that is accurate and easy to read and is interesting. The chart will be clearly labeled and the pupils will have written a conclusion.

More able pupils will have good and accurate data that they transfer onto a table of results. They will produce a bar chart that is clear, accurate and neatly and interestingly presented. All parts of the graph will be clearly labeled and there will be a clear and concise conclusion with suggestions for improvements.

Less able pupils will have some data that can be presented in a table and some data that is accurately recorded. They will need help to produce and label the bar chart and will be able to enter the results onto the chart. They will need help to write a conclusion.

Teacher Guide: What you need to do

Give pupils examples to look at and aspire to and explain fully the task. Keep the class together for the preparation of the data input and the drawing of axis and intervals.

Encourage pupils to use colour and design to make their graphs more appealing to the reader.

Help less able pupils to present their information. Encourage the class to think about the data answers and what it means to the design of the tree house

Reasons for the lesson

- Systematically collect, organize, and describe data
- Construct, read, and interpret tables charts, and graphs
- Make inferences and convincing arguments that are based on data analysis
- Develop an appreciation for statistical methods as powerful means for decision making

Key Words

Title, Axis, Bar chart, Interval, Conclusion

Groupings

Pupils will discuss the ideas first as a whole class and then work in pairs to construct the graphs

Pace of Lessons

Set clear timescales for each part of this lesson (and move on when the time is up!) Make sure that pupils have sufficient time to complete the final graph.

Assessment Sheet

This sheet will give you an idea of the marks your teacher will give you for your work.

What you have to do	Mark available	Your mark
Discuss ideas and task with the class	5	
Put your raw data into a table	5	
Draw and label the axis and give the graph a title	5	
Enter your data and make your graph interesting for the reader	5	
Total	20	

COMMENTS TO HELP YOU IMPROVE