



Combined activity

**Description:**

Solve problems by collecting data and using it to create pictograms where each symbol represents ten units.

Numeracy Strategy reference:

Year 3
Handling data
Organising and using data
pg92

Task analysis:

Pupils are required to:

- Use data provided to create a tally chart.
- Use the tally chart to create a pictogram

Learning Objectives:

Solve a problem by collecting, organizing, representing, extracting and interpreting data in tables, graphs and charts.

Suggested activities:**Oral work and mental calculation:**

Counting in 5s and 10s forwards and backwards, starting at different numbers. Use an OHP to project a tally chart with only tally marks filled in. Children are to use number fans to show totals in each row, differences between specific rows and totals of all tally marks. Discuss with the children that they will need to use tally charts to collect information for the main part of the lesson.

Teaching activity:

Discuss and demonstrate the tally charts and five-bar gate system using the examples of the monthly weather chart data. Provide individual numeric survey data sheet – Birds spotted from hides at Yare Valley Reserve in one day. Determine as a class a hypothesis, for example ‘Mallards are thought to be the most common water birds seen as reserves in the East of England. Is this true?’ Children are to convert the data into a tally chart and use the data to create a pictogram to investigate. Next, introduce the pictogram drawing program. Discuss how one bird symbol can be used to represent 10 observed birds and how 5 birds can be represented. In their groups, pupils should go on to create their own pictogram using their tally chart. Pupils generate questions about the pictogram and take them back to the whole class.

Plenary:

Children to bring their own pictograms back to the whole class session and explain their findings. Pupils have the opportunity to put their questions to the class who use their pictograms to answer.

Resources:

Printable pictogram activity sheet. Flash pictogram-drawing program.

Learning outcomes:

Pupils should be able to:

- Convert data to a tally chart and create pictograms from tally charts.
- Use pictograms to test hypotheses.

Extension activities:

Ask pupils to suggest other data that could be collected and use a tally chart to collect such data. Use the tally chart to create a pictogram and use it to solve a problem.