



Purple Mash Computing Scheme

Graphing

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Overview

This unit explores the benefits of creating common graph types, digitally. Children will create a range of familiar graph types using the 2Graph and 2Calculate tools, exploring features that make it easy to present data in the best possible way.

Key Learning

- To create comparative bar charts using graphing software.
- To create pie charts using graphing software.
- To create line graphs using graphing software.
- To present data in graphs to support an argument.

Knowledge Organiser and Learning Mat

These resources can be used to support learning across the unit.

- [Knowledge Organiser](#)
- [Learning Mat](#)

Concept Map and Quiz

Use these resources to gauge children's understanding before or after the unit has been taught.

- [Concept Map](#)
- [Quiz](#)

Lesson 1: Comparative Bar Charts

Aim

- To create comparative bar charts using graphing software.

Success Criteria

- I can give examples of the advantages of using graphing software compared to traditional methods.
- I can create comparative bar charts using graphing software.
- I can use export and import functionality of software to combine graphs within one file.

Preparation

- Set **2Graph** as a 2Do.
- Set **Interpreting a Comparative Chart** as a 2Do.
- Print a copy of the **Activities Data PDF** for each child.
- (Optional Extension) Set **Modifying a Comparative Chart** as a 2Do.

Please find all lesson resources and additional teaching notes below.

Resources

- [Slideshow - Lesson 1](#)
- [2Graph](#)
- [Interpreting a Comparative Chart](#)
- [Modifying Comparative Charts](#)
- [Activities Data](#)

Teaching Notes

There is the expectation that children will, by year 6, know essential graph vocabulary and therefore only the most pertinent vocabulary to each lesson is provided. Data is provided for all lessons for children to use when creating graphs using software, teachers might choose to use their own data linked to current learning in the wider curriculum.

If you are using iPads to deliver the lessons, please use Safari to access Purple Mash to ensure the export feature in 2Graph works.

Lesson 2: Pie Charts

Aim

- To create pie charts using graphing software.

Success Criteria

- I can compare the steps needed to produce a pie chart manually and by using software.
- I can identify common problems with manual creation of pie charts.
- I can create pie charts from data using graphing software.

Preparation

- Set **2Graph** as a 2Do.
- Set **2Calculate** as a 2Do.
- Print a class set of the **Activities Data PDF**.

Please find all lesson resources and additional teacher notes below.

Resources

- [Slideshow - Lesson 2](#)
- [2Graph](#)
- [2Calculate](#)
- [Activities Data](#)

Teaching Notes

There is the expectation that children will, by year 6, know essential graph vocabulary and therefore only the most pertinent vocabulary to each lesson is provided. Data is provided for all lessons for children to use when creating graphs using software, teachers might choose to use own data linked to current learning in the wider curriculum.

If you are using iPads to deliver the lessons, please use Safari to access Purple Mash to ensure the export feature in 2Graph works.

Lesson 3: Line Graphs

Aim

- To create line graphs using graphing software.

Success Criteria

- I can explain the advantages of using graphing software to create line graphs.
- I can use the features of graphing software to create well-presented line graphs.
- I can use export and import functionality of software to combine graphs within one file.

Preparation

- Set **2Graph** as a 2Do.
- Set **Interpreting a Line Graph** as a 2Do
- Print a class set of the **Activities Data PDF**.
- (Optional Extension) - Set **2Calculate** as a 2Do.

Please find all lesson resources and additional teacher notes below.

Resources

- [Slideshow - Lesson 3](#)
- [2Graph](#)
- [Interpreting a Line Graph](#)
- [Activities Data](#)
- [2Calculate](#)

Teaching Notes

There is the expectation that children will, by year 6, know essential graph vocabulary and therefore only the most pertinent vocabulary to each lesson is provided. Data is provided for all lessons for children to use when creating graphs using software, teachers might choose to use own data linked to current learning in the wider curriculum.

If you are using iPads to deliver the lessons, please use Safari to access Purple Mash to ensure the export feature in 2Graph works.

Lesson 4: Solving a Problem

Aim

- To present data in graphs to support an argument.

Success Criteria

- I can choose the most suitable graph type from given data.
- I can create graphs to help solve a problem.
- I can import graphs into a file to support a point.

Preparation

- Remind children of how to access 2Graph from the tools area (**Do not set as a 2Do as they will need four files**).
- Set **Report Template** as a 2Do.
- Print a copy of the **Activities Data PDF** for each child.
- Print **Graphing Solutions** for those children who may need additional support in understanding the provided data.

Please find all lesson resources and additional teacher notes below.

Resources

- [Slideshow - Lesson 4](#)
- [Report Template](#)
- [Activities Data](#)
- [Graphing Solutions](#)

Teaching Notes

There is the expectation that children will, by year 6, know essential graph vocabulary and therefore only the most pertinent vocabulary to each lesson is provided. Data is provided for all lessons for children to use when creating graphs using software, teachers might choose to use own data linked to current learning in the wider curriculum.

To support this lesson, a supplementary PDF is provided that can be shared with children that need support with understanding the data provided and the best graph types to use.

If you are using iPads to deliver the lessons, please use Safari to access Purple Mash to ensure the export feature in 2Graph works.

Assessment

The following information is an exemplar of what a child at an expected level would be able to demonstrate when completing this unit with additional exemplars to demonstrate how this would vary for a child with emerging or exceeding achievements.

Emerging

- Children can identify some of the advantages of creating graphs using software. With support, they can select the most appropriate graph types to present given data. Children can label graphs but might struggle with changes to scale. With support, children can create graphs in spreadsheet software and import them into other files. Children can comment on how graphs can be used to help solve a problem or show a point of view. They can do this with simple graphs but might struggle to interpret more complex representations of data.

Expected

- Children can explain the advantages of using graphing software to create common graph types compared to traditional pen and paper methods. They can select the most appropriate graph types for data given or collected. Children experiment with software features such as selection of chart type, scale interval size for y-axis, category colour and dataset colour to present their graphs in the best possible way. Children can export charts and import them into publishing files to produce short reports. Children can use and compare more than one piece of software to create graphs and identify the benefits each one has.

Exceeding

- Children can explain the advantages of using graphing software and provide details on steps that the software takes care of such as calculating angles for a pie chart. They can select the most appropriate graph types for given data or collected data and give examples of why some data might be suitable for more than one graph type dependent on what the overall intention is. Children can use graphing features to present graphs in the best possible way. They demonstrate a sound understanding of how graphs can help people draw conclusions and make decisions based upon data by independently pinpointing relevant features of the graphs that they produce.