Lesson plan

Graphs and charts

Level 1

1. Lesson objectives

- Gather, record and present data
- Interpret different charts
- Construct pie charts

2. Functional skills Level 1 curriculum

Handling information and data
27 represent discrete data in tables, diagrams and charts including pie charts, bar charts and line graphs
28 group discrete data and represent grouped data graphically

3. Lesson plan

This is an overview of the lesson. More notes can be found in the notes in the lesson slides.

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Introduction	To introduce the topic of data, graphs & charts and ensure that learners understand the similarities, differences and the most appropriate method for different types of data	20	On Slide 2 learners are asked to 'say what they see' in response to a tally chart. Learners work in pairs to interpret the chart and also to discuss how they may present the data on a graph or chart. Slide 3 asks learners to look at the similarities and differences between 3 different types of charts. They work in pairs to discuss the advantages and disadvantages of each before feeding back. Grouped frequency tables are introduced on Slide 4. The class is presented data about ages of medal winners. Animations bring in questions which lead onto a discussion about the need to group the data. Learners work on mini whiteboards and share their work with each other. Discussion follows about the different class intervals used. Learners are then encouraged to think about suitable graphs/charts to present this data. Slide 6 is a key idea slide which recaps and reinforces the key learning points.	Slides 2–6
Activity	To collect and present data and in doing so build relationships in the classroom and create a positive and engaging learning environment	25	Learners are to work in pairs or 3's and collect data from the class which they will record on a tally chart. Animations offer suggestions on the data they could collect. Learners will then present this data using two different graph/chart formats of their choice. The learners will share their charts with the class and class discussion about the best formats for showing the data and why. Class then discusses what is needed and what is missing on each graph/chart.	Slides 7–8 Graph paper or squared paper Compasses Protractors Handout 1

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Review	To review common errors and misconceptions when representing data	5	Slide 9 is an incorrectly drawn bar chart. Discussion about the errors made will reinforce learning. This is followed by a key idea slide which consolidates learning.	Slides 9–10
Discuss	To construct and interpret pie charts	20	Tutor to give out Handout 2. The tutor models how to construct a pie chart (with the angles given) with the help of the animations on the slides. Learners work through the example with the tutors using handout. On Slide 13 learners are asked what is missing from the table and to think about how they would work out the angles. Animations can be used to show the use of a multiplier. Slides 14 and 15 ask the learners to interpret pie charts and include using a ratio table to support the learners. Slide 16 is a key idea slide to consolidate learning.	Slides 11–16 Handout 2 Compasses Protractors
Practice exam questions	Learners apply their knowledge to exam questions	15	Tutor to give out the exam questions. Ask learners to work independently through the exam questions. After they have completed the task, ask learners to discuss their thinking and review. Answer slides available.	Slides 17–28 Exam question handout
Review and lesson closure	To review lesson objectives and summarise key learning points	5	Ask for class feedback to summarise the key points for graphs and charts when reviewing the learning objectives.	Slide 29