CENTRES FOR EXCELLENCE IN MATHS

FE centre resource

Pearson

Lesson plan

Scatter graphs

Level 2

1. Lesson objectives

- Draw and interpret scatter diagrams including lines of best fit
- Recognise positive and negative correlation

2. Functional Skills Level 2 curriculum

Handling information and data
28 draw and interpret scatter diagrams and recognise positive and negative correlation

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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	Introduce the topic of data collection	5	Teacher to encourage learners to think about why data may be collected, by whom and what could be done with data once collected. Class discussion including addressing different methods of presenting data.	Slide 2
Your turn	To build relationships in the classroom and create a positive and engaging learning environment by collecting data	15	***The further away from college you live the longer it takes to get to college.*** As a class they are going to find out if the statement is true. Learners are going to think about how they may do this. Learners to then work in pairs to collect the data from the class and record this on the handout table. This data will then be put to the side. (If learners don't know how many miles away they live, they could look this up on their phones from a mapping app.)	Slide 3 Handout 1
Discuss 1	To introduce scatter graphs and lines of best fit	15	Learners will identify scatter graphs, discuss what they see and the characteristics of lines of best fit. Learners will use white boards to answer questions about interpreting the scatter graph (questions in teachers notes). Misconceptions and a Key Ideas slide will be used to reinforce the key concepts.	Slides 4–8
Discussion and activity	To understand correlation	15	Learners will think about different types of correlation. They will then think of different scenarios that may result in each type. These should be shared with the class and discussed along with the concept of strength of correlation. A Key Ideas slide follows to reinforce learning.	Slides 9–13

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Activity	Purpose of this activity	Time (min)	Guidance	Materials
Activity	To construct a scatter graph from data collected by the class and consider correlation	20	At this point, learners return to the data from the initial task to construct a scatter graph about time taken to travel to college and distance away. Learners are to come up with some questions that they can ask each other from their graphs and peer assess each other's graphs. Class discussion.	Slide 14 Handout 1 (distributed earlier)
Discuss	To ensure learners know what is required to gain full marks	5	Slides 15 and 16 address all the detail needed in FS exam questions to get full marks. Learners will think about what is required in order to construct a scatter graph and can use this to check the scatter graphs produced in the previous activity.	Slides 15–16 Graph paper
Practice questions	To apply learning to exam questions	10	Ask learners to work independently to answer exam questions. After they have completed the task, ask learners to discuss their thinking and review their answers.	Slides 17–20 Handout 2: Exam questions
Review	To summarise learning and review the process of interpreting and constructing scatter graphs	5	Summarise the key points of interpreting and drawing scatter graphs including correlation and line of best fit. Review learning objectives.	Slide 21

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