CENTRES FOR EXCELLENCE IN MATHS

FE centre resource

Pearson

Lesson plan

Perimeter of rectangles and compound shapes Level 1

1. Lesson objectives

- Find the missing side lengths in rectilinear and compound rectilinear shapes
- Explore the concept of perimeter and calculate the perimeter of compound rectilinear shapes
- Understand the concept of perimeter and use it in a range of problem-solving situations

2. Functional Skills Level 1 curriculum

Using common measures, shape and space

- Convert between units of length, weight, capacity, money and time, in the same system
- Recognise and make use of simple scales on maps and drawings
- Calculate the area and perimeter of simple shapes including those that are made up of a combination of rectangles

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 lesson and address common misconceptions around perimeter	5	Learners are given the lesson objectives and then consider three answers to a perimeter of a rectangle problem. Feedback from the class is used to introduce the concept of perimeter and address common misconceptions.	Slides 1–2
Discuss 1	To define the concepts perimeter, area and volume and to highlight how to recognise which measure to use	15	Class discussion is used to elicit the definitions and examples of perimeter, area, and volume. A quiz provides the opportunity for learners to consider common measurement scenarios and terms and to decide whether the term is likely to be linked to perimeter or to area. A 'Key ideas' slide to reinforce definition of perimeter and key perimeter terms. Ask learners to discuss in pairs how they would calculate the perimeter of a rectangle and a square before feeding back to the class.	Slides 3–7
Explore and discuss 1	To introduce learners to problems involving compound rectilinear shapes with missing side lengths	20	Learners work individually to find the perimeter of a compound shape drawn on dot paper. Class discussion is used to show that the opposite side lengths of a rectilinear shape are equal in length. Learners then work individually to find the perimeter of two compound rectilinear shapes with missing side lengths where they are not able to use the counting squares method. Answers are compared and discussed with a partner.	Slides 8–12 Handout 1

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Activity 1	To solve multi-step problem-solving questions involving perimeter of compound shapes and money	25	Learners work individually to work out the perimeter, and hence the number of light strings and cost involved in two different scenarios. The first scenario is presented on a grid, so learners have the option of the counting squares method. The second scenario requires learners to find the total perimeter and divide it by the length of one string. Answers are compared and discussed with a partner. The activity is followed by class discussion to review work. A ‘Key ideas’ slide to reinforce general steps to approach multi-step perimeter problems.	Slides 13–18 Handout 2
Exam questions	Learners check and consolidate their understanding by answering exam questions	20	Learners work individually to answer two to four exam questions (which are varied in difficulty) followed by class feedback. Guidance notes and worked answers are available.	Slides 19–26 Handout 3
Review	To review lesson objectives and recap key learning points	5	Tutor to close the lesson by looking at the objectives and recapping with the class the key learning points.	Slide 27