CENTRES FOR EXCELLENCE IN MATHS

FE centre resource

Pearson

Lesson plan

Area and perimeter of rectilinear and compound shapes

Level 2

1. Lesson objectives

- Explore the area and perimeter of squares, rectangles, triangles and compound shapes
- Understand the concepts of area and perimeter and use them in a range of problem-solving situations

2. Functional Skills Level 2 curriculum

Using common measures, shape and space

16 calculate perimeters and areas of 2-D shapes including triangles and circles and composite shapes including non-rectangular shapes (formulae given except for triangles and circles)

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 highlight how changes in length versus changes in width affect the area of a rectangle	5	Introduce the concept of area of rectangles. Ask learners to work in pairs to consider two statements relating to how changes to the dimensions of three fields affect the areas. Gather responses from the learners.	Slides 2–3 'Three gardens' handout
Discuss 1	To explore area and perimeter (including factors and square numbers)	10	Students work individually using dotty paper to draw various squares, calculate their area and note down anything noticeable/any patterns. Teacher to get feedback from students and use various squares to elicit/demonstrate important concepts relating to squares, area and perimeter. Misconceptions are addressed by students considering a set of statements. Key ideas slides to reinforce main learning points.	Slides 4–8 Dot grid paper
Pair activity 1	To solve problems involving the area of compound shapes	15	Ask learners to work in pairs to work out the area of two compound shapes. Once learners have completed the task, ask some pairs to share their methods. A key ideas slide to reinforce main learning points.	Slides 9–13

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Discuss 2	To demonstrate how the formula for the area of a triangle is derived and to highlight common misconceptions around area of triangle problems	10	Teacher to use presentation visual to show a rectangle split into two triangles and use the prompt questions to elicit the formula for a triangle from students. Students consider a set of answers to an area of a triangle problem. Teacher uses discussion around the various answers to highlight common misconceptions. Teacher to reinforce key ideas.	Slides 14–16
Pair activity 2	To solve multi-step problem-solving questions involving area of compound shapes, capacity and money	25	Students work in pairs to work out the area, and hence the income for a series of different music festival enclosure options.	Slides 17–22 Handout 4
Discuss	To discuss tips and strategies for answering the wordier FS questions	5	Teacher to lead a discussion about FS exam questions and tips for answering them. Includes information about reverse checks.	Slide 23–24
Practice question	Learners check and consolidate their understanding by answering exam questions	15	Ask learners to answer exam questions and after a few minutes discuss their thinking.	Slide 25–34 Handout 5

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Review	To review lesson objectives and recap key learning points	5	Teacher to close the lesson by looking at the objectives and recapping with the class the key learning points.	Slide 35