CENTRES FOR EXCELLENCE IN MATHS

FE centre resource

Pearson

Lesson plan

Area of squares, rectangles and rectilinear compound shapes Level 1

1. Lesson objectives

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

2. Functional Skills Level 1 curriculum

Using common measures, shape and space
22 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 highlight how changes in length versus changes in width affect the area of a rectangle	5	Learners are given the lesson objectives and then consider three answers to an area of a rectangle problem. Feedback from the class is used to introduce the concept of area and address common misconceptions.	Slides 1–2
Explore and discuss 1	To explore area (including factors and square numbers)	10	Learners work individually using dot paper to draw as many rectangles as they can with an area of 24 units. Tutor to use feedback from learners to elicit the link between the side lengths and the factors of 24 and show visually how rectangles which look different can have the same area. Key ideas slide to reinforce formula for the area of a rectangle.	Slides 3–4 Handout 1
Explore and discuss 2	To allow learners to explore area of compound rectilinear shapes	25	Learners work in pairs to work out the area of a compound rectilinear shape on dot paper. Pairs are encouraged to try to find more than one way to find the area. Pairs are selected to come up to the board to show the different methods which can be used to find the areas of each of the shapes (optional review answer slides are available). Learners then work individually to find the area of a compound rectilinear shape where they are not able to use the counting squares method and need to split the shape and find missing side lengths (optional review answer slides are available).	Slides 5–9 Handout 2 Handout 3

Activity	Purpose of this activity	Time (min)	Guidance	Materials
Pair activity 1	To solve multi-step problem solving questions involving area of compound shapes, capacity and money	20	Learners work in pairs to work out the area, and hence the income for a series of different music festival enclosure options. The activity is followed by class discussion to review work. A misconception is used to reinforce the concept of area problems where one shape is within another. A key ideas slide to reinforce key facts around compound rectilinear shapes.	Slides 10–17 Handout 4
Discuss 1 – Exam strategy	To discuss the process involved in answering multi-step problem solving exam questions on area	10	Tutor elicits problem-solving strategies from a class discussion. A typical multi-step area problem is then used to consider some exam question guidance/tips. Learners then use the guidance as scaffolding and answer the exam-style question. A key ideas slide reminds learners of the two processes which could be used to check their answers.	Slides 18–20 Handout 5
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.	Slides 21–26 Handout 6
Review	To summarise learning and review the concept of areas of various shapes	5	Tutor to close the lesson by looking at the objectives and recapping with the class the key learning points.	Slide 27