



Performance Area Lesson Plan

Main focus of activity:

- To be able to identify which Acts/Performers can perform at which arenas.

Learning objectives:

- To be able to work out the area of simple shapes
- To be able to work out the area of harder shapes
- To be able to work out the area of harder compound shapes

Links to curriculum: Links to the maths curriculum are as follows

- Area
- Compound shapes
- Fractions and decimals
- Scales
- Measuring
- Properties of shapes

Activity outline:

Introduction

The overall objective is to decide which acts can appear at which arena

- On a simple level this activity involves only working out simple areas (Squares and rectangles) involving positive integer values only that need simple calculations.
- On a more advanced level the same principle is applied but with the need to work out being targeted at harder shapes. (Parallelograms, trapeziums and Triangles)
- Where the venues are more complex, compound shapes are used to show the layout of the arenas. The performance areas then need to be calculated.

Starter

Ask pupils to find the areas of the three stages. Use this to establish starting points for differentiation and guidance during the main part of the lesson.

Main Part of Lesson:

Teaching and Learning:

- The idea is that pupils will need to calculate the area of shapes (the shapes represent the performance areas) and then apply this knowledge to work out the arenas certain acts can perform within.
- The scales can be made harder for more able groups. For example $1\text{cm} = 2.5\text{m}$ rather than $1\text{cm} = 1\text{m}$. Teachers are encouraged to use this variable to differentiate for more able pupils. There is also the opportunity to explore conversion between cm^2 and m^2
- The lower ability students are expected to only work with simple shapes although the numbers can be made progressively harder. Teachers may want to use some larger numbers that are outside the normal tables. Or they may want to introduce some decimal numbers if calculators are to be allowed.



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- For a middle ability pupils will be expected to work out all of the above but will also be expected to calculate areas of triangles, trapeziums and parallelograms.
- At a higher level pupils will need to be able to carry out all of the above and use them to find areas for compound shapes. This activity includes area of circles for level 6 pupils. This is significantly harder than the first two ability ranges and should really stretch the most able pupils.

The resource pack contains three different sets of stage designs: simple rectangles, harder rectangles and compound shapes. Select what will be most suitable for your learners.

Plenary:

- Challenge pupils to design their own stage which has an area of exactly 100 square metres.
- You could ask pupils to peer assess each other's designs to further cement understanding.