



Rounding Lesson Plan

Main focus of activity:

- To introduce the idea rounding to significant figures using performance areas

Learning objectives:

- To be able to work out areas of simple shapes
- To be able to work out volumes of simple cubes and cuboids
- To be able to round to 1, 2 and 3 significant figures accurately

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

- Areas
- Volumes
- Rounding to significant figures
- Conversions from cm² to m²
- Long Multiplication

Activity outline:

The idea here is that we make a real world link with the use of Rounding. Pupils are asked to describe how three stage managers can potentially make different decisions based on the same information. The pupils will need to decide which stage managers decisions they would trust the most and justify their answer.

Introduction

- Students should work in pairs for this task.
- The problem is brought in to a real life context as certain acts need a certain amount of performance area. If they get the decision wrong it could cost the venue a lot of money.
- Lower ability pupils will probably only be able to work out stage manager 1 decisions, where the rounding is very simple. It may be a good idea to allow the weaker students to have access to calculators to allow them to compare their rounded answers to the actual answers.

Starter

The starter activity consists of one stage layout with three decisions about the minimum stage requirement of 100m² for Lady Gaga.

Students have to identify what type of rounding each stage manager has used. It may be worthwhile letting them know that one has rounded to 1.s.f, one has rounded to 2.s.f and the other has rounded to 1.d.p.

Stage manager 1 = 1.s.f.

Stage manager 2 = 2.s.f.

Stage manager 3 = 1.d.p.



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Main Activity

The main activity is in the prepared flipchart and contains questions that cover areas and volumes. This builds the connection between rounding and how the difference between the estimated answer and actual answer will grow the more calculations that take place. In all questions the pupils have to apply the same rounding that each stage manager is using consistently.

Teachers can easily change this activity to apply to decimal places instead of significant figures.

More able pupils will be able to access the last task which involves working backwards from a given volume to find the dimensions of the stage. There is an opportunity to introduce upper and lower bounds.

Plenary

Which stage manager would you hire? Why? What does this show us about rounding in the real world?

Why might someone round to 1.s.f. instead of 2.s.f.?

Would the level of accuracy required be different in other scenarios?

Can you think of any jobs/scenarios where a greater level of accuracy would be required?