

Topic / theme: Area

Subject / Stage: Maths S2

Curriculum for Excellence experiences & outcomes:

Numeracy & Maths – Measurement

- I can solve practical problems by applying my knowledge of measure, choosing the appropriate units and degree of accuracy for the task and using a formula to calculate area or volume when required (MNU 3-11a)

Resources:

- Paper & pencils
- Clipboards
- Calculators
- Measuring tapes & trundle wheels



Introduction:

Quick revision of formulas - how to calculate the surface area of 2-D and 3-D shapes such as a cylinder, rectangle, etc. Explain to group that they are going to carry out a cost analysis of various aspects of the school grounds.

Main learning:

Split class into co-operative groups and ask them to pick one aspect of the school grounds where the surface area can be measured - length of fencing, piece of seating, set of steps, etc. Set groups the task of working out the total surface area of their chosen object. Distribute measuring tools and encourage them to work together to measure accurately, use formulas to calculate the surface area of the various parts and then add together to find the total surface area of their object. Give a rough costing of how much their chosen object cost to install per square metre - ask groups to work out total costs.

Evaluation and follow-up:

Swap groups and ask them to investigate another aspect of the school grounds. Compare results across groups & discuss discrepancies. Ask groups to work out how much it would cost to install additional pieces of seating, length of fencing, etc.

Courtesy of Emma Dawson, Lornshill Academy