



Engaging Places

A resource to support teaching and learning through buildings and places



Homes and houses (4), by David Walmsley, education consultant

Curriculum subject/s	Maths
Key stage/s	2 & 3 - designed for use with SEN pupils.
Curriculum outcomes	Apply maths skills to everyday contexts. Understanding measures to solve numerical problems. Understanding patterns and properties of shape.
Lesson objectives	To compare and contrast the school with another large building. To understand where to go for building materials, the wide variety available and how they are sold. To calculate the cost of simple repairs to common features of homes and gardens.

Starter

- Refresh objectives of the previous lesson, focussing especially on how building materials deteriorate.
- Talk about what materials in children's homes and gardens might need to be repaired or replaced. Can they give examples?
- Explain the 'group task' – to replace items such as missing roof tiles, a snapped fence panel, a broken plastic drainpipe, an area of gravel or some cracked patio or paving slabs. (15)

Main/Just around the corner

- Visit a DIY store.
- Before going in, talk about the building. Why is it designed the way it is?
- What materials are used on the inside and outside of the building?
- How is it different from other buildings – school, homes, shops?
- What is the land round about used for? What are nearby buildings used for?
- Locate the section in the store that sells the materials needed for the task.
- Talk about the wide range of materials available.
- Children write down the prices of the materials needed for the repairs you may wish to prepare sheets for children to fill in showing images of each item.
- Encourage discussion about the function of other materials and objects in this section of the store. Compare prices.

Plenary

- On your return to school display costs and images of the materials on the whiteboard.
- Help children calculate the cost of replacement materials by giving them simple repair problems to solve, such as six roof tiles, four metres of drainpipe, eight fence posts at one metre high, etc. (30)

Additional activities

- Ask children to design a new patio for their own garden or for an area around the school using different shapes of slabs – squares, rectangles, triangles, etc.
- How can they fit them together in different arrangements? Use this as an opportunity to explore tessellation. In the classroom children can work individually using plastic tiles or as a group by using large pieces of paper on the floor.
- Work out how much the slabs would cost for the arrangement based on the costs recorded during their visit.

Assessment for learning

Formative:

- Discuss with children what they need know to complete the given task, and why the skills they will use are important.

Summative:

- Help children understand what they have done well and what they need to develop to tackle future similar situations.

Resources

- Large sheets of coloured paper
- Sets of different shaped plastic tiles
- Clipboards (optional)
- Calculators

Cross-curricular links

Literacy: Children learn how to read, comprehend and record information required to resolve a given task.

ICT: Instead of visiting a DIY store children learn how to find this information from Internet sites. This would enable them to compare prices of different suppliers and present mathematical data as graphs, spreadsheets or diagrams in a digital format.

Personal, learning and thinking skills: Children learn how to adapt behaviour to a different situation and to work collaboratively towards a common goal.

This resource is from a bank of resources created for Engaging Places by practising teachers and education professionals. If you have ideas for using buildings and places in teaching and learning, and would like to help us create further resources, please email: engagingplaces@cabe.org.uk