

Objectives

- To understand the reasoning behind decisions to use particular materials in particular ways.

Resources

Examples of suitable non-fiction texts and children's stories that link to the uses of materials; photocopiable page 173 'Building houses'

Speaking scientifically

appropriate, building, material, property, use

Lesson 1: Rocky stories

Introduction

Begin by sharing with the children stories and non-fiction texts. For example, you could tell one of the many versions of the story of 'The Three Little Pigs'.

Whole-class work

1. Ask the children to think about, for example, the story of 'The Three Little Pigs'. Ask: *What are the materials that the three little pigs used in building their houses? Why did they choose these materials? Were they good materials to use? Why?*
2. Encourage the children to think about the work they have been doing recently and ask: *Why do we use certain materials for some things and not others?*

Independent work

3. Give out photocopiable page 173 'Building houses'. Ask the children to think about a house and the materials that are used in houses today. They should use their ideas to complete the photocopiable sheet.
4. Give the children time to read and explore some of the non-fiction texts and stories from earlier.
5. Ask them to choose one story and re-write it, but this time the story should feature alternative materials. For example, in the story of 'The Three Little Pigs' what might have happened if the pigs had built a sand house or one made from clay? As an alternative, children could re-write a story to include the ideas at the bottom of the photocopiable sheet. For example, what would happen if Paddington Bear went out walking with an umbrella made of paper?

Whole-class work

6. Bring the children together to share some of their stories.
7. To end the lesson, ask the children to play a game of 'Imagine if'. Ask them to think of a situation similar to those at the bottom of the photocopiable sheet. They should then explore all the positive and negative aspects of this situation. For example, 'Imagine if... umbrellas were made from roof slates', 'Imagine if... door handles were made from chocolate'. Whilst this seems a bit of fun, the ideas and suggestions do lend themselves to further discussion about uses of materials and the choices we make. In addition, there are further investigations that could be carried out to gather evidence to support these ideas.

Differentiation

- Some children may need support with the written aspects of this lesson. You may wish to provide this through additional adult support, the use of a word bank, or allowing children to tell their story in pictures as a storyboard.
- Challenge confident learners to write more detailed, imaginative responses with scientific justifications clearly evident.

Science in the wider world

Our ability to manipulate the materials around us has played a major part in our development from the Stone Age, through the Iron Age, to the modern age of synthetic and 'man-made' materials. The basic designs of many everyday items today may have changed little since their invention, but the materials they are made from have often been replaced by newer alternatives.

Review

Through scrutiny of the children's work, assess their ability to understand the reasons why we use particular materials to make particular things.