

What Makes the Best Building Stone?



Ages	Subject	Topics	Resources
7-11 years	Science Geography History	Rocks	Junk modelling materials to build model house, scissors, glue, magnets, worksheets from the activity pack

Did you know that one of the most famous building stones in the world is Portland stone? From the UN building in New York to St. Paul's cathedral in London, this beautiful, resilient sparkling white limestone has decorated the facades of iconic buildings across the world. The source of this stone is the Isle of Portland on the Jurassic Coast and it has been quarried since the 17th century. The rock formed at the bottom of a clear, warm and shallow sea where small particles of shell fragments became coated in layers and layers of calcite. These small balls (called ooids) then became partially cemented together to form an oolitic limestone that we know as Portland Stone. The stone is popular with stonemasons as it weathers very slowly but can still be readily cut. This activity retells the story of the three little pigs but with the inclusion of rocks found along the Jurassic Coast instead of hay, sticks and bricks. In the story, Portland stone is compared to the resilience of two other rock types (Triassic sandstone and Blue Lias clay and shale) found along the Jurassic Coast



Teachers' Materials

To build the model of the house at the start of the activity, you will need a range of materials such as pipe cleaners, newspapers, bubble wrap etc. The activity requires a selection of rock specimens for children to examine and describe. Rock specimens can be obtained from local stonemasons, quarries or university Earth Science departments (subject to availability).

Practicalities

This activity can be delivered with the classroom but would benefit from investigations of building stone in the school grounds.

Discussions

Across the world, dwellings are made from all sorts of materials that are available to hand. In some of the poorest and most deprived parts of the world, people live in slums where they do not have access to safe building materials. Many of their houses are built out of scrap materials they find discarded by industry or other people such as plastic sheeting, timber, sheet metal and even cardboard boxes. What do the children think these houses are like to live in? In other parts of the world, particularly in African tribal communities, people use the natural environment as a source for constructing their dwellings. In these communities, mud mixed with manure and straw can be made into robust structures, some of which have stood for thousands of years such as in Mali and Mexico. Why do the children think that these buildings have survived for so long?

Extensions and Adaptations

Many prestigious buildings such as churches, banks, libraries and government buildings use Portland stone as a façade. If possible, take the children for a trip to your local high street to survey building stones in the local environment. They can take pictures of the stone and then use reference books or the internet to identify them.

Links to Other Resources

What Makes the Best Building Stone? links well to the following resources:

- Rock Detectives
- Linking the Past to the Present
- Make a Model of the Jurassic Coast