



# **A roof over your head**

**People in the past have used many different materials to roof buildings. The choice would have depended on what types of material they had available, how much different materials cost and what type of building they were constructing. In this activity you will look at the different types of roofing materials that are used in your area and try reconstructing roof tiles from different periods in history to see which ones are most effective.**

## **You will need:**

- Clipboards, paper, pencils
- Air drying clay
- Lolly sticks or similar
- Glue gun or panel pins and hammer
- Water and measuring jug
- A sponge
- A tray or similar item that can hold water
- Photographs/drawings of tiles from different periods (optional, see worksheet)

## **Activity:**

Start by taking the children on a walking tour of your area. Ask them to focus on how the roofs on different types of buildings are made. Can they spot different materials? (You may discover: ceramic tiles, concrete tiles/surfaces, tarred surfaces, thatch, wooden shingles, lead, slate etc.) Look out for evidence that different roofing materials were used at different times by comparing buildings of different ages. Then ask them to focus on tiled roofs. Can they spot different designs and shapes for tiles? Ask them to make sketches of different designs.

Once you have completed your survey, ask the children to focus on the different tile designs they have seen out and about. Why do they think that different designs were used? What would make a good roof tile and what would make a bad one? Look at the pictures of different tile patterns. How are Roman tiles different from modern machine made tiles? Explain that they need to choose a tile pattern and make copies of it with clay.

While the tiles are drying the children need to construct a lean to roofing structure that they can put the tiles onto. You can do this by making a basic structure with lolly sticks

stuck together with a hot glue gun. If you have access to a building with visible rafters you can spend time discussing how roofs are constructed and make comparisons with older timber frame building techniques and modern house construction.

Once the tiles are dry they can either be stuck onto the roof structure with a hot glue gun or tacked into place with panel pins (remember to make holes in the tiles before they dry if you are choosing this option!) Place the roof structures to be tested in a tray with a sponge underneath. Decide on a set quantity of water to be poured over the roof to make a fair test for each structure and then pour! Squeeze out the water from the sponge and keep a record of how much water each roof type lets through. Which type of tile worked best? Why do they think this might be? How might this compare to other roofing materials such as thatch?

## Useful questions:

- What makes a good roofing material?
- Why have different tile patterns been designed over the years?
- How can we make this a fair test?
- What is the best way of arranging the tiles on the building?

## Research Opportunities:

- Look in greater detail at timber frame construction techniques
- Research the different skills of thatching and slate tile production
- Find out about Roman tile manufacture
- Visit a museum with Roman tiles and construction materials on display

## Useful Websites:

<http://www.newarchaeology.com/articles/romanrooftile.php>

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Young Archaeologists' Club

## creativeminds



The Creative Minds project works with museums libraries and archives across the Yorkshire region, to provide young people with learning opportunities in Science, Technology, Engineering & Maths (S.T.E.M.). This ground-breaking project is the first of its kind in the country and is managed by MLA Yorkshire. This pack was developed by Creative Minds with funding from Yorkshire Forward.

	<b>National Curriculum</b>	<b>QCA Unit</b>
<b>KS 1</b>	Science: Sc1, Sc3 D&T: 1a-e, 2a-e, 3, 4a History: 4a-b, 5	Science: 1c, 3c D&T: 1d Art & Design: 2c History: 6A
<b>KS 2</b>	Science: Sc1, D&T: 1a-d, 2a-e, 3a-c, 4a,b. History: 4a-b, 5a-c, 7	History: 6A, 18