

Extension Activities

Homes and Buildings

Science Extension Activities



Science Extension Activities

The Science extension activities linked to the ‘Homes and Buildings’ project provide the students with opportunities to use ICT to either research or to produce work.

The extension activities are not required to complete the project but provide other learning opportunities.

The activities will enable students to extend their knowledge about materials.

The activities will provide the students with further investigative opportunities.

ICT Opportunities

Some students may be able to devise a record sheet for their own investigative work.

Older students could make simple information books for younger students.

Step	Title	Notes
1	Is It Suitable?	Develop knowledge of suitability of building materials.
2	Best for the Roof.	Develop knowledge of the effect of water on materials

The following QCA Units are appropriate to use as complete units as part of the Science extension activities for Homes and Buildings		
1	http://www.standards.dfes.gov.uk/schemes2/science/sci1c/?view=get	QCA Unit 1c Sorting and Using materials
2	http://www.standards.dfes.gov.uk/schemes2/science/sci2d/?view=get	QCA Unit 2d Grouping and changing materials
3	http://www.standards.dfes.gov.uk/schemes2/science/sci3c/?view=get	QCA Unit 3c Characteristics of materials

Resources
<p>Provided</p> <ul style="list-style-type: none"> • Best for the Roof worksheet • My Investigation support sheet <p>Suggested</p> <ul style="list-style-type: none"> • Selection of common materials – metal, plastic, wood, paper, glass, fabric • Pictures of various types of homes • Selection of building materials – brick, roof tile wood, plastic guttering

Vocabulary
metal plastic wood paper glass fabric hard soft rough smooth transparent shiny dull compare comparison group material soft bendy rigid investigation prediction results

Expectations
<p>Most students will be able to</p> <ul style="list-style-type: none"> • name some common materials • make observations about the materials • suggest how to test an idea • say what the test result shows <p>Some students will be able to</p> <ul style="list-style-type: none"> • suggest several reasons why a material may or may not be suitable for a particular purpose • predict the outcome of an investigation

The focus of the activity is for the students to plan an investigation in the suitability of a material for a specific purpose.

Objectives	Lesson Activities	Outcomes	Notes
<p>Students learn how to turn suggested ideas into a form that can be investigated.</p>	<p>Tell the students that they need to find the best material to be used for a toy house roof when it is raining.</p> <p>Younger students</p> <ul style="list-style-type: none"> • Ask the students to suggest materials they think would be suitable for the roof. • List the suggested materials on the Best for the Roof worksheet. • Ask the students to predict what they think will happen when the suggested material gets wet. • Enter the students' predictions onto the Best for the Roof worksheet. • Divide the students into groups. • Each group builds a small lego house without a roof. • Each group of students uses a different material to make a roof for their house. Ensure that the students realise that they will have to test each material to see which is best. • Either the teacher introduces the notion of a 'fair' test. Or revise the notion of a 'fair' test if the students have undertaken investigative work previously. • Encourage the students to decide which factors would alter the results of the investigation – the amount of water used. • The students decide how they will overcome the problems. • Choose one student from each group in turn to test the material being used. • Record the results on the Best for the Roof worksheet. • When all the materials have been tested establish which was the best material for the roof. • Compare the predictions with the results. • The students record their investigation in pictorial form using the My Investigation worksheet. • When the My Investigation worksheet is complete students verbalise their pictorial representation to communicate their findings. <p>Older students</p> <ul style="list-style-type: none"> • The students record their investigation outlining the purpose of the investigation, the method used and the results of the investigation. 	<p>Students are able to make predictions.</p> <p>Students are able to suggest materials that are fit for a purpose.</p> <p>Students are able to give reasons for a choice of material that is fit for a purpose.</p> <p>Students are able to decide on a 'fair' test.</p> <p>Students are able to record the steps of an investigation.</p> <p>Students are able to explain to others an investigation.</p> <p>Students are able to compare predictions with results.</p>	<p>Use a photocopier to enlarge the Best for the Roof worksheet.</p> <p>Use a photocopier to enlarge the My Investigation worksheet. Use to support the students with the recording of their investigation.</p>

Extension Activity Resources

Week 2	Resource
Best for the Roof	Worksheet for students to make predictions about the suitability of materials for a specific purpose.
My Investigation	Worksheet for students to pictorially record their investigation.

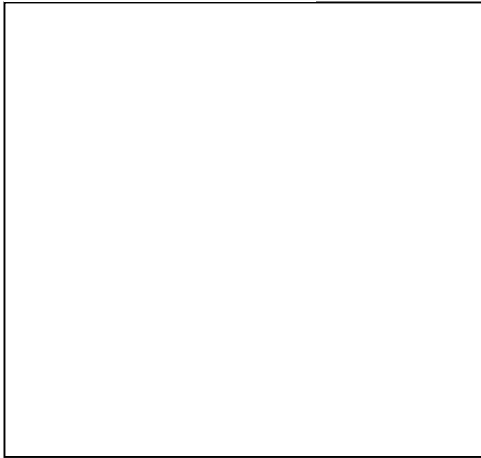
Name _____ Date _____

Best for the Roof

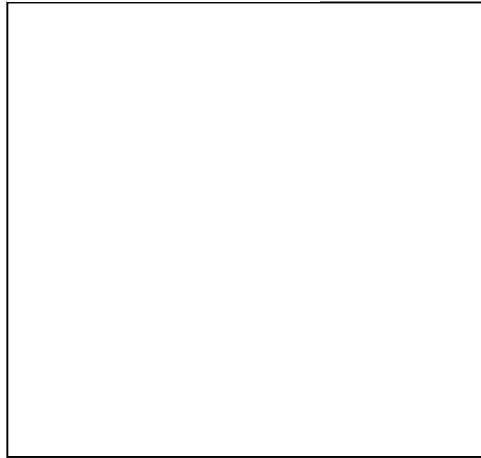
Material	Prediction	Result

My Investigation

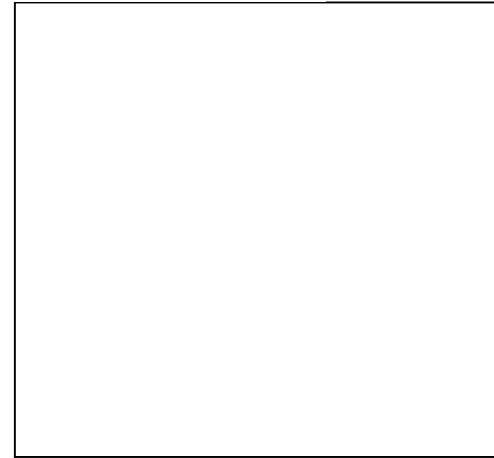
Step 1



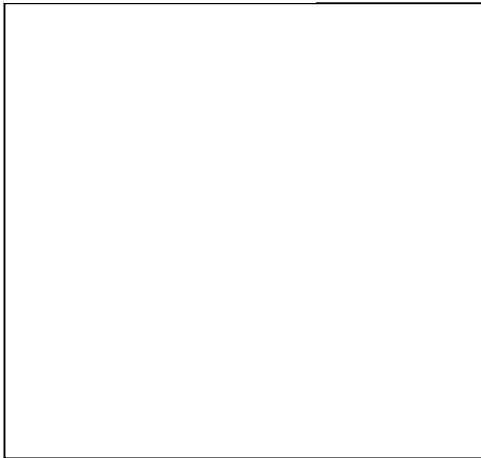
Step 2



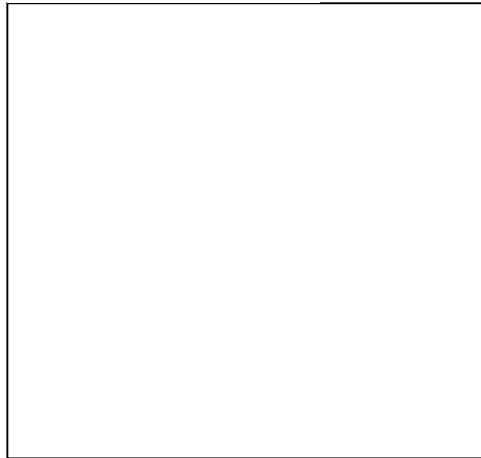
Step 3



Step 4



Step 5



Step 6

