

Maths topics	Section layout	Accompanying worksheets	Lesson considerations
<ul style="list-style-type: none"> ● Calculating area. ● Converting between mm and m and mm² and m². ● Logical thinking and sequencing. ● Buildings can be adapted to their environment and build with local materials to be more sustainable. ● Sustainable building practices. 	<p>This section demonstrates how modern houses are usually built and compares this with how a more sustainable energy efficient house can be built. The first page shows a simplified timeline of a typical home being built in the UK. The second page has a drag and drop activity where students can plan their own building - this activity aims to get students thinking logically about the process. Note that steps 2 & 3 (design and planning can be interchanged) and steps 4 & 5 could be the other way round or occur simultaneously. There is also a worksheet version of this activity which could make a good group activity. After the drag and drop, students can find out more about the regulations for sustainable buildings. The final page gives a summary of eco-design principles that can be used as a basic reference if teachers wish to set the research work to the costs of building sustainable homes.</p>	<p>Buying materials for a house build - Foundation This worksheet helps students calculate the outside area of glass, bricks and wood used in a house. All calculations of area are in m².</p> <p>Buying materials for a house build - Intermediate This worksheet helps students calculate the outside area of glass, bricks and wood used in a house. It goes on to help students estimate how many bricks would be needed to build the house. The worksheet requires an understanding of the difference between area in m² and mm².</p> <p>Buying materials for a house build - Higher This worksheet helps students calculate the outside area of glass, bricks and wood used in a house. Students then calculate/estimate how many bricks would be needed to build the house and how heavy the walls of the house would be. The worksheet requires an understanding of the difference between area in m² and mm².</p> <p>Building your own home - Foundation This cut and stick exercise aims to get students thinking logically about how a house is built and sequencing the process. To encourage debate and reduce the use of paper, it is suggested that this is a group exercise.</p> <p>Is it more expensive to build sustainable buildings? - suitable for more able students This worksheet is a piece of research work that can be done by interested and able students who want to find out more about building structures using sustainable materials and designs.</p>	<p>This section is accessible to all students, but the worksheets should be set to students familiar with the concept of area. The intermediate and higher worksheets require students to convert mm² to m². It makes a good activity when looking at making estimations and the application of mathematics to the real world. The section can be explored by students in a computer-based lesson with the 'Building your own home' cut and stick being a paper-based group activity after looking at the site. The worksheets can be set as follow-up work or homework.</p>