

Activity name	GIANT TETRAHEDRON
<p><b>Activity Descriptor</b></p>	<ul style="list-style-type: none"> <li>• Building the giant tetrahedron (a triangular-based pyramid) is an impactful activity, creating a 4m x 4m structure using only dowels and elastic bands.</li> <li>• The emphasis is on teamwork and listening to, and following, instructions. Many roles in the construction industry can be incorporated into the activity and building process, making it an excellent illustrative and fun activity.</li> <li>• The finished tetrahedron is very versatile and can be used as a whole or in parts for a variety of events.</li> </ul>
<p><b>Activity Aims</b></p>	<ul style="list-style-type: none"> <li>• To promote a wide range of construction careers and aspects of the construction process, including health and safety, teamwork, engineering problem-solving and working to timescales.</li> <li>• For participants to use key skills relevant to the construction industry, e.g. co-operation, communication, problem-solving and planning.</li> </ul>
<p><b>Activity Length</b> <i>All timings given are approximate and for the basic activity described here. Additional time should be allowed for extensions.</i></p>	<ul style="list-style-type: none"> <li>• Two hours if a single group is completing the 4m structure.</li> <li>• Different groups can build elements of the 4m structure over a shorter time period</li> </ul>
<p><b>Preparation Required</b></p>	<ul style="list-style-type: none"> <li>• See Resources Required section for details of the items needed to build the structure.</li> <li>• Enough space to deliver the activity (see Resources Required section).</li> <li>• Consider developing a suitable risk assessment for this activity. For more information please visit the Health and Safety Executive (HSE) website: <a href="http://www.hse.gov.uk/risk/casestudies">http://www.hse.gov.uk/risk/casestudies</a>.</li> </ul>
<p><b>Group Size</b> <i>Remember that the overall size of the group/audience involved may affect timings</i></p>	<p>Up to 30 students.</p>
<p><b>Audience</b> <i>This is the recommended age range for this activity.</i></p>	<p>Age 11 – adult.</p>
<p><b>Suggested timetable</b></p>	<ul style="list-style-type: none"> <li>• Setting the scene 5 mins</li> <li>• Health and safety 10 mins</li> <li>• Introduce the activity 15 mins</li> <li>• First stage of the build 30 mins</li> <li>• Second stage of the build 15 mins</li> <li>• Post assembly 15 mins</li> <li>• Recap learning 10 mins</li> <li>• Disassembly 10 mins</li> <li>• Concluding remarks 10 mins</li> </ul>
<p><b>Extension ideas</b></p>	<ul style="list-style-type: none"> <li>• Inclusion of a careers presentation.</li> <li>• Short talks from Industry Ambassadors at each stage of the build to highlight: <ul style="list-style-type: none"> <li>• Health and safety</li> <li>• Setting out</li> <li>• Costing (quantity surveying)</li> <li>• Quality control etc.</li> </ul> </li> <li>• See Activity Lead Delivery Notes for more ideas.</li> </ul>

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<b>Resources Required</b>	<ul style="list-style-type: none"> <li>• A full giant tetrahedron set consists of 384 wooden dowels (600mm length x 10mm diameter). Purchasing 400–500 dowels is recommended to cover breakages.</li> <li>• Minimum 1 x 454g box of elastic bands, size 6mm x 87mm (e.g. Banner No 64).</li> <li>• Large holdall or sports bag to contain and carry the dowels and elastic bands.</li> <li>• A large area is required for the full build, with a 4m height clearance. The structure also measures 4m along each side so space must also be allowed for safe movement of participants around it. A large hall or sports hall is ideal</li> </ul>	
<b>Documentation List</b> <i>Documents may need to be photocopied/printed in multiples if dividing audience into small groups/teams</i>	<ul style="list-style-type: none"> <li>• Activity Lead Delivery Notes.</li> <li>• PDF presentation 'Guide to Building the Giant Tetrahedron' (<b>this for the Activity Lead only – it is not intended to be used with participants</b>).</li> </ul>	
<b>Employability Skills Involved</b>	<ul style="list-style-type: none"> <li>• Planning</li> <li>• Teamwork</li> <li>• Problem solving</li> <li>• Listening</li> </ul>	<ul style="list-style-type: none"> <li>• Timekeeping</li> <li>• Communication</li> <li>• Organisation/planning</li> <li>• Leadership</li> </ul>
<b>Curriculum Links</b>	<ul style="list-style-type: none"> <li>• Design and technology</li> <li>• Engineering</li> <li>• English</li> </ul>	<ul style="list-style-type: none"> <li>• Maths</li> <li>• Physics</li> </ul>
<b>Construction Sector Links</b>	<ul style="list-style-type: none"> <li>• Civil engineering</li> <li>• Specialist sectors e.g. roofing (triangulation)</li> <li>• Environmental</li> </ul>	