



## Challenge Rubric

### SAFETY IS OUR NUMBER ONE CONCERN

	Criteria	Points
<b>Portfolio Rubric</b> <b>Contents to include:</b>  <b>Total possible points - 45</b>	<ul style="list-style-type: none"> <li>• A detailed outline of each team member’s participation in the production of the portfolio and planned production of the device</li> <li>• At least 3 illustrations of initial design concepts of possible device</li> <li>• Materials used to build prototype from the Workshop Kit including dimensions</li> <li>• Description of the use of the principles of a strong and stable structure</li> <li>• Rationale used to decide on the type of fluid power used and where to place the piston-syringes</li> <li>• Isometric drawing of a portion of the prototype</li> <li>• Orthographic drawings showing dimensions and construction notes</li> <li>• List of alternatives materials that would have been useful with reasons why</li> <li>• Evaluation of prototype including the conclusions from making it</li> </ul>	<ul style="list-style-type: none"> <li>• 0-5</li> <li>• 0-5</li> <li>• 0-5</li> <li>• 0-5</li> <li>• 0-5</li> <li>• 0-5</li> <li>• 0-5</li> <li>• 0-5</li> <li>• 0-5</li> </ul>
<b>Work Habits</b>  <b>Total possible points - 10</b>	<ul style="list-style-type: none"> <li>• Members of the group work independently and cooperatively and in an organized way</li> <li>• Members of the group demonstrate safe working practices</li> </ul>	<ul style="list-style-type: none"> <li>• 0-5</li> <li>• 0-5</li> </ul>
<b>Interview Questions</b>  <b>Total possible points - 20</b>	<ol style="list-style-type: none"> <li>1. What alternative designs did you look at before selecting the design you are building today?</li> <li>2. Why did you select this design to use for the Challenge?</li> <li>3. What did you find most difficult with the project overall?</li> <li>4. How did you decide who on your team would be responsible for which parts of the project?</li> </ol>	<ul style="list-style-type: none"> <li>• 4 X 5 = 20</li> </ul>
<b>Design, construction and operation of device</b> <b>Total possible points - 10</b>	<ul style="list-style-type: none"> <li>• The device uses materials effectively and is well constructed with parts securely attached</li> <li>• The device itself operates efficiently and is operated in an organized way</li> </ul>	<ul style="list-style-type: none"> <li>• 1-5</li> <li>• 1-5</li> </ul>
<b>Challenge</b>	Number of points scored by moving objects successfully in 2 minutes	# points