

**Major Project - Create an arcade-style claw machine that can pick up various toys and small pieces of lab equipment from a 1x1m square area. The points for each object will depend on its dimensions. Your score for the project will be the total of the retrieved objects.**

**Team / Committee Assignments**

<p><b>Claw &amp; Syringes</b></p> <ul style="list-style-type: none"> <li>- Build and test the upper arm of the hydraulic claw</li> <li>- Select from the design options for the claw itself</li> <li>- Upload and print the claw on the 3D mini printer.</li> </ul>	<p><b>Rotating Base</b></p> <ul style="list-style-type: none"> <li>- Select from the design options for the base of the claw</li> <li>- Build and test the base and the controls for turning the arm.</li> </ul>	<p><b>Display &amp; Driver Station</b></p> <ul style="list-style-type: none"> <li>- Design, upload and print required pieces on the 3D mini printer.</li> <li>- Create an operating station to control all of the necessary switches, syringes, levers or buttons for the <i>driver</i>.</li> <li>- Design and build the <i>playing field</i> for the challenge within the limits of the claw itself.</li> </ul>	<p><b>All Students</b></p> <ul style="list-style-type: none"> <li>- Maintain your journal for the project.</li> <li>- Maintain communication with the other teams.</li> <li>- Use any down time within your own assignment to assist other groups.</li> <li>- Communicate any needs your team has including purchasing or manufacturing parts, design and strategy.</li> </ul>
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**Team / Committee Assignments**

20 / 20 _____	17 / 20 _____	14 / 20 _____	0-12 / 20 _____
<p><b>Excellence in all parts</b></p> <ul style="list-style-type: none"> <li>- Your team designed and built a successful piece for the class project</li> <li>- You submitted all work including design plans, and your log book.</li> <li>- Your workspace, tools, and materials were properly used and returned.</li> </ul>	<p><b>Strong</b></p> <ul style="list-style-type: none"> <li>- Your team designed and built a successful piece for the class project</li> <li>- You submitted all work including design plans.</li> <li>- Some aspects of maintaining a journal, or your workspace were overlooked.</li> </ul>	<p><b>Passing</b></p> <ul style="list-style-type: none"> <li>- Your team designed and built a piece for the class project that was in some way incomplete or failed to meet the task.</li> <li>- Some aspects of maintaining a journal, or your workspace were overlooked.</li> <li>- Some aspects of collaboration with the other groups were missing.</li> </ul>	<p><b>Incomplete</b></p> <ul style="list-style-type: none"> <li>- Your team did not design or build a successful piece for the class project</li> <li>- Work including design plans, and your log book were not submitted.</li> <li>- Your workspace, tools, and materials were not used properly.</li> </ul>

**Comments:**

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