

**Challenge Rubric**

**SAFETY IS OUR NUMBER ONE CONCERN**

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|  | **Criteria** | **Points** |
| **Portfolio Rubric Contents to include:**          **Total possible points - 45** | * A detailed outline of each team member’s participation in the production of the portfolio and planned production of the device * At least 3 illustrations of initial design concepts of possible device * Materials used to build prototype from the Workshop Kit including dimensions * Description of the use of the principles of a strong and stable structure * Rationale used to decide on the type of fluid power used and where to place the piston-syringes * Isometric drawing of a portion of the prototype * Orthographic drawings showing dimensions and construction notes * List of alternatives materials that would have been useful with reasons why * Evaluation of prototype including the conclusions from making it | * 0-5 * 0-5 * 0-5      * 0-5      * 0-5 * 0-5 * 0-5 * 0-5 * 0-5 |
| **Work Habits**    **Total possible points - 10** | * Members of the group work independently and cooperatively and in an organized way * Members of the group demonstrate safe working practices | * 0-5 * 0-5 |
| **Interview**  **Questions**    **Total possible points - 20** | 1. What alternative designs did you look at before selecting the design you are building today? 2. Why did you select this design to use for the Challenge? 3. What did you find most difficult with the project overall? 4. How did you decide who on your team would be responsible for which parts of the project? | • 4 X 5  = 20 |
| **Design, construction and operation of device**  **Total possible points - 10** | * The device uses materials effectively and is well constructed with parts securely attached * The device itself operates efficiently and is operated in an organized way | * 1-5      * 1-5 |
| **Challenge** | Number of points scored by moving objects successfully in 2 minutes | # points |