

Engineering Design Challenge 3

Mars Colonization

Technical Judging Outline

Technical Assessment			
Technical Assessment (10%)	<p><i>How well does the rover perform? How professional was our work?</i></p> <table border="0"> <tr> <td> <p>High-score Characteristics</p> <ul style="list-style-type: none"> - Reliable and robust design - Well-executed manufacturing - Grasp of technical concepts </td> <td> <p>Low-score Characteristics</p> <ul style="list-style-type: none"> - Ineffective attachments and solutions - Poor quality or fragile rover - Missing understanding of concepts </td> </tr> </table>	<p>High-score Characteristics</p> <ul style="list-style-type: none"> - Reliable and robust design - Well-executed manufacturing - Grasp of technical concepts 	<p>Low-score Characteristics</p> <ul style="list-style-type: none"> - Ineffective attachments and solutions - Poor quality or fragile rover - Missing understanding of concepts
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Cost Effectiveness			
Cost Effectiveness (10%)	<p><i>To what extent were we smart in spending money? Did we try and minimize our rover's cost?</i></p> <table border="0"> <tr> <td> <p>High-score Characteristics</p> <ul style="list-style-type: none"> - Inexpensive components or materials - No unjustified redundancy - Cost overview with justifications </td> <td> <p>Low-score Characteristics</p> <ul style="list-style-type: none"> - Unjustified use of expensive components - Redundant parts - Using expensive kits </td> </tr> </table>	<p>High-score Characteristics</p> <ul style="list-style-type: none"> - Inexpensive components or materials - No unjustified redundancy - Cost overview with justifications 	<p>Low-score Characteristics</p> <ul style="list-style-type: none"> - Unjustified use of expensive components - Redundant parts - Using expensive kits
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Design Process			
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Creativity & Originality			
Creativity & Originality (10%)	<p><i>Did we build it ourselves/used something in an unexpected way? Did we come up with a new way to do things?</i></p> <table border="0"> <tr> <td> <p>High-score Characteristics</p> <ul style="list-style-type: none"> - Manual manufacturing of rover by team - Using CAD and/or CAM for the design - Original ideas, methods, and/or solutions - Using unexpected material </td> <td> <p>Low-score Characteristics</p> <ul style="list-style-type: none"> - No understanding of manufacturing - Using readymade kits without changes - Sticking to traditional methods without consideration for alternatives </td> </tr> </table>	<p>High-score Characteristics</p> <ul style="list-style-type: none"> - Manual manufacturing of rover by team - Using CAD and/or CAM for the design - Original ideas, methods, and/or solutions - Using unexpected material 	<p>Low-score Characteristics</p> <ul style="list-style-type: none"> - No understanding of manufacturing - Using readymade kits without changes - Sticking to traditional methods without consideration for alternatives
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