

## Northglenn High School STEM For use with PBL Presentation:

		Advanced Understanding		Meets the Standard		Approaching Standard		Does Not Meet
	Notes & Comments	4	3.5	3	2.5	2	1.5	1
Physicist		<ul> <li>Uses proper vocabulary towards an explanation of the use and control of all forces (spring, tension, and/or friction) involved in movement of their prosthesis prototype.</li> <li>Identifies where torque is applied and how it is used in prototype.</li> <li>Clear and concise explanation (CER) that uses experimental data from the force lab to support your prototype design.</li> </ul>		<ul> <li>Fails to identify ALL forces (spring, tension, and/or friction) or torque applications involved in prosthetic prototype.</li> <li>Includes explanation (CER) that uses experimental data from the force lab to support claim for your prototype design.</li> </ul>		<ul> <li>Fails to identify ALL forces (spring, tension, and/or friction)</li> <li>No explanation of torque applications involved in prosthetic prototype.</li> <li>Includes explanation (CER) that uses experimental data from the force lab to support claim for your prototype design.</li> </ul>		<ul> <li>Fails to identify all forces involved in prosthetic prototype. And does not include explanation (CER) that uses experimental data from the force lab to support your prototype design</li> </ul>
Engineer		<ul> <li>Make a clear and concise explanation of how prototype functions.</li> <li>Explanation for how prototype will accomplish three tasks</li> <li>Explains why specific materials were chosen including vocabulary such as: strength, weight, durability.</li> </ul>		<ul> <li>Make a clear and concise explanation of how prototype functions.</li> <li>Explanation for how prototype will accomplish three tasks</li> <li>Lacks an Explanation for why specific materials were chosen including vocabulary such as: strength, weight, durability.</li> </ul>		<ul> <li>Make a clear and concise explanation of how prototype functions.</li> <li>Lacks an Explanation for how prototype will accomplish all three tasks</li> <li>Lacks an Explanation for why specific materials were chosen including vocabulary such as: strength, weight, durability.</li> </ul>		<ul> <li>Unclear explanation of how prototype functions.</li> <li>Lacks an Explanation for how prototype will accomplish all three tasks</li> <li>Lacks an Explanation for why specific materials were chosen including vocabulary such as: strength, weight, durability.</li> </ul>
Biomechanical Specialist		<ul> <li>Clear and concise description, using CER model, of how the prototype mimics the mechanics and anatomy of the human hand using accurate vocabulary.</li> <li>Accurate reference to anatomical clay hand model as part of the presentation</li> <li>Includes a kinesthetic activity as to how their prototype relates to a human hand for audience/evaluators to do</li> </ul>		<ul> <li>Clear and concise description, using CER model, of how the prototype mimics the mechanics and anatomy of the human hand using accurate vocabulary.</li> <li>Accurate reference to anatomical clay hand model as part of the presentation</li> </ul>		<ul> <li>Uses the CER model to explain how the prototype mimics the mechanics and anatomy of the human hand using accurate vocabulary.</li> <li>Lacks an appropriate reference to anatomical clay hand model as part of the presentation</li> </ul>		<ul> <li>Does not use the CER model to explain how the prototype mimics the mechanics and anatomy of the human hand using accurate vocabulary.</li> <li>Lacks an appropriate reference to anatomical clay hand model as part of the presentation</li> </ul>

Marketing	<ul> <li>Clear and concise description of how prototype meets the client's needs.</li> <li>Accurate analysis of costs of materials in the prototype</li> <li>CER, using marketing design matrix, that explains why specific materials where chosen.</li> <li>Professional and persuasive sales pamphlet or brochure that promotes the product design and cost benefits.</li> </ul>	<ul> <li>Clear and concise description of how prototype meets the client's needs.</li> <li>Accurate analysis of costs of materials in the prototype</li> <li>CER, using marketing design matrix, that explains why specific materials where chosen.</li> <li>Professional and persuasive sales pitch that promotes the product design and cost benefits.</li> </ul>	<ul> <li>Lacks one of the following:</li> <li>Description of how prototype meets the client's needs.</li> <li>Accurate analysis of costs of materials in the prototype</li> <li>CER, using marketing design matrix, that explains why specific materials where chosen.</li> <li>Professional and persuasive sales pitch that promotes the product design and cost benefits.</li> </ul>	<ul> <li>Lacks two or more of the following:</li> <li>Description of how prototype meets the client's needs.</li> <li>Accurate analysis of costs of materials in the prototype</li> <li>CER, using marketing design matrix, that explains why specific materials where chosen.</li> <li>Professional and persuasive sales pitch that promotes the product design and cost benefits.</li> </ul>
Presentation Skills	Clear, crisp, authoritative voice. Body language enhances presentation. Demonstrates command of formal English as appropriate. Conveys a distinct, professional perspective (lens). Visual presentation is professionally formatted	Clear, appropriate voice. Body language seems comfortable and appropriate. Demonstrates command of formal English as appropriate. Conveys a distinct perspective (lens).	Audible but quiet, rushed, or fumbling voice. Body language seems somewhat nervous or unsure. Sometimes breaks from formal English inappropriately. Conveys a clear perspective (lens).	Voice is too quiet; pacing is distracting. Body language distracts from presentation. Language is too informal for presentation. Perspective (lens) is unclear.