**Simple Machines Rubric**

**Name of student \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ HR:\_\_\_\_\_\_\_ Pd:\_\_\_\_\_**

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| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Category** | **4** | **3** | **2** | **1** |  |  |
|  | **Identification** |  | Student is able to identify the steps of the Engineering Design Process used in the design and construction of the structure. | Student is able to identify part/some of the steps of the Engineering Design Process used in the design and construction of the structure; however the struggle to identify completely. | Student is not able to identify of the Engineering Design Process used in the design and construction of the structure. |  |  |
| **Explanation** | Student is able to explain in detail how their project was created using the Engineering Design Process and how the EDP can be used in other scenarios. | Student is able to explain in detail how their project was created using the Engineering Design Process. | Student is able to explain some of the ways the Engineering Design Process was used to create their project. | Student is unable to explain how their project was created using the Engineering Design Process. |  |  |
|  | **Identification** |  | Student is able to identify the simple machine(s) used in the structure and how they function. | Student is able to identify part/some of the simple machine(s) used in the structure; they struggle with the function. | Student is not able to identify the simple machine(s) used in the structure. |  |  |
| **Function** | Structure functions extraordinarily well; One or more simple machines were used/created | Structure functions well; At least one simple machine was used/created | Structure functions but with additional aide; At least one simple machine was used/created | Structure struggles to function; no simple machine was used/created |  |  |
| **How it Works** | Student is able to explain in detail how their project works AND how the simple machines used improve the overall functionality. | Student is able to explain in detail how their project operates. | Student is able to explain some of the ways their project works | Student is unable to explain how their project operates. |  |  |
|  | **Safety** |  | Student works safely in the lab using all materials and tools correctly and cleans up completely when finished. | Some steps are taken to insure personal safety and to care properly for laboratory materials. Partially helps to clean up when finished. | Safety practices are NOT followed and/or laboratory materials are treated carelessly. Does not participate in clean up. |  |  |
| **Construction- Materials** | Appropriate materials were selected and creatively modified in way that made them even better; assembled properly. | Appropriate materials were selected and assembled.. | Materials selected and assembled were a mix of appropriate and inappropriate. | Inappropriate materials were selected and contributed to a product that performed poorly. |  |  |
| **Construction- Care Taken** | Great care taken in construction process so that the structure is neat, attractive and follows plans exactly. | Care is taken in the construction process. Structure is neat and follows plans for the most part. | Construction was careful and accurate for the most part, but 1-2 details could have been refined for a more attractive product. Plans are partially followed. | Construction appears careless or haphazard. Many details need refinement for sturdier/more attractive product. Plans are not followed. |  |  |
| **Overall Score** | | | | | |  |  |