**STEM project: Arcade Game TEAM:\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Student Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Evaluation Rubric Final Mark:\_\_\_\_\_\_\_\_\_\_/80**

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| **Criteria** | | **Level A**  **(85-100)** | **Level B**  **(70-85)** | **Level C**  **(60-70)** | **Mark** |
| **Portfolio** | **Design Process**  **(Team Effort)** | -Critically evaluates every detail of the design  -Drawings for each possible solution present, relevant, and labeled.  The design covers a wide range of physics concepts. | -Evaluates the design with moderate effectiveness.  -A few drawings for possible solutions are present.  The design covers some physics concepts. | -Drawings for possible solution are present missing.  The design covers a limited number of physics concepts. |  |
| **Collaboration and teamwork**  **(Individual)** | -Works with teammates to come up with many possible solutions to the design challenge.  -Takes a lot of responsibility and leadership in problem solving and critical analysis. | -Works with teammates to come up with alternative solutions to the design challenge.  -Takes some level of responsibility in problem solving and critical analysis. | -Works with teammates in a limited capacity, or misses meetings.  -Takes on limited responsibility and leadership in problem solving and critical analysis. |  |
| **Documentation**  **(Team Effort)** | -Evidence of organization and planning is present in the engineering notebook.  Provides neat, labelled and scaled drawing of the design.  -Spec document is detailed and thorough and communicates design rationale and game rules clearly. | -Some evidence of organization and planning is present in the engineering notebook.  Provides drawing of the design that are mostly labelled and neat.  -Spec document communicates design rationale and game rules with moderated level of effectiveness. | -Limited evidence of organization and planning is present in the engineering notebook.  Drawing of the design is present, but is not neat or labelled.  -Spec document communicates design rationale and game rules with limited clarity. |  |
| **Final product** | **Implementation**  **(Team Effort)** | -The product functions as it was designed without any problems.  -Creates a functional prototype creatively and uses resources and materials responsibly. | -The product functions as it was designed with some minor problems.  -Creates a functional prototype with moderated level of creativity; Uses resources and materials responsibly. | -The product does not function as it was designed or functions with major problems.  - The prototype is created with limited creativity and resources and materials were used with limited sense of efficiency. |  |
| **Calculations**  **and documentation**  **(Individual)** | -Keeps detailed records of design sketches of design possibilities, and revisions for the component in question.  -Conducts thorough mathematical analysis of the data for the mechanism in question. | -Provides some design sketches for the component in question.  -Conducts some mathematical analysis of the data for the mechanism in question. | -The record of design sketches of design possibilities for the component in question show limited organization.  -Conducts limited mathematical analysis of the data for the mechanism in question or has some errors in calculations. |  |