**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. |  |