**Transformation Rube Goldberg**

Standards: MCC8.G1 – G4

Essential Question: How are geometric transformations essential to the working of a Rube Goldberg machine?

I Can: I can identify geometric transformations in a Rube Goldberg machine.

Overview: Rube Goldberg machines are contraptions that use chain reactions to take a simple task and make it complex. Your job is to investigate Rube Goldberg machines and then create a Rube Goldberg machine that uses the four types of geometric transformations. You will record your machine in action. You will present your findings and video of your machine using PowerPoint, a video or other presentation program of your choice.

Instructions:

1. Investigate Rube Goldberg machines. (Be sure to reference all your sources.)
2. Create a Rube Goldberg machine that has all four geometric transformations. Video record your machine in action.
3. Create a presentation of your findings.

Presentation

Your presentation should include

1. Explanation about Rube Goldberg machines
2. A video of your Rube Goldberg machine in action
3. Explanation of the geometric transformations used in your machine.

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|  | **Emerging** | **Proficient** | **Exemplary** |
| **Information**  | Little or no information. Lacks understanding of material. | Some information. Lacks clear understanding of information. | Information is clear and concise. Information is organized in a clear manner. |
| **Identification of transformations** | Little or no identification of transformations. | Identification of some transformations used in the machine. | Identification of all transformations used in the mach. |
| **Video of Rube Goldberg machine in action** | Machine does not meet the requirements of being a Rube Goldberg. Machine does not work. | Machine has some elements of a Rube Goldberg. Machine as less than 2 parts that do not work. | Machine is a clear example of a Rube Goldberg. Machine works from start to finish. |
| **Understanding of importance of transformations** | Little or no understanding of the importance of transformations in the Rube Goldberg machine. | Some understanding of the importance of transformations in the working of the Rube Goldberg machine. | Clear understanding of the importance of transformations in the working of the Rube Goldberg machine. |
| **Resources** | Little or no resources used and cited. | Some use of resources. | Deep use of resources to understand the machine. |
|  **Presentation** | Presentation design uses little or transitions, effects, and color. Presentation is of poor quality. | Presentation design uses some transitions, effects, and color. Presentation is of average quality. | Presentation design uses transitions, effects, and color. Presentation is of high quality. |