# Hummingbird Robotic Rube Goldberg Machine Creation Planning

Name(s): _____ Section: ____

Your team's task it to create a robotic Rube Goldberg Machine that:

1. Triggers a sequence of chain reaction events using 2 simple machines

2. Interacts with your partners' machines to initialize your machine and continue the chain reaction to the next machine.

3. Uses at least 2 sensors and 2 motors and programming to make something happen. For example -

- Move
- Light up
- Make sounds

Your creation is complete when:

1. Your robot meets the guidelines above.

2. Everything resets (initializes) at the end or beginning of the program. You should not have to do anything before restarting your creation.

3. Your Interactive Engineering Notebook (in Google Drive) is complete with detailed project description, project specifications, significant design decisions, diagrams of final project implementation, materials used, assembly information, and instructions for initializing your machine. Could another person make it work following your instructions? Does it look good? Will it hold up? Strengthen and beautify!

Name(s): _____ Section: ____

## Hummingbird Robot Creation Plan

1. We want to build a Rube Goldberg Machine that:

_____

2. The following will initialize the machine:

_____

3. Explain the interaction between your machine and the next machine:

_____

4. Can the above be designed in Illustrator or Google Drawings?

_____

5. We are going to use a _____ (type of motor) to make the _____(what) move _____ (how) when _____(sensor used/action).

6. We are going to use a _____ (type of motor) to make the _____(what) move _____ (how) when _____(sensor used/action).

7. Repeat above as needed. Use additional space if necessary.

8. How will the motors or motion reach the area that needs to move?

_____

9. Will you be adding any lights? Where and how? _____

10. Discuss your plan with your teacher. She must sign off on it before you proceed.

Teacher's initials: _____

11. Great! Turn this sheet in and start designing in Illustrator!