

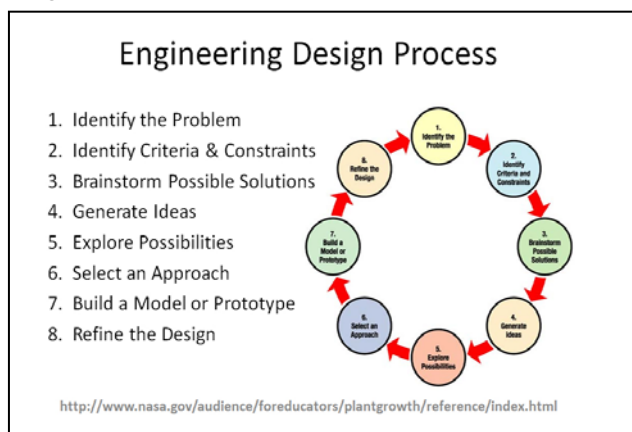
# The Rube Goldberg Polymer Machine

**Purpose** - To learn about the different types of polymers and the physics of motion as teams design a machine that will move polymer objects ( i.e. ball, toy-car, etc) through an over-engineered course.

**Procedure** - Teams will use the laptops to:

- Identify properties of a Rube Goldberg machine
- Identify the different kinds of polymers as distinguished by the recycle codes found on plastic materials

Teams will design and build their machine following this process:



Teams will design and build their machine following these rules:

1. The motion of the first object must begin using a shape memory polymer.
2. At least one example from each type of polymer must be a **functional** part of the machine...not just placed in the machine as a decoration!
3. The rubber objects must make at least three directional changes
  - Teams will film their best run and show it on the day the class reviews the machines.
  - Teams will observe each machine's film and every individual will score each using the rubric provided.
  - Teams will evaluate and score each member of their team regarding their teamwork during this project using the rubric provided.

**Conclusion** - Each person will hand in their evaluation rubrics for each machine.  
Each person will hand in their evaluation rubrics for each team member.  
Each person will hand in the conclusion paper which is given.