

# Student Worksheet for Ep. 23:

## Drawing Machine

**Overview:** We're going to make a quick and easy drawing machine that will teach your kids about the conservation of energy! By storing energy in the rubber band (called "elastic potential energy"), you can see for yourself how this transforms into movement (called "kinetic energy") while making a picture on your paper.



### Materials:

- Rubber band
- Thread spool
- Marker or pen
- Large sheet of paper
- 3 paperclips or large washers

### Experiment:

1. First, thread your rubber band around a washer and secure it to the washer (or paperclip).
2. Thread the rubber band through the thread spool.
3. Insert the rubber band through two washers on the other end.
4. Loop the rubber band around the marker so it sits flat against the two washers.
5. Spin the marker around to wind up your machine and watch it draw!

### Observations:

1. What part of the drawing machine stores the potential energy?
2. Where is the energy transferred in this machine?
3. How would you make the drawing machine draw circles?