**Marble Roller Coaster**

Objective: Design a safe, stable marble roller coaster that earns the most points.

Point System:

* Flat: 1 point
* Hill: 2 points
* Loop: 5 points
* Gap jump/Drop: 7 points

Your Materials:

* 10 markers
* 15 rubber bands
* Tape
* 5 plastic cups
* 4 foam cups
* 12 popsicle sticks
* 20 pieces of paper
* 1x6ft, 1x4ft, 2x3ft, 1x2ft insulation tubing

How To Make Your Roller Coaster Track:

1. Cut a strip of paper
2. Fold the paper into three sections to form “walls” of your track
3. Cut the walls into small sections
4. Tape the walls together according to how the track will bend (you can make a hill, loop, drop)
5. Experiment with different types of tracks to form your roller coaster!

Questions to Think About:

* How does transfer of energy help the marble to move through the roller coaster?
* Where does the marble have its maximum and minimum velocity?
* How would a larger or smaller marble affect your design?
* What were some obstacles you had to overcome in your design process?