

# The Roller Coaster Project



## Objective:

The object of this project is to design, plan and construct a paper (cardstock) roller coaster for marbles. You should use the standard rules of design mixed with creativity and thinking outside the box. Your roller coaster should be neat, clean and fun to use. You should also be able to discuss the physics' principles that are demonstrated in this project.

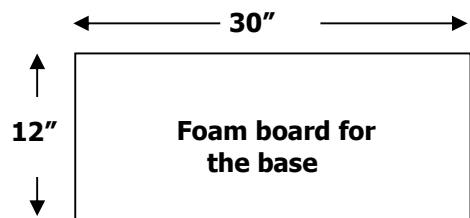
## Guidelines

**You must plan, design and build a paper roller coaster.** It must be constructed from cardstock; cellophane tape and glue (stick type). You will NOT be given extra tape or glue. The roller coaster construction pieces will be supplied when you submit your design and materials list. Plan carefully; you will be penalized for too much or too little. The base of the roller coaster must be 12" x 30" and the height should be between 30-36". However, the decorations may exceed this height. Remember, this is a group effort and the actual construction must be done in class.

- You should watch the videos on the website and check YouTube™ for examples.
- You must submit a design with a request for materials.
- You will NOT be given extra tape or glue.
- It must work without helping the marble.
- Your coaster must have a name (a theme is extra).
- You need at least 2 loops.
- You need at least 1 funnel.
- You should include 3 wide and 2 sharp turns
- You must have a **theme** and decorations.
- You need one non-template **element** that maybe of another material. (no electronics)

## The following materials may be used for construction:

- Cardstock templates (provided)
- Glue Stick
- Cellophane tape
- Scissors
- marble
- ruler
- ball point pen (black ink)
- 12" x 30" foam board base



**Due Date:** \_\_\_\_\_

# Roller Coaster Point Distribution

## The Roller Coaster is worth 100 points

A completed roller coaster designed and constructed according to specifications and finished on time will earn 70 points.

If, for any reason, the roller coaster is non-compliant with any of the specifications or the delivery date the point deductions will be as follows:

<b>Non-compliance with requirements:</b>	five (5) points deducted
<b>Improper width and length:</b>	five (5) points deducted
<b>Improper height:</b>	five (5) points deducted
<b>Late penalty:</b>	ten (10) points deducted

- The roller coaster that gets the most votes (10 points)
- Second place will receive (8 points)
- Third place will receive (5 points)
- Fourth place will receive (3 points)
- Fifth place will receive (2 point)
- Sixth place will receive (1 points)

## Roller Coaster (possible points)

\_\_\_\_\_ Completed (70)

\_\_\_\_\_ Deductions (-25)

===== Subtotal

\_\_\_\_\_ Place (10)

\_\_\_\_\_ Design (5)

\_\_\_\_\_ Name (5)

\_\_\_\_\_ Element (5)

\_\_\_\_\_ Theme (5)

===== Subtotal

===== Total

**DON'T THROW  
THIS AWAY!**