Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Assignment #:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Building a Roller Coaster**

**DIRECTIONS: Using the link below, please use your knowledge of kinetic and potential energy to help you build a safe and thrilling roller coaster. Please, follow all of the steps thoroughly to ensure that you earn the best grade possible!**

**STEP 1:**

Log on to <http://content3.jason.org/resource_content/content/digitallab/4859/misc_content/public/Main.swf>



**STEP 2:**

Click on Learn How to Craft a Super Coaster and listen to all of the instructions on how to successfully build a roller coaster that has enough kinetic energy to complete a full run.



**STEP 3:**

Click on Build a Roller Coaster Right Now! Follow the steps to create a roller coaster. As you build your roller coaster please, complete the questions/chart below.



**ROUND 1:**

Name of car: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Number of cars: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mass: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hills: \_\_\_\_\_\_\_\_\_\_\_\_m \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Loops: \_\_\_\_\_\_\_\_\_\_\_\_m \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Difficulty: \_\_\_\_\_\_\_\_\_\_\_\_ x\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Screams: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Top Speed:\_\_\_\_\_\_\_\_\_\_\_\_m/s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Stop Accuracy \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Overall Score: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ROUND 2:**

Name of car: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Number of cars: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mass: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hills: \_\_\_\_\_\_\_\_\_\_\_\_m \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Loops: \_\_\_\_\_\_\_\_\_\_\_\_m \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Difficulty: \_\_\_\_\_\_\_\_\_\_\_\_ x\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Screams: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Top Speed:\_\_\_\_\_\_\_\_\_\_\_\_m/s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Stop Accuracy \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Overall Score: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ROUND 3:**

Name of car: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Number of cars: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mass: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hills: \_\_\_\_\_\_\_\_\_\_\_\_m \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Loops: \_\_\_\_\_\_\_\_\_\_\_\_m \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Difficulty: \_\_\_\_\_\_\_\_\_\_\_\_ x\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Screams: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Top Speed:\_\_\_\_\_\_\_\_\_\_\_\_m/s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Stop Accuracy \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Overall Score: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**What did you change about your roller coaster mass from Round 1, Round 2, to Round 3?**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**What did you change about your roller coaster track from Round 1, Round 2, to Round 3?**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**What tips would you give to someone in the other class periods about building a roller coaster?**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Below, sketch the roller coaster track that you created that earned the highest overall score:**