



END OF THE YEAR

STEM

ROLLER
COASTER

Carly and Adam

The Cyclone

Roller Coaster Instructions

Materials for each group of 2-3 students:

- 10-20 toilet paper rolls
- 2 pieces of card stock
- tape
- 1 marble

Instructions:

- This challenge will be completed in groups of 2-3 students.
- Students will construct a roller coaster out of toilet paper rolls, card stock, and tape.
- Allow students approximately 10 minutes to plan their design individually and another 10-20 minutes to plan as a team. Use the included planning pages.
- Students will have 30 minutes to build their roller coaster. You may need to allow more time depending on the age of your students.
- At the end of the time limit test the roller coasters by placing a marble at the start of the roller coaster. If the marble travels all the way from the beginning to the end of the roller coaster the team will have completed the challenge successfully.
- At the end of the activity have students complete the reflection page.



Dear Students,

A theme park wants to build a new roller coaster, and they need your help to design it. In order to build your roller coaster model you will use toilet paper rolls, card stock, and tape. You will have 10 minutes to plan your design individually and another 10-20 minutes to plan as a team. You will have 30 minutes to complete this challenge. At the end of the time limit each design will be tested by placing a marble at the start of the roller coaster. In order to successfully complete the challenge the marble must travel all the way from the beginning to the end of the roller coaster.

Materials:

toilet paper rolls

card stock

1 marble

tape

Good luck!

Name: _____

ROLLER COASTER



My Design:

Name: _____

ROLLER COASTER PLANNING



How will you use your materials?

How will you be sure that your marble will roll the entire way down the roller coaster?

What possible problems could come up as you construct your design?

Name: _____

ROLLER COASTER REFLECTION



What about your design worked well?

If you were to do this STEM challenge again
what would you do differently?

How did your group work together? What was
your role in the group?

Example!

