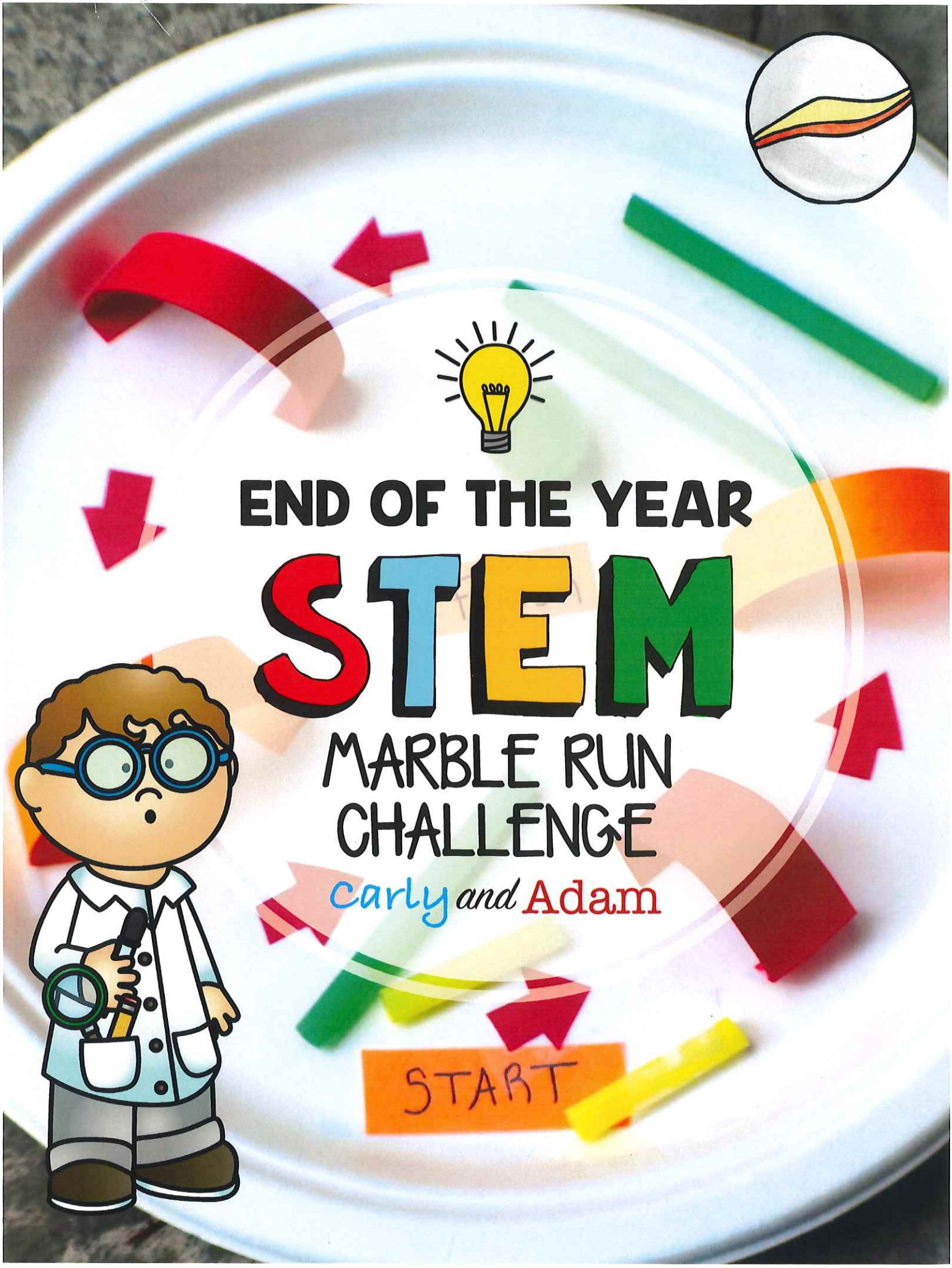
END OF THE YEAR
STEM
MARBLE RUN
CHALLENGE
Carly and Adam
START

MARBLE RUN STEM CHALLENGE

Teacher Instructions

Materials for each group of 2-3 students:

- 1 paper plate
- 2 pieces of construction paper or colored computer paper
- 3 straws
- 1 marble or pom pom
- clear plastic tape
- scissors

Instructions:

- Have students read the task instructions or read them aloud.
- Give students 10 minutes to plan individually and then 10 minutes to plan as a team. Use the included planning pages.
- Give students the materials listed above. Students will have 30 minutes to construct their marble run.
- At the end of the 30 minute time limit have groups test their marble run. The marble run must have at least 5 obstacles for the marble to go through and there must be a start and a finish.

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EXAMPLE

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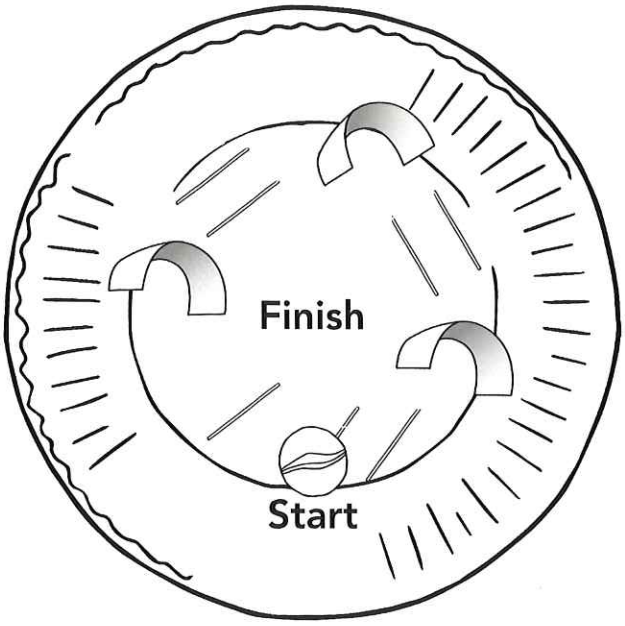

Dear Students,

A toy company has asked you and your team of engineers to design a marble run. Your marble run must include a start and a finish, and there must be at least 5 obstacles that the marble must go through.

You will have 10 minutes to plan your design individually and 10 minutes to plan as a team. You will have 30 minutes to construct your marble run. At the end of the 30 minute time limit you will test your marble run by showing how it works. In order to successfully complete this challenge your marble must start at the beginning and move through each of the 5 obstacles all the way to the finish.

Materials:

1 paper plate	3 straws	2 pieces of paper
scissors	tape	1 marble

Good luck!

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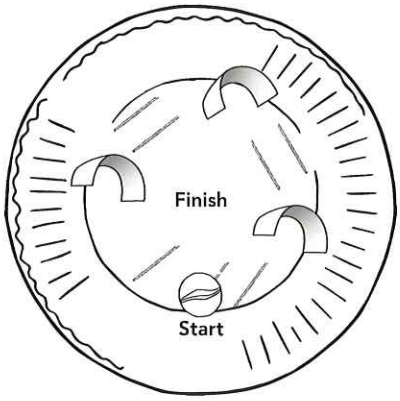
Name:_____

MARBLE RUN PLANNING

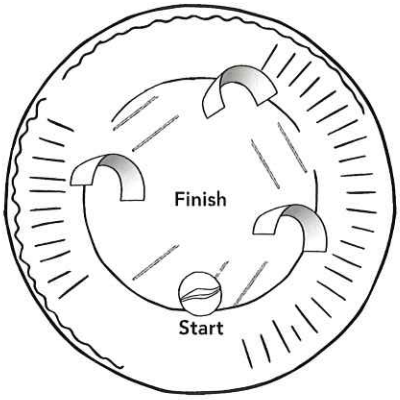


My Design:

©CarlyAndAdam

Name:_____

MARBLE RUN PLANNING

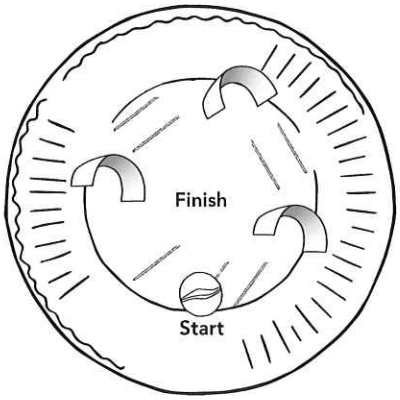


My Group's Design:

©CarlyAndAdam

Name:_____

MARBLE RUN PLANNING



How will you use your materials?

_____

_____

_____

How will you be sure that your marble will successfully make it through the five obstacles?

_____

_____

_____

What possible problems could come up during construction?

_____

_____

_____

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Name:_____

MARBLE RUN STEPS

Directions: Record the steps that your marble must go through.

Steps	Where will the marble go?
First	
Obstacle #1	
Obstacle #2	
Obstacle #3	
Obstacle #4	
Obstacle #5	
Last	

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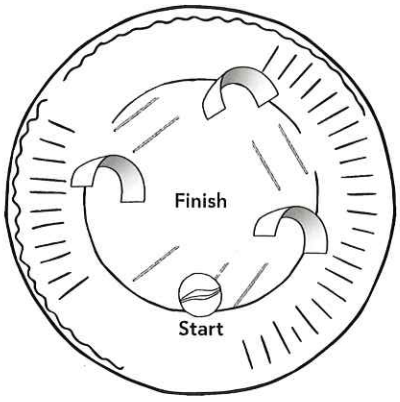
Name:_____

MARBLE RUN 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?

_____

_____

_____

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