

Name: _____

Date: _____

Period #: _____



MARBLE RAMP!!!

Purpose:

1. To practice working as a group
2. To practice problem solving skills

Materials:

1. 1 sheet of newspapers
2. Scissors
3. 1 meter masking tape
4. Ruler
5. 1 marble

Background: You are the newly hired architect for the recently amusement park called "Need for Speed." As the new architect, you are required to create the tallest, fastest, and scariest ramp for the marbles that are to roll down!

Your job is to create the funnest marble ramp that you can. You must obey these rules:

Using **ONLY** the newspaper and masking tape, build a ramp that will:

1. Be at least 25 cm in height
2. Will carry the marble the entire length of the ramp without being touched after it is released.
3. Will stop the marble at the end of the ramp
4. The marble cannot fall off the ramp
5. Do NOT use scissors or ruler as part of the ramp
6. You won't receive extra supplies if you run out!

Problem: How can you build the tallest standing tower in Need for Speed?

Discussion Ideas (Research): Have each person in your group describe at least one idea for building the ramp.

1. Whose idea? _____ Idea: _____

2. Whose idea? _____ Idea: _____

3. Whose idea? _____ Idea: _____

4. Whose idea? _____ Idea: _____

Hypothesis: (Use your research and decide on how you will build the ramp. You will be testing this hypothesis.)

Observations: Explain what happened when you attempted to build the ramp.

Procedure: After building the ramp, record detailed instructions and illustrations for how you did it. You do not have to use all 4 steps. Use as many as needed to explain your procedure.

	Written Directions	Illustration
Step 1		
Step 2		
Step 3		
Step 4		

Analysis Questions:

1. Explain 2 problems you encountered in this lab.

- a. _____
- b. _____

2. Explain 2 ideas or techniques that you think worked well for this lab.

- a. _____
- b. _____

3. What is an advantage you gained from working in a team rather than alone?

4. What is a disadvantage you gained from working in a team rather than alone?

5. List 5 things you can do to make a group more productive:

- a.
- b.
- c.
- d.
- e.