

CRAZY COASTERS !!!

Scene Set:

A new amusement park.

Who are you?

You are a member of design engineering team.

What is your job?

Your job is to design the wildest roller coaster in the state.

What is your problem?

Your boss is coming to see you in 40 min. and she wants to hear your ideas.

What are you going to do?

You have a lot of great ideas, so to impress your boss your team decides to build a small working model of your design.

How are you going to build the model?

Luckily, the maintenance man has a closet full of the following surplus supplies:

- pipe insulation sections (3-4)
- masking tape
- cardboard tubes
- poster board sections
- paper cups
- dominoes
- marble (1)

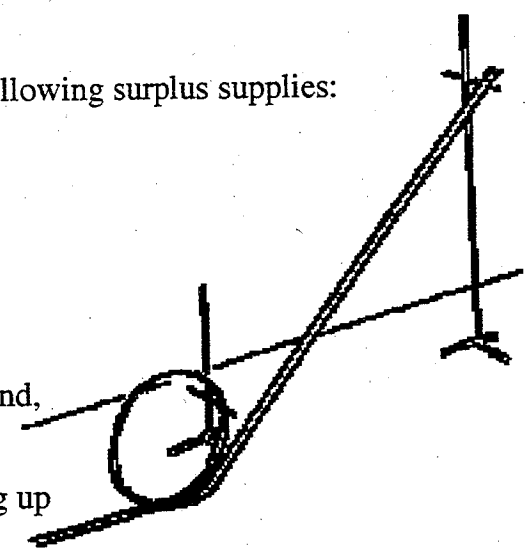
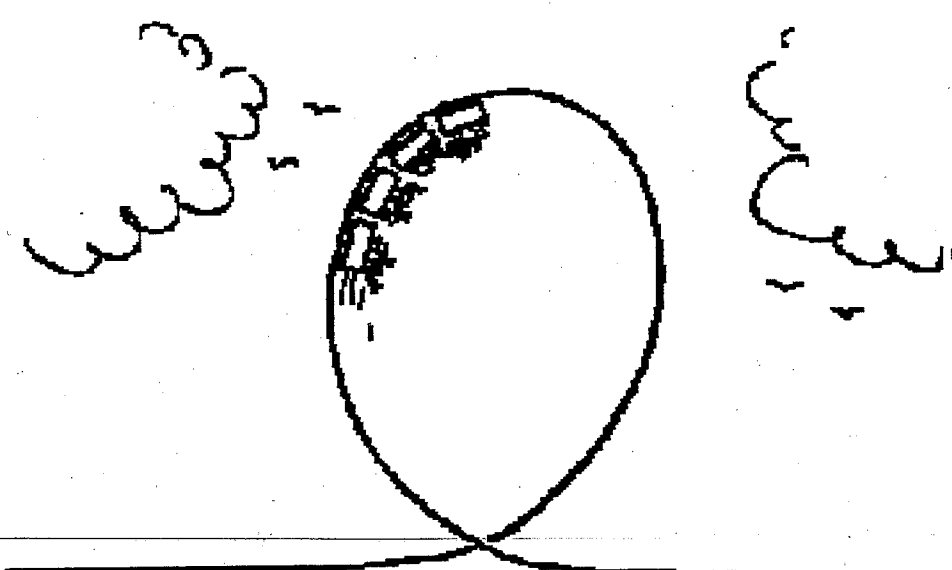
You use these supplies, as well as any others you can find, to build your working roller coaster model.

You also decide to further impress your boss by coming up with a great name for your design team's roller coaster.

Any other great ideas?

Yeah, you decide that your coaster should have a **big** finish. So your design team has the marble transfer its energy to something else at the end of the track.

You are not sure how yet, but you want the marble to make something else happen. For example, it could knock over cups, or start a domino chain reaction, pop a balloon, launch a catapult, or move a slider... try anything!



Guess What?

Your boss wants you to use the space below to draw and label your roller coaster design.



Coaster Name _____

What Now ?!

The boss also wants you to answer a few questions about the design project.

1. Classify the different features of your roller coaster from hardest to easiest to build.
2. What made the hardest feature so difficult to build? Explain how your team solved the problem.
3. Explain how the shape or position of the track affected the speed of the marble. (Where was the speed the greatest and the least? Where did the marble tend to fly off the track? What caused the marble to speed up or slow down?)
4. If I (the Boss) gave you an unlimited budget, explain what you would add to your design to make it the greatest roller coaster in the world.