

## Barbie's Great Adventure!

This is a hands-on problem. You have one minute to determine which team members will solve the problem.

JUDGE READS TO TEAM (after participants are determined):

You will have 10 minutes to complete this problem. You may talk or ask questions at any time; however, time continues.

Your problem is to build one vehicle that will transport a "Barbie Doll" through the obstacle course. You will be given materials to be used in your solution. No other materials may be used.

The Barbie Doll must be placed in or on the vehicle. The Barbie Doll must be completely within the taped off start and finish areas to count for score. Dolls must be removed from the vehicle at the completion of each attempt. Barbie Dolls that extend past the outside edge of the taped boundary will receive no score. Score will be as follows:

Each Barbie to successfully make it down the slide without falling out or touching the ground: 10 points

Each Barbie doll to make it across the guide wire without falling: Additional 50 points

Each Barbie doll to make it down the stairs without falling out or touching the stairs: Additional 100 points

How well your team works together will receive 1-20 points.

If you touch the Barbie dolls or the vehicle while outside of the start and finish boxes, with anything other than the supplies provided, no further points will be added for that attempt. You may rerun the course as many times as possible. All attempts will be scored.

### Materials and Setup

Give each team the following materials:

2 empty water bottles

4 piece of yarn 12" in length

4 straws

4 mailing labels

1" square of clay

5 unsharpened pencils

1 sheet of construction paper

4 paper clips

1 Rubberband

1 Coat Hanger  
1 Fly swatter  
1 pair of scissors  
2 sets of wheels from an old toy

**JUDGES ONLY:**

On a hard surface or tabletop, tape off a 2' square for the start area at the top of the slide.

Starting at the tabletop, make a slide to reach the floor. This could be a piece of wood or a leaf from a table. At the bottom of the slide, tape off another 2' square area for the start/stop area.

Use a string as a guide wire. The starting end of the string should lay loose at the bottom of the slide.

The other end of the string should be secured beyond and higher than the stairs that you are to provide. This end of the string could be tied off to another table.

At the top of the stairs, you will need another 2' taped off start/stop area.

The stairs can be made out of whatever you want them to be. They can be stacks of books, seat cushions, etc. At the bottom of the stairs, tape off another 2' square area.

The vehicle must be in contact, in some way, with the obstacle at all times to be counted for score.

The team does not have to complete the course for score.

This problem may be altered to conform to materials available. If it is too hard or too easy for the team, change it up and try it again. Most of all...Have fun.

