

# MTV LAND - PRECISION

(INDIVIDUAL; ON-SITE COMPETITIVE)

## DESCRIPTION:

This contest provides an opportunity for the student to demonstrate his or her skills in problem solving. The problem will consist of building a mousetrap vehicle (MTV) that will travel nearest to the distance of 30 feet. Each vehicle will compete in precision competition.

## GENERAL RULES AND REGULATIONS:

- 1.The only power source allowed is an ordinary mouse trap.
- 2.No additional energy storing materials can be used.
- 3.The spring on the mouse trap cannot be heat treated or altered.
- 4.The vehicle must be designed so that the mouse trap can be attached or replaced quickly and efficiently. **Tape or glue cannot be used to attach the mousetrap to the vehicle. Tape of any kind cannot be used in the construction of the vehicle.**
- 5.Only one (1) mouse trap can be attached to the vehicle at one time.
- 6.The vehicle will be constructed at the entrant's school.
- 7.**Vehicles must not have a mousetrap attached at the time of registration. After registration, mousetraps (Victor) will be provided for 5 minutes assembly time.**
- 8.The mousetrap base cannot be altered in any manner. After the mousetrap has been attached, the vehicle cannot be altered except during the vehicle testing.
- 9.Track Specifications - Standard tiled, wood, or rubber gym floor covering
- 10.Documentation must be typed or produced electronically. Drawings and sketches can be done by hand.
- 11.Documentation of the problem solving process used in developing the balloon vehicle must be provided to the coordinator.  
Basic Problem Solving Steps: (Must accompany project and be done electronically, handwritten not acceptable)  
a.Define the Problem b.Gather Information c.Set Goals d.List Solutions  
e.Select the Best Solution  
f.Apply the Best Solution g.Evaluate

## CRITERIA FOR JUDGING:

The MTV will be judged on the basis of distance traveled that is the nearest to 30 feet.

A total of three places will be awarded for each level.

Documentation:

- 12.Definition of Problem - 5 points
- 13.Information and Data - 5 points
- 14.Goal Statements - 5 points
- 15.Choosing the Best Design - 5 points
- 16.Developmental Work - 10 points
- 17.Testing and Evaluation - 5 points
- 18.Redesigning and Improving - 5 points

Vehicle:

- 19.Vehicle Construction and Design - 10 points
- 20.Precision Ranking - 1st, 50 pts.; 2nd, 45 pts.; 3rd, 40 pts.; 4th, 35 pts.; 5th, 30 pts.; etc.

**ANY RULES AND REGULATION VIOLATION - (-20 POINTS)**

**TOTAL POSSIBLE - 100 POINTS**

AWARDS IN LEVELS I AND II

