

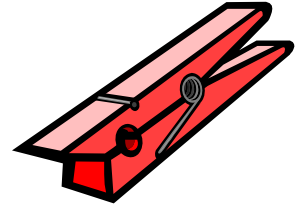


Mountain Vista High School Tech Lab 1- Design Challenge

Clothes Pin Shuttle

Objective

Students will find a way to transport a clothes pin a distance of 10 to 15 feet.



Materials (per team of two only)

1. 1 - Clothes Pin
2. 2 - Rubber Band
3. 1 - Balloon
4. 1 - Straw
5. 2 - Paper Clips
6. Masking Tape (6 inches)
7. 1 - Stationary string or fishing line that can be detached at either end.



TOOLS

1. Scissors



Specific Regulations

1. Each group may use only the materials provided. **NO EXCEPTIONS!**
2. The clothes pin must be transported the entire distance of line in a single movement.
3. The clothes pin must be powered by the given materials. It can not be thrown or pushed.
4. **The fishing line must remain level.**

Instructions

1. **Groups of 2 only.**
2. The students will design a device that transports a clothes pin from point A to point B.
3. The students may test their device 5 times.
4. Brainstorm and sketch the design of your structure. Include **everything** in the sketch. A short summary paragraph of the design you choose and why must be included at the bottom of the page.
5. Present your sketch to the teacher for approval.
6. Upon approval from the teacher, attain the required materials.
7. Construct your device.

Clothes Pin Shuttle Grade Sheet

Name _____

Score _____/100

Evaluation

The students will only gain credit when they demonstrate their device for the instructor and it transports the clothes pin the distance in one movement.

Quality of Device

Distance spanned – three tries

- 4-7.9 feet _____ 10 points
- 8-11.9 feet _____ 20 points
- 12-15 feet _____ 30 points

Efficient use of materials

- Tape used* _____ 10 points
- All supplies used in structure* _____ 10 points

Sketches

- _____ 15 pts Sketches are all neatly drawn; no smudges; no pen
- _____ 15 pts All parts of device are clearly identified
- _____ 20 pts Summary paragraph of design chosen and why

Rules Violation

-25 points (can vary)