

Engineering

Recycled Vehicles



CHALLENGE

Hello STEM students! We need your help to design and build a vehicle that is made of recycled materials and duct tape and can successfully travel down an incline and over a flat surface. The focus is to create a vehicle that can cover the greatest distance.

Criteria for Vehicle

- Must be created by students **only** during STEM sessions and brought to competition by the STEM coach
- Must use recycled materials ([View WM Paper/Cardboard and Plastics lists of acceptable recyclables @ www.wm.com/thinkgreen/what-can-i-recycle.jsp](http://www.wm.com/thinkgreen/what-can-i-recycle.jsp))
- Must use duct tape as only form of fastener
- Must have a body
- Must have a minimum of three wheels
- Must have at least two axles made from chopsticks (those with square end on one end)
- Can use straws
- Must fit in large paper box (10 reams of paper)

Accepted Materials

- Chopsticks (with squared end on one end; not skewers)
- Duct tape (provided by STEM coordinator)
- Straws (provided by STEM coordinator)
- Recycled materials
- Small rocks may be placed in sealed baggie/water bottle for added weight

Constraints for Challenge

- Masking tape, paper clips, staples, or glue **CANNOT BE USED**
- Wood, metal, glass, styrofoam, CDs/DVDs, store bought containers, and non-recycled materials **CANNOT BE USED**
- Must be designed/built by students
- Must travel down a 30 degree incline plane and across the floor independently once released