



2020 Cub Scout Backyard Challenge



Make a Balloon Powered Sled

Category: STEM

Difficulty: Advanced

Description:

Your job, if you choose to accept it, is to create a sled that that moves under its own power...

You will need:

- a piece of thin cardboard
- balloons
- rubber bands
- straw
- tape

Build your sled and test it on various surfaces, such as: Kitchen floor, Livingroom floor, garage floor, wood deck, and on the grass. Measure how far it travels.

Results #1

Kitchen floor:

Living room floor:

Garage floor:

Wood deck:

Grass:

Explain your results: **“Doesn't do well on rough surfaces”**

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After your first sled experience, apply some smooth tape to the bottom of the cardboard. Test your sled on the various surfaces. Measure how far it travels.

Results #2

Kitchen floor:

Livingroom floor:

Garage floor:

Wood deck:

Grass:

Explain your results: **“Tape helps because the tape surface is smoother than the cardboard”**

Are you using just one balloon? What are the rubber bands for?

Change the variables to see what works... **Never Give UP!**

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