DESIGN A ROLLER COASTER MODEL FROM REPURPOSED MATERIALS

Roller Coaster Design Challenge with ScrapsKC

Force is the energy that moves something. Potential energy is stored when a roller coaster car climbs up a hill, then it turns into kinetic energy when it starts to fly down the hill using the force of gravity!

Use these supplies to create a roller coaster for your car (the marble) to travel. Make the marble roll faster by reducing friction, which is the resistance that one surface or object encounters when moving over another.

Use the items in the kit or things around your house to build your roller coaster model.





Use the tubes, comb binding, thread spools, and food pouch lids to attach a course to the base that your marble "roller coaster car" will travel through. You can use tape, ribbon, twist ties, or pipe cleaners to connect your roller coaster course. Use the knitting needle to poke holes in the foam core safely.

What else can you add to the roller coaster to improve it? Asking how you can improve things is an important part of the Engineering & Design Process!

Be sure to test your roller coaster as you go, so you are sure the car won't fall off, and make adjustments as needed. Engineers need to readjust settings all the time to make sure their machines work properly. "Failure" is actually learning, so we welcome it - in this activity you'll learn about design, engineering, improvement, problem solving, and express your own creativity!

Scan the QR code for a video tutorial!





We can't wait to see the pieces you create! Share your photos and tag @scrapskc on social media.