

STEM Challenge Cards

20 Hands-On Engineering Challenges

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How to Use These Cards

Each card presents a unique engineering challenge. Work alone or in teams to solve them using creativity and problem-solving skills!

Challenge 1: Bridge Builder

Build a bridge using only paper and tape that can hold a toy car. Make it as long as possible!

Challenge 2: Egg Drop

Design a container that will protect an egg when dropped from 6 feet high. Use any materials you want!

Challenge 3: Marble Maze

Create a maze using cardboard that guides a marble from start to finish without falling off.

Challenge 4: Paper Tower

Build the tallest tower you can using only newspaper and tape. It must stand for 10 seconds!

Challenge 5: Balloon Rocket

Make a balloon rocket that travels at least 10 feet along a string. How fast can you make it go?

Challenge 6: Catapult

Build a catapult that can launch a marshmallow at least 3 feet. Use popsicle sticks and rubber bands.

Challenge 7: Water Filter

Design a filter that can clean dirty water using coffee filters, sand, and gravel.

Challenge 8: Solar Oven

Create an oven using a pizza box that can melt chocolate using only sunlight.

Challenge 9: Parachute

Design a parachute that will slow down a toy's fall. Test different shapes and sizes!

Challenge 10: Boat Building

Build a boat from aluminum foil that can hold the most pennies without sinking.

For more resources, visit www.dallaswthompson.com