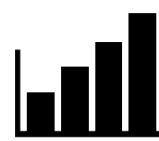




# SUMMER CHALLENGE

# STEM

## Challenges & Engineer's Notebook



# Summer STEM Challenge Supply List

Acrylic paint	Glow sticks	Shredded paper
Aluminum foil	Glue	Skewers
Aluminum trays	Golf tees	Sponges
Baking soda	Google eyes	Stapler
Baggies	Gumdrops	Sticks
Beads	LEGO® bricks	Straws
Cardboard	K'Nex®	String
Clothes pins	Magnets	Styrofoam
Coffee filters	Marshmallows	Styrofoam balls
Coins	Measuring cups	Sugar cubes
Cookie cutters	Nails	Tape
Cotton balls / swabs	Paint	Tape measure
Craft foam	Paper	Tea lights
Craft paper	Paper cups	Tin can
Craft sticks	Paper clips	Toilet paper rolls
Dowel rods	Pencil	Toothpicks
Duct tape	Pinecones	Trash bags
Fabric	Pipe cleaners	Twigs
Feathers	Plastic bags	Twine
Felt	Pom-poms	Twist ties
Flat marbles	Pool noodles	Washi tape
Food coloring	Raffia	Water
Funnel	Ribbon	Water beads
Gears	Rubber Bands	White vinegar
Gems	Scissors	Wire
Glitter glue	Shells	Yarn

# Paper Airplane Challenge

**Challenge:** Design and build a paper airplane. Can you test it with friends to see whose plane soars the farthest?

**Supplies:**

paper, you can also use the provided templates

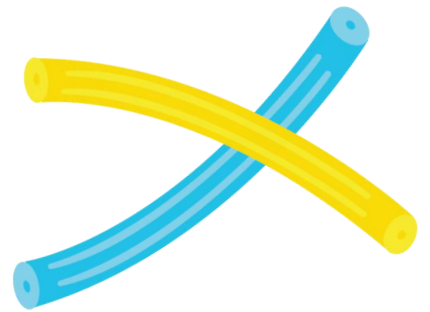


# Pool Noodle and Toothpick Structure

**Challenge:** Cut a pool noodle into pieces of varying size. Build a structure! Test your structure in water to see if it floats!

**Supplies:**

pool noodles, toothpicks

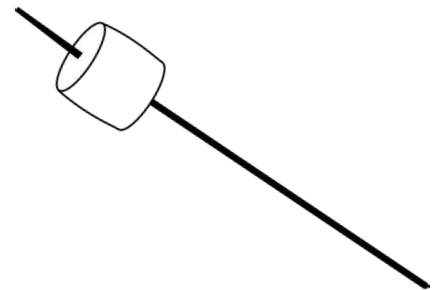


# Design and Build a Solar Oven

**Challenge:** Design and build a solar oven to melt a marshmallow or make s'mores.

**Possible Supplies:**

cardboard, aluminum foil, aluminum tray, duct tape, toothpicks, skewers, marshmallows



# Design and Build a Dog House

**Challenge:** Fido could really use a dog house to get through the hot days of summer. Design and build your pup a shady spot to call home when you are outside.

**Possible Supplies:**

cardboard, tape, glue, LEGO bricks, craft sticks, foam, fabric, paint

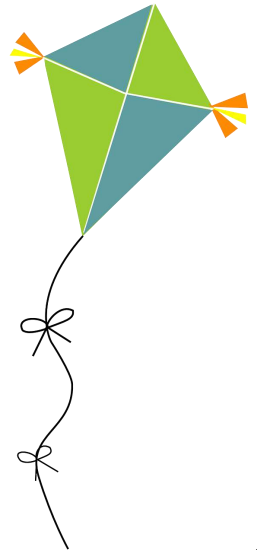


# Design and Build a Kite

**Challenge:** Design and build a kite that will fly on a windy day!

**Possible Supplies:**

string, sticks, craft sticks, skewers, fabric, cardboard, craft paper, glue, dowel rods



# Design and Build an Ice Box

**Challenge:** Design and build a container to keep an ice cube from melting out in the sun! How long does it take for the ice cube to melt?

**Possible Supplies:**

cardboard, tape, duct tape, Styrofoam, craft foam, trash bags, plastic bags, glue

