



1

Design a floating raft that holds the most pennies, using plastic straws and string.

2

Build the tallest possible tower using the fewest number of toothpicks and gum drops.

3

Construct a catapult from wood craft sticks and rubber bands that can accurately launch a marshmallow through a hoop.

4

Engineer a structure to support the most weight (measured in books) using clothespins and wood craft sticks.

5

Build the tallest possible tower that supports the weight of a book using only 10 index cards. You can bend or tear the cards however you like, but you cannot use scissors, glue, or other tools.

6

Use paper plates, cardboard tubes, and masking tape to construct a marble roller coaster. You can cut the plates and tubes as needed.

7

Make a working jump rope from two plastic grocery store bags and 12 inches of duct tape.

8

Fold a single sheet of paper into a cup that will hold water for at least 30 seconds without leaking.

9

Use one box of paper clips to create a chain that can hold the most weight.

10

Create a bubble solution recipe from water, dish detergent, and glycerin (or corn syrup) that makes the longest lasting bubbles.



11

Build a domino chain reaction that spells the name of one of the members of your group.



12

Stack plastic cups into the tallest tower you can in 1 minute.

13

Build a free-standing
ring of Pringles chips.

14

Design a paper airplane that
can hold the most cargo
(coins taped to the plane).
The plane must fly at least 8
feet.

15

Use newspapers and masking tape to design a device that would keep all the members of your group dry in a rainstorm.

16

Construct a device to carry a plastic cup full of water from the top of a 5 foot tall zip line to the bottom while spilling the least amount of water.



17

Come up with three ways to get a toy car to move without directly touching it with any part of your body.

18

Build a bridge that is 12 inches long using drinking straws and masking tape. The strength of your bridge will be measured using pennies in a paper cup.



19

Use newspaper and scotch tape to design a stylish shoe that you can put on and take off of a team member's foot.



20

Draw a maze on the outside of a plastic bottle. Then drop a paperclip into the bottle and use a magnet to move the paperclip through the maze.

21

Create a musical instrument using supplies like index cards, paper clips, tape, rubber bands, plastic straws, etc.

22

Build a house with at least two rooms using wood craft sticks and glue.

23

Design a new paperclip style that holds at least 10 sheets of paper without damaging them.

24

Use plastic straws and pipe cleaners to build a geodesic dome or sphere.

25

Design and create a set of building blocks using cardboard, masking tape, and scissors. Build a cool structure to show off your creation.

25 Fifth Grade STEM Challenges

Shared from [WeAreTeachers.com](https://www.weareteachers.com)

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