

# CATAPULT

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In the circus, many acts included a seesaw or catapult, where performers jump on one end to send performers on the other side flying.

Building a catapult out of popsicle sticks engages all areas of STEAM! We use our technology skills to build the catapults, and math to estimate the distance the projectile will travel and determine how to best construct the catapult. We use engineering to actually build the catapult and science to test and redesign the catapult. We use art to decorate the catapult and make it unique.

Before you begin, predict which objects will fly the furthest. How do you think the objects weight and shape will affect its propulsion? What forces are affecting the projectile?

Use the instructions below to build your catapult. If you are feeling like a more adventurous engineer, try creating your own design for a catapult! How do the different designs you try affect the distance your projectile travels?

## ACTIVITY

### MATERIALS:

2 JUMBO POPSICLE STICKS, 8 REGULAR POPSICLE STICKS,  
RUBBER BANDS, OPTIONAL: GLUE DOTS, BOTTLE CAP

### DIFFICULTY LEVEL:

SIMPLE

## DIRECTIONS

1. Stack the 8 regular popsicle sticks together and bind tightly with rubber bands on one end.
2. Push one of the jumbo popsicle sticks just above the bottom layer of popsicle sticks. Rubber band the opposite end of the stack.
3. Lay the second jumbo popsicle stick on top and rubber band the short end together tightly.
4. OPTIONAL STEP: with a grownup's help, use a glue dot or hot glue to attach a bottle cap to the far end of the top jumbo stick, open side up. This bottle cap can be used to hold objects before propelling them out of the catapult.

### STANDARDS:

SC.5.P.13.2

SC.5.P.13.3

SC.3.P.10.2

VA.2.H.2.2

Click [here](#) for more catapult fun!