

## Summer 2020 Lesson

Class: Innovation Club

Grade Band: Grades 2-6

Teacher: Mrs. Richey

Lesson: Spoon Catapult

**Objective:** Play with physics as you harness the stored energy in a catapult, turning it into kinetic energy by pulling back on a spoon and releasing a small object into space!

**Materials:** 9 craft sticks, one spoon (plastic is preferable), 4 rubber bands, one small marshmallow or soft object to fling

### Process:

Eat 9 popsicles and save the sticks! Just kidding, but you do need 9 non-sticky popsicle or craft sticks.

Connect 7 craft sticks together by looping a rubber band around one end.

Slide a craft stick between the bottom stick and the other 6 sticks (making a plus sign) that you banded together.

Wrap a rubber band around the other end of the stack of craft sticks and loop it until it is nice and snug.

Place your last craft stick with a spoon on top of it over your stack of sticks parallel to your single craft stick and put a rubber band around the spoon handle and craft stick attaching it to the single craft stick, making a V shape.

Loop a 4th rubber band around the middle of the spoon, stick, and stack of 7 craft sticks to firmly hold the spoon in place with an X shape.

Place a mini marshmallow or small object into the spoon and use the springing motion of the catapult to fling the object away from you.

Don't aim towards anyone! How far can your marshmallow fly??

**Vocabulary:** catapult (something that hurls things through the air), fulcrum (the point where a lever rests or turns), kinetic energy (moving energy), lever (a bar used to lift an object), load (a thing that is carried-your marshmallow)