



## Challenger's Morning Science Segment:

September 28, 2015

**Topic:** Potential and Kinetic Energy

**Build:** Popsicle Stick Chain Reaction

**Credit:** <http://www.stevespanglerscience.com/lab/experiments/popsicle-stick-chain-reaction/>

### Materials Needed:

Lots and lots of Popsicle Sticks, and safety glasses (recommended)

**Building a popsicle stick chain** – Lay two popsicle sticks in an “X” on top of one another. Then close the “X” to make two acute angles. Add one end of a third stick underneath one end of the lowest stick of the original X. This third stick will overlap the top stick of the original “X.” Next add a fourth stick under the end of the top stick of the original “X” and over the third stick. Continue for as long as you have popsicle sticks! Go across the room, down the hall and even out the door. Use your final stick to connect both ends of the “X” and hold your weave in place. When you are ready, pull that final stick and watch the weave fly!!!

**The science** [<http://www.stevespanglerscience.com/lab/experiments/popsicle-stick-chain-reaction/>]

“The key to the Popsicle Chain Reaction comes from potential and kinetic energy. As you weave the popsicle sticks together, you are continually building potential energy. Each popsicle stick is bent over the stick before it and pinned under the stick before that, creating tension in the wood. When you finally have the chain length that you want, you let go and all of the tension and potential energy is released in a chain reaction of kinetic energy!”

**This activity ties into the Challenger Learning Center of Maine:** We have LOTS of engineering challenges and even some with potential/kinetic energy! Join us for Catapult week—Nov 12-14, 2015!

We will explore the transfer of energy with the fun of catapults big and small. Nov 12- Family Engineering Night, Nov 13- Homeschool day, Nov 14- Girl Scout and Boy Scout day. FMI-

[www.astronaut.org](http://www.astronaut.org)