Age: 6+

Q is for... Q-Tip Launcher

Experiment: Q-Tip Launcher

Materials needed:
- 4 popsicle sticks
- 2 Buttons
- 1 Rubber Bands
- Paint
- Plastic straw
- Glue Gun * Parental help required for the glue gun.
- Scissors
- Q-tips

Instructions:
1) Paint the popsicle sticks. You can paint them the same color or all different colors
2) Glue 2 popsicle sticks together (on top of the other) with the glue gun. Next glue 2 other popsicles stick together. By gluing them together you will make the structure stronger
3) Next, you are going to make the crossbar. Grab one the set of popsicle sticks and place it perpendicular to the other stick and about ¼ of the way from the top. Glue to secure it in place
4) Next glue the buttons on both sides of the crossbar about 2in from each end (make sure the crossbar is on the bottom of the structure)
5) Cut your straw about 4in in length
6) Glue the piece of straw to the top of the launcher (not on the crossbar) [see image above]
7) Wait for the straw and buttons to completely dry

8) Next, grab the rubber band and wrap it around the end of the crossbar & the button. Repeat on the other side. Pull the middle of the rubber band to the end of the popsicle stick to anchor it (the popsicle stick on top with the straw)
9) Grab a Q-tip and start launching

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Career Exploration:

Mechanical Engineer: An engineer designs and builds complex products, machines, and system. A mechanical engineer works with how things are made and how machines operate. They also design and builds complex products, machines, and systems. Mechanical engineers also help with the invention of many machines, including the early inventions of simple machines like the wheel and axle.

Computer Engineering: Computer hardware engineers research, design, develop, and test computer systems and components such as circuit boards. Computer hardware engineers research, design, develop, and

test computer systems and components such as processors, circuit boards, memory devices, networks, and routers.

Chemical Engineer: Chemical engineers use chemistry, biology, physics, and math to solve problems that involve the production or use of chemicals, fuel, drugs, food, and many other products. They design processes and equipment for large-scale manufacturing, plan and test production methods and byproducts treatment, and direct facility operations.

Biomedical Engineering: Biomedical engineers combine engineering principles with medical and biological sciences to design and create equipment, devices, computer systems, and software used in healthcare.

Civil Engineer: Civil engineers conceive, design, build, supervise, operate, construct and maintain infrastructure projects and systems in the public and private sector. This includes roads, buildings, dams, and bridges.

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