



Lisa Guida, M. Ed, Director of Education
lguida@nuclearmuseum.org



Rise of the Drones

Drone Science with Popsicle Sticks

Key Concepts

Forces

Materials

- 2 jumbo Popsicle sticks
- Kitchen sponge
- Marker
- Stapler
- 4 mini Popsicle sticks
- Round color stickers
- Rectangular color stickers

To Do

Directions

1. Take two jumbo Popsicle sticks and put them in the form of a “+” sign and staple or glue the center.
2. Place a small rectangular piece of a kitchen sponge on one side of the frame in the center and a small rectangular piece of the sponge on the side of the frame in the center and staple them. [The pad acts like the flight control, which gives the drone instructions. The sponge is like the battery needed by all parts of the drone to work well].



Lisa Guida, M. Ed, Director of Education
lguida@nuclearmuseum.org

3. Place four round stickers for the four motors and place the mini-Popsicle sticks on top of the stickers to act like propellers (blades that spin). [Popsicle sticks on top of these stickers act like the propellers which are blades that spin].
4. Place four rectangular stickers on each side of the frame to represent Electronic Speed Controllers, which connect (use markers) the flight control to the motors, and they control the speed at which each propeller spins. [Newton's Third Law of Motion: for every action, there is an equal and opposite reaction. As the propellers push the air down, an equal force is also created that pushes the air up, resulting in Drones flying upwards].

Keywords

- Drone, Quadcopter, Battery, Flight Control, Motors, Propellers, ESC (Electronic Speed Controllers), Clockwise, Anti-clockwise

Fill in the blank: In a quadcopter, four _____ spins the blades also called _____.