

Let's Fly!

It's time to tinker! Become an engineer by creating your own flying machine.

Big Idea

Students will investigate different strategies to create paper airplanes and determine which paper, launch type, and fold is most effective.

Standards

<p>11.A.ECc Plan and carry out simple investigations</p>	<p>Students will plan the construction of their paper airplane and test the airplane to see if they can get it to fly a targeted distance.</p>
<p>12.D.ECb Explore the effect of force on objects in and outside the early childhood environment</p>	<p>Students will try different strategies or techniques to see if different ways of throwing or launching the plane cause it to fly more effectively.</p>
<p>25.A.ECd Investigate and participate in activities using visual arts materials</p>	<p>Students will decorate and design their paper airplane using various art materials or papers.</p>

Materials

- Paper airplane launcher
- Markers, pencils and other writing and coloring utensils
- Various types of paper

Setup

Lay out all paper and coloring utensils for students to choose from, and set up an open area for students to test out their paper airplanes once they have finished creating.

Directions

1. First, students should plan out their airplane and think of different strategies to create one they believe will fly the farthest. Various folding techniques should be displayed to children so they can choose the one they believe to be the most effective. Students can test out different papers as well, investigating whether the weight or malleability of the paper helps its flight-path. Students should also be encouraged to decorate their airplanes to keep track of which is theirs.
2. Here is one method for folding a paper airplane:
 - a. Take paper and fold it in half long-ways.
 - b. Open and fold both top corners into the middle.
 - c. Take the slanted edges and fold the into the middle again.
 - d. Fold the entire airplane in half again along the original fold.

- e. Fold down each wing.
3. Students can also invent their own method for folding their airplane.
4. Students should then take their airplanes and test them out at the launch site, making note of what they notice with the different types of paper and the different throwing or folding techniques. Encourage students to return to their designs and adjust their airplanes after testing to see if they can solve any identified problems.

Investigation Questions:

- Why do you think your airplane flew so far?
- How do you think you could get your airplane to fly further?
- What are you noticing about the different types of paper?
- Which paper is working the best/worst?
- What are you noticing about the way you should fold the airplane?
- Is there a fold that works best?