

Materials Needed:

- Several sheets of paper (copy paper, construction paper)
 - Markers or crayons
 - An open space (indoors or outdoors)
 - Optional: A small electric fan
 - Optional: Tape
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Let's Be Wind Detectives!

Have you ever wondered why paper airplanes sometimes fly straight and sometimes wiggle or even fly backward? It's often because of something invisible called **wind**! Wind is just air moving around. Today, we're going to be Earth Scientists and investigate how wind affects our amazing paper airplanes.

Activity 1: Airplane Engineers

First, let's build our airplanes! Fold at least two different paper airplanes. You can use different types of paper or different designs if you like. Use your markers or crayons to decorate them!

Activity 2: Test Flights - Calm Skies

Find a clear space indoors where there isn't much air moving. Gently throw your first airplane. Watch how it flies. Does it go straight? Does it curve? Try throwing it a few times. Do the same with your second airplane. Talk about how they flew. Was one design better?

What is Wind?

Even though we can't usually see air, it's all around us! When that air starts moving from one place to another, we call it **wind**. Wind can be very gentle, like a soft breeze, or very strong, like during a storm. Wind is part of Earth's weather, and it can push things like leaves, flags, sailboats, and... paper airplanes!

Activity 3: Test Flights - Windy Conditions!

Now, let's see what happens when we add some wind!

Option 1 (Indoor Wind): If you have a fan, ask a grown-up to help you set it up on a low setting at one end of your open space.

- First, try throwing your airplanes *towards* the fan. What happens? Do they fly farther? Shorter? Do they wobble?
- Next, carefully stand near the fan (not too close!) and throw your airplanes *away* from the fan, so the wind is pushing them from behind. What happens now? Do they fly farther? Straighter?

Option 2 (Outdoor Wind): If you can go outside, find an open space. Can you feel the wind? Which way are leaves or flags blowing? That's the wind direction!

- Try throwing your airplanes *into* the wind (facing the direction the wind is coming from). How do

they fly?

- Now, turn around and throw your airplanes *with* the wind (letting the wind push them from behind). How is their flight different?

Discussion: What Did We Discover?

Let's talk about our experiments!

- What happened when the airplanes flew into the wind?
- What happened when the airplanes flew with the wind behind them?
- Did the wind make the airplanes harder or easier to fly? Why do you think that is?
- Did your different airplane designs behave differently in the wind?

We learned that wind (moving air) can push our paper airplanes and change how they fly! Real pilots have to understand wind to fly big airplanes safely. Understanding wind is an important part of Earth Science!