

# STEM Challenge MMXXI

MAKE:

## Up Up and Away! Paper Airplanes

**CHALLENGE:** Follow the instructions to create a paper airplane. How far can your paper airplane fly? Try adding paper clips onto the front, back, or wings of your airplane. Does adding weight to the plane slow it down or make it go further?

**BIG IDEA:** Did you know that airplanes lift off the ground using what is known as the Bernoulli Principle? Yes, an aircraft can achieve lift because of the shape of its wings. They are shaped so that the air flows faster over the top of the wing and slower underneath. There can be up to nine different wing shapes on airplanes.

### Materials:

**8x10 piece of paper**  
**Crayons (optional)**  
**Paperclips (optional)**

### INSTRUCTIONS:

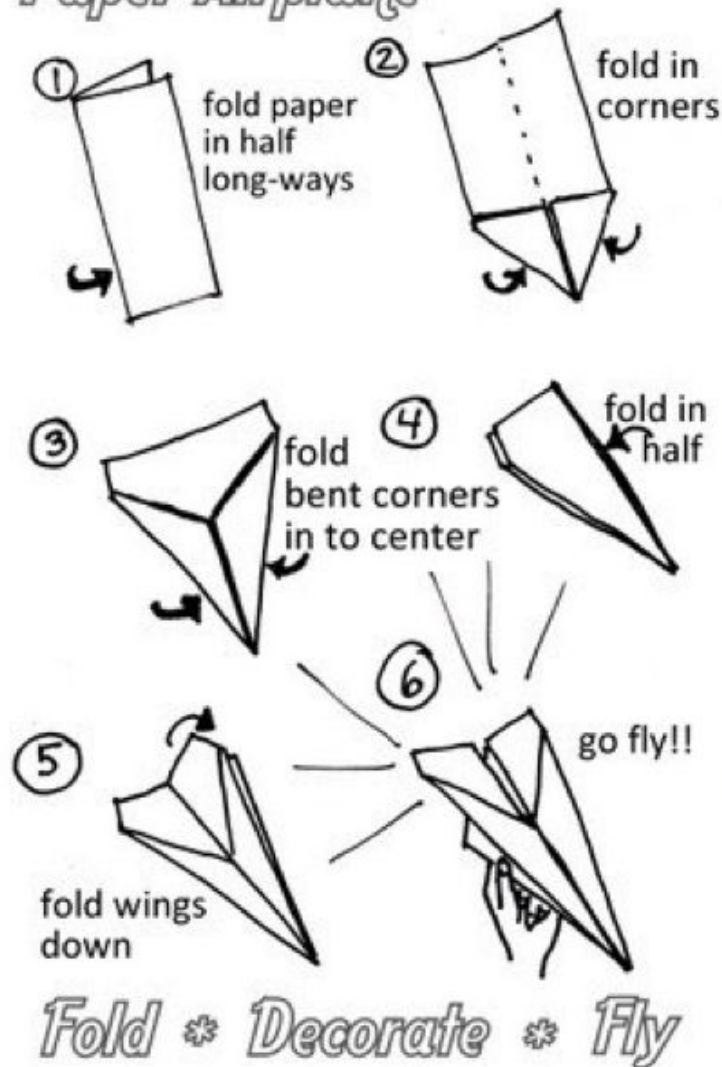
1. Take your paper and fold it in half long ways (so the long sides touch one another).
2. Open your paper and you now have a centerline. Folding down from a short side, fold both corners into the middle, creating 45 degree angles. You will now have one triangular end.
3. Take the slanted sides and fold them into the middle, so that what were the 45 degree angles are folded in to meet in the middle on that center line.
4. Now fold your plane together on that center line.
5. Fold down each wing – the slanted edges should fold down to meet the straight middle fold.

### Want to know more?

<https://www.boeing.com/features/2016/02/the-art-of-flight-02-16.page> (Big kids and paper airplane fun)

<https://www.foldnfly.com/#/1-1-1-1-1-1-1-1-2> (paper airplane designs)

# Paper Airplane creativewithkids.com



## WE WANT TO SEE & SHARE YOUR CREATIONS!

Send us a picture or video by May 3, 2021 and be entered into a drawing for a gift card! Four ways to share:

1. Use this google form and we'll show off your creation. [Submit Here \(tinyurl.com/STLsubmit\)](https://tinyurl.com/STLsubmit)
2. Email to [schoolpartnership@wustl.edu](mailto:schoolpartnership@wustl.edu)
3. Text us at **314-285-9663**
4. Tweet us using the hashtag **#aBitofSTEM**

For more challenges visit: [STEMchallenges.wustl.edu](https://STEMchallenges.wustl.edu)