

# The Paper Airplane STEM Challenge!

The challenge this week, we will fold and adjust planes to try and make them fly as far as possible. Watch the videos to become an expert plane folder and learn about the forces that make your plane SOAR!

John Collins (the guy in the 1st video below who folded the World Record plane) says that people think they don't know how to fold a good paper airplane, but they are WRONG. They just don't know how to ADJUST a paper airplane! The second link contains some background information on the science of paper airplanes, and the third link contains 5 challenging designs.

- **The Challenge: Build a paper airplane that flies as far as possible!**
  - Collect materials:
    - Paper – regular boring copy paper is usually the best, but experiment with any kind of paper
    - Measuring tape
  - Fold a paper airplane!
    - Use the videos OR fold your own design
    - Remember that folding paper airplanes can be tricky. Go slow and make sure you line edges up carefully!
  - TEST:
    - Set up your measuring tape.
    - Make a chart to track your data. Include a column for:
      - Distance
      - Observations
      - Change
    - Throw your plane!
    - Observe flight – Does it fly straight? Does it curve up or down? Does it spin? Write it down on your chart.
    - Measure distance and record on your chart
    - Make a change! (refold, flatten, bend a wing, add a paperclip, fix a crease, change how you throw, etc.)
    - REPEAT – Continue to improve your airplane to maximize your distance.
  
- If you want to, fold another plane!

<https://youtu.be/3BNg4fDJC8A>

[https://www.youtube.com/watch?time\\_continue=18&v=OwQ20jn\\_umU&feature=emb\\_title](https://www.youtube.com/watch?time_continue=18&v=OwQ20jn_umU&feature=emb_title)

[https://www.youtube.com/watch?time\\_continue=14&v=JhYZy1ugl3Q&feature=emb\\_logo](https://www.youtube.com/watch?time_continue=14&v=JhYZy1ugl3Q&feature=emb_logo)