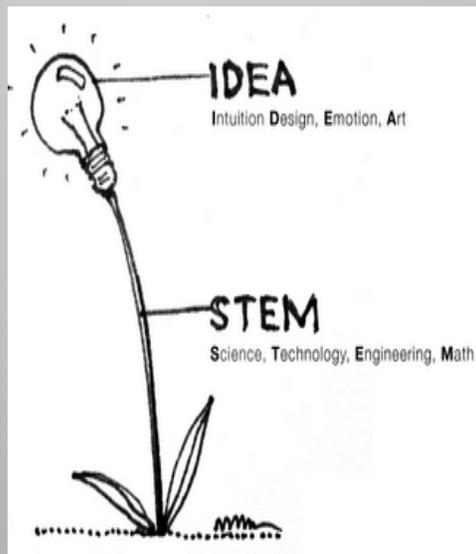


# S.T.E.M. Newsletter

March



Dear STEM enthusiasts,

Monthly DIY challenges have created design, materials, and mechanical engineers as well as computer scientists and chemists out of our youngsters. This month, students are encouraged to become aeronautical engineers as they work through the Engineering Design Process to create a paper airplane that can either perform stunts or one that is designed for distance. Submissions are due on Friday, March 27<sup>th</sup>. This challenge was inspired by the Wright Brothers. Check out the museum in NC or learn more virtually by checking out [www.nps.gov/wrbr/index.htm](http://www.nps.gov/wrbr/index.htm)

The U.S. Department of Commerce: Economics and Statistics Administration division wrote an interesting article about STEM education and employment statistics called, "STEM: Good Jobs Now and for the Future." It can be found at [https://www.commerce.gov/sites/default/files/migrated/reports/stemfinaljuly14\\_1.pdf](https://www.commerce.gov/sites/default/files/migrated/reports/stemfinaljuly14_1.pdf)

Finally, if you can serve as an expert in any STEM related field and would be interested in collaborating with teachers and/or students at JPS, please email [jessica.krachenfels@am.dodea.edu](mailto:jessica.krachenfels@am.dodea.edu). Working together, we can help make our curriculum come alive!

## DIY Challenge

This month's challenge is to design and create a **paper airplane**. You can create a plane that is designed for stunts (tricks) or create a plane that is designed for distance.

### Guidelines:

- 1) Your paper airplane can only be made up of ONE 8 ½ x 11in white copy paper. You can add color to it using markers/colored pencils/crayons, but cannot add other materials.
- 2) Along with your paper airplane, you will need to submit your PLAN (drawing/sketch).
- 3) Write the definitions or draw a picture representing the forces that affect flight: thrust, lift, weight, and drag. \*Think about these forces when designing your paper airplane!\*

**Deadline for Participation  
Friday, March 27<sup>th</sup>**

Need ideas? Check out...

- <https://www.youtube.com/watch?v=j3ISnUYW9FA>
- <http://www.bestpaperairplanes.com/>
- <http://www.funpaperairplanes.com/>
- <http://www.2020site.org/templates/Free-Paper-Airplane-Templates.html>
- <https://howthingsfly.si.edu/forces-flight/four-forces>

## Resource List for the Month



Mr. Parr- Mr. Parr's YouTube science videos break down complex topics into exciting parodies that include lyrics! This content is mostly above grade-level, but may still be of interest to students as a means of exposure to content.

<https://www.youtube.com/user/ParrMr>



Study Jams- Need help explaining science and math concepts? Let the Study Jams crew help you. These short videos cover a wide variety of topics, incorporate key vocabulary, and have an opportunity for students to test themselves. Not to mention that some videos have karaoke!

<http://studyjams.scholastic.com/studyjams/index.htm>



Science Max: All Kinds of Flight- Students can explore science concepts through Science Max experiments.

<https://video.search.yahoo.com/search/video?fr=mcafee&p=science+max+flight#id=1&vid=42dd1cc66db508f14dd80fa5bdb2596f&action=click>

## Contact Information

If you'd like more information about S.T.E.M. initiatives and/or want to get involved, email: [jessica.krachenfels@dodea.edu](mailto:jessica.krachenfels@dodea.edu)