**Navy Elementary**
**STEAM Day & Fair**

## *Into Space and Beyond!*

**March 18, 2019**
**Student Information Packet**

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# Important Dates:

- Wednesday, January 9, 2019: Online Registration opens

- Friday, January 25, 2019: Online Registration closes

- February 4: Project & team info form

- Open feedback sessions (2)

    o Dates TDB (tentatively planned for mid-February and early March)

    o Registered participants will be notified of session dates via email from STEAM Fair coordinators

- Sunday, March 17, 2019: Set up project at school

- Monday, March 18, 2019: STEAM Day at Navy!

    o Project drop off/setup: 8:15am-8:45am

    o Present your project to a judge during school

    o All classes visit STEAM presentations by professionals in our community

    o Class walk-throughs of student projects

    o Family viewing of STEAM Fair projects

    o Take home projects at end of school day

# General Information

## Welcome to the 2019 Navy STEAM Fair!

Congratulations on signing up to participate in the 2019 Navy STEAM Fair! We are excited to see your ideas get designed, tested and developed. We hope to see the many areas of STEAM explored by our Navy students. What are you going to explore?

## STEAM Fair Theme: *Into Space and Beyond!*

New this year! In honor of NASA's 60th anniversary (October 2018) and the ongoing 50th anniversary of the Apollo moon missions we are introducing a theme to this year's STEAM Fair: *Into Space and Beyond!* In NASA's 60 years, we have sent explorers--human and robot--into space. Some have even made it to the outer reaches of our solar system. This year, the STEAM Fair asks: what will the next 60 years look like for space exploration? Where will we go? How will we get there? What will we need? What will we see and do?

Topics selected for a Navy STEAM Fair Project <u>must</u> tie in to the theme above through one or more of the STEAM fields: Science, Technology, Engineering, Arts, and Math. It can answer a big or small question and relate back to the questions presented above.

A Navy STEAM Fair Project can be

- a science experiment or demonstration
- an invention or functional item designed to solve a problem (engineering design)
- a model or collection related to the theme
- an artistic representation (painting, sculpture, poem, story, music, etc)

Each project should be carefully planned out with a good amount of background research to help you work through your project. Along the way, you can meet with Navy teachers during special, optional feedback sessions to go over your progress. At the end of your project, you will put together a display to show off your work and discoveries.

Please see the corresponding project guide for each of these types and decide which type of project you want to do.

## Project Teams

Work on your project independently, work with a partner, or work with a team—it's your choice!

All participants must be current Navy Elementary students.

Partner or team members can come from different classes or grades. Maximum team size is four.

## Note to Parents

We are excited to see your child enter our school's STEAM Fair! Our STEAM Fair has had many successful years at Navy and we are excited to expand the idea of innovation, design and testing to all topics STEAM – Science, Technology, Engineering, Arts, and Math and connect these concepts to our theme: *Into Space and Beyond!*

The STEAM Fair is an opportunity for your child to problem-solve and learn by doing. We hope you will encourage and guide them through the project process. But please encourage your child to do most, if not all, of the work. The final project should be a reflection of your child's individual work and effort. Keep in mind that the main goal of the STEAM Fair is to encourage creativity and curiosity in your child!

## Questions?

Please contact Patricia Kruep (pkruep@gmail.com) or Uzma Geloo (uzma.geloo@gmail.com) with questions.

# FCPS Project Guidelines

All projects must fall within Fairfax County Public School guidelines and restrictions for science projects. Projects that do not follow the guidelines may be disqualified from receiving a commendation.
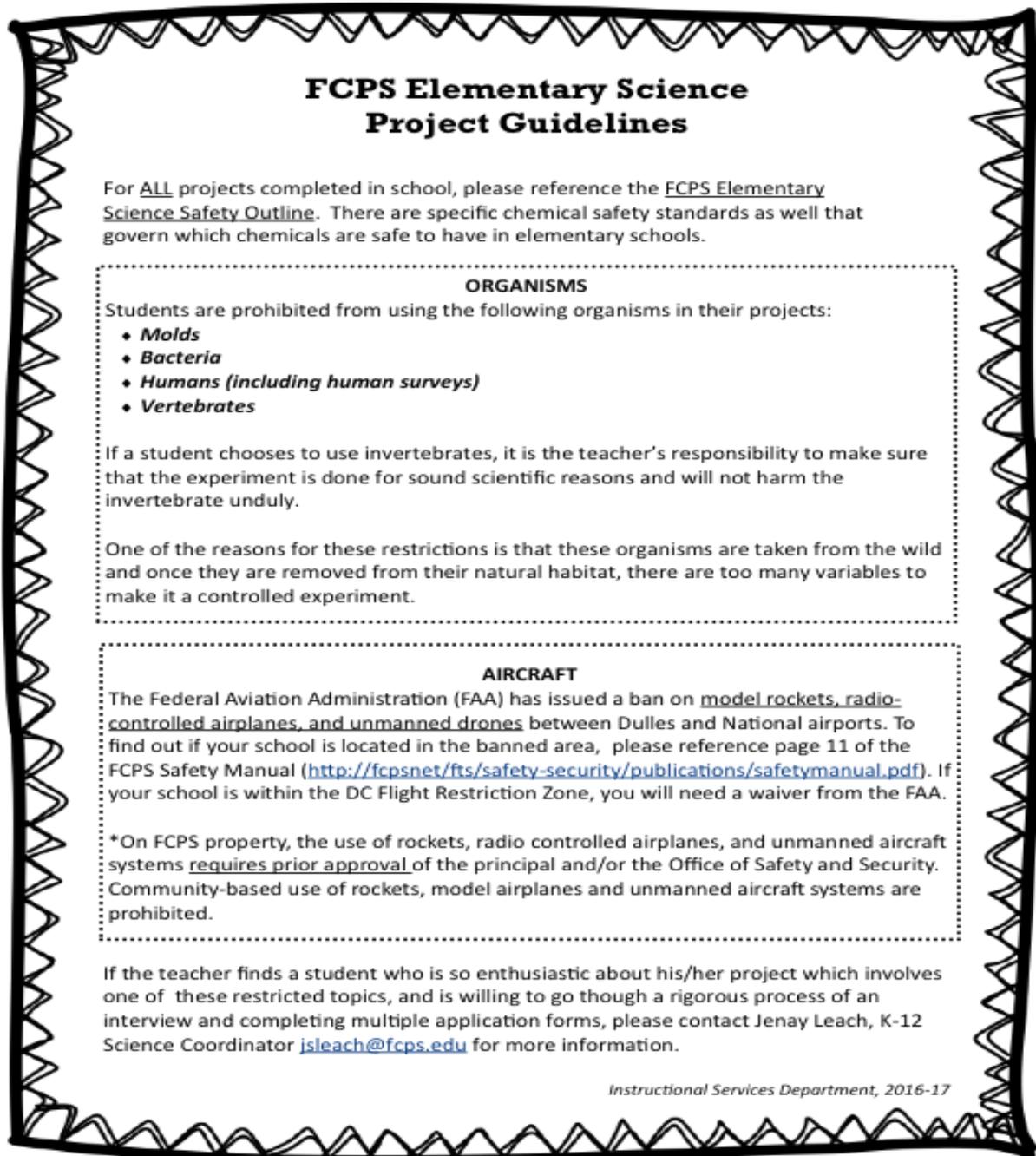
## FCPS Elementary Science Project Guidelines

For ALL projects completed in school, please reference the FCPS Elementary Science Safety Outline. There are specific chemical safety standards as well that govern which chemicals are safe to have in elementary schools.

### ORGANISMS

Students are prohibited from using the following organisms in their projects:

- **Molds**
- **Bacteria**
- **Humans (including human surveys)**
- **Vertebrates**

If a student chooses to use invertebrates, it is the teacher's responsibility to make sure that the experiment is done for sound scientific reasons and will not harm the invertebrate unduly.

One of the reasons for these restrictions is that these organisms are taken from the wild and once they are removed from their natural habitat, there are too many variables to make it a controlled experiment.

### AIRCRAFT

The Federal Aviation Administration (FAA) has issued a ban on model rockets, radio-controlled airplanes, and unmanned drones between Dulles and National airports. To find out if your school is located in the banned area, please reference page 11 of the FCPS Safety Manual (http://fcpsnet/fts/safety-security/publications/safetymanual.pdf). If your school is within the DC Flight Restriction Zone, you will need a waiver from the FAA.

*On FCPS property, the use of rockets, radio controlled airplanes, and unmanned aircraft systems requires prior approval of the principal and/or the Office of Safety and Security. Community-based use of rockets, model airplanes and unmanned aircraft systems are prohibited.

If the teacher finds a student who is so enthusiastic about his/her project which involves one of these restricted topics, and is willing to go though a rigorous process of an interview and completing multiple application forms, please contact Jenay Leach, K-12 Science Coordinator jsleach@fcps.edu for more information.

*Instructional Services Department, 2016-17*

# Important Display Information

Each project will be given a table assignment when students come to set up their project display boards. All exhibit materials must fit on the table in the space right in front of the display board. Table space available for projects is approximately one quarter of a 6 foot x 3 foot folding table. There will be no access to electricity or additional space available to any student. If your project required access to electricity or the materials used are bigger than the space provided, you should consider displaying pictures, videos or a slideshow of your experiment or design. No exceptions will be made. If using electronics (laptops, tablets, etc,) as part of your display, make sure the device is fully charged and bring the device with you when it's time to present your project. In other words, don't leave valuable items unattended.

# Day-of-Presentation Information

Each student participant will present his or her project to a STEAM Fair Judge on the morning of March 18th, 2019. Judges are comprised of Navy science teachers, scientists and engineers in our community, and parent volunteers with a STEAM background. You should be ready to give a brief overview of your project to the Judge. Then you will be asked a few questions by the Judge!  Remember that the judges have a limited amount of time to read and discuss each project with students.  Students should use this valuable time to confidently share and explain their project, model or experiment with the judges. Parents - remind your child to speak clearly and proudly about all their hard work!

Here are examples of questions you might be asked by a Judge:

● How did you get the idea for your project? What was your inspiration?

● What were you trying to find out or solve when you did your experiment?

● Was there anything that surprised you after you did your experiment?

● Explain how you did your experiment.

● What did you like best about doing your science project?

● If you did the same project again next year what would you change or do differently?

● Were the results of the experiment how you guessed they would be? If not, what surprised you the most?

Navy classes will walk through to view all the projects displayed after judging is over. Families are invited to view all projects during family time in the afternoon.