



Discovering the Pilot in YOU!

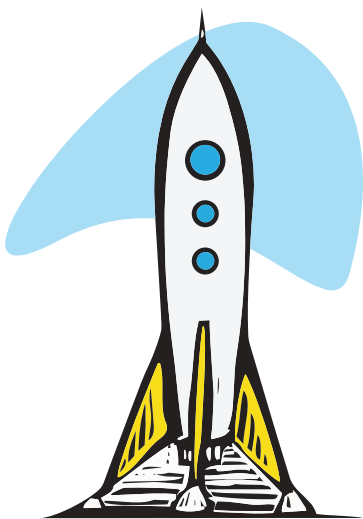
Aerospace

4-H Science, Engineering and Technology Project Overview

Explore the wonder of flight! In Aerospace, you will have fun while learning about things that fly and all things connected to flying. This project is full of hands-on activities in which you fly your own creations. Who knows, this project may be the first step to a career in aviation! The following are examples of types of activities that should be included in your 4-H Aerospace Project. Use these as a guide for your project completion.

Objectives

- Gain knowledge of gravity, forces of flight and the varieties of clouds.
- Learn about the Laws of Motion and how they relate to flight.
- Relate skills learned to job and career opportunities.



Starting Out

- Gather information about different types of planes, and make a poster to display at your school.
- Create and fly a paper airplane.
- Build and fly a diamond kite.
- Make different types of clouds with cotton balls.
- Learn about the center of gravity with the butterfly activity.
- Calculate your weight on different planets.
- Invite a local pilot or air traffic controller to speak about his job.

Moving Forward

- Create a poster on how weather affects flying.
- Build and fly a box kite.
- Demonstrate the forces of flight: gravity, lift, drag and thrust.
- Make a model of a hot air balloon.
- Build a balloon rocket.
- Create a model airplane.
- Create a control panel of an airplane.
- Take a trip to the local airport to see the different jobs and activities necessary to keep people flying.

Digging Deeper

- What is life like at an airport over a 24-hour time period? Make a video to tell the story.
- Learn about airplane mechanics and what they need to know for their job.
- Research and create a speech on NASA and the job of an astronaut.
- Research and create a speech on what it takes to become a pilot.
- Build two types of rockets and hold a rocket workshop.
- Build and fly a helicopter.
- Demonstrate and share your knowledge on aerospace with younger children.

Character Soars

In Aerospace we learn about what it is like to soar but to really soar in life you must be true to yourself. Look at the elements of Character Education below and the ideas for how you can model good character in your project work.

Trustworthiness	Be credible and reliable. If you are volunteering to do a talk or host a workshop, make sure you can be counted on to be there and be prepared.
Respect	Treat others as you would like to be treated. Listen when others are speaking.
Responsibility	Set a good example to others, and have good work habits.
Fairness	Accept the differences in others. Share equipment whenever possible.
Caring	Encourage others to try new learning experiences, and express gratitude to people who help you.
Citizenship	Use your project to serve others by participating in leadership or service opportunities (see below).

Leadership Opportunities

- Demonstrate and share your knowledge with younger children or older adults.
- Serve as a project helper to younger youth by helping them set goals and encouraging them to complete them.
- Host a day camp or workshop on aerospace for younger students or be a counselor at a Louisiana Outdoor Science and Technology (LOST) Camp.
- Start an aerospace project club in your parish.
- Work with a school Veterans Day program to honor air force veterans.

Service Opportunities

- Check with the local airport to see if you can assist with planting flowers to welcome visitors or by cleaning an area of the airport.
- Give others tips on how to fly smoothly and make it through airports.
- Ask a local hospital if they need help organizing supplies for "life flights."
- Create a model airplane display for showcase at an airport, library, museum or nursing home.
- Help organize an educational neighborhood aerospace day, and fly kites.

Career Possibilities

Pilot	Aircraft technician	Computer scientist	Quality control inspector
Flight attendant	Physical scientist	Mathematician	Project manager
Air traffic controller	Life scientist	System analyst	Flight planner
Engineer – all types	Social scientist	Business manager	Aircraft inspector



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Pub. 3512 (500) 6/16

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