



AEROSPACE



WHAT'S IT ALL ABOUT?

Think about the excitement that accompanies dreams of sending a rocket into space, making a first solo flight, becoming an astronaut or someday visiting other planets. In the aerospace project, you will enjoy learning more about your dreams through hands-on experiences. Members can explore their fascination with flying an airplane, launching a rocket, conquering space and becoming an astronaut or pilot with this project.

HERE'S WHAT YOU CAN LEARN...

STARTING OUT

- ✿ Make paper airplanes
- ✿ Identify different types of aircraft
- ✿ Learn how weather affects flying
- ✿ Learn star constellations and their stories

LEARNING MORE

- ✿ Make and launch model rockets
- ✿ Learn the forces that act on a rocket and experiment with roll, pitch, and yaw
- ✿ Build a balloon shuttle
- ✿ Use your investigation skills to discover the principles of flight, rocketry, and astronomy
- ✿ Design your own experiment and enter your results in science and technology fairs

GOING FURTHER

- ✿ Use engineering principles to design your own air and space crafts
- ✿ Construct an altitude tracker
- ✿ Learn pilot certification requirements
- ✿ Learn about airport issues in your county or across Wyoming
- ✿ Learn the science behind science fiction

RESOURCES

- ✿ *Pre-Flight, Level 1* (06842)
- ✿ *Lift Off, Level 2* (06843)
- ✿ *Reaching New Heights, Level 3* (06844)

- ✿ *Pilot in Command, Level 4* (06845)
- ✿ *Aerospace Adventures Helper's Guide* (06846)

TAKE AEROSPACE FURTHER!

- ✿ Attend a star-gazing program at a planetarium
- ✿ Explore an aerospace career using online resources
- ✿ Shadow an airline employee for one day
- ✿ Attend an aerospace event or camp
- ✿ Visit a local airport and have a pilot and/or mechanic talk about flying
- ✿ Look for opportunities to take the ground school portion of a flight training class
- ✿ Visit with an aircraft maintenance engineer to learn about aircraft maintenance
- ✿ Take a flight with a flight instructor

ENHANCE YOUR COMMUNICATION SKILLS

Do a presentation about life on the International Space Station

Demonstrate what it takes to build a model airplane

Compare paper airplanes, how to make them and how they work

Demonstrate glider flight capabilities

Interview a pilot

GET INVOLVED IN CITIZENSHIP AND SERVICE

Organize a rocket launch

Organize a kite-flying contest

Volunteer at an airport or airshow

Create a model airplane display for a showcase at a public location like an airport, library, museum, nursing home

LEARN ABOUT LEADERSHIP

Teach younger kids to make model rockets

Bring your club to the local airport to learn more about airplanes and pilots

Lead a star-gazing session at an evening workshop or overnight camp

EXHIBIT IDEAS

- ✿ Make a poster on parts of an airplane/rocket and their functions
- ✿ Create a display on the types of aircraft and what they are used for
- ✿ Make a poster about the forces that act on an airplane or a rocket
- ✿ Chart the moon and make a display about how the moon affects the earth
- ✿ Make a poster about constellations and when you can see them
- ✿ Exhibit a model rocket you built from a kit
- ✿ Exhibit a model rocket you built from your own design
- ✿ Demonstrate how weather affects flying
- ✿ Create a display comparing birds and airplanes
- ✿ Create a typical pilot's log and explain why it's important
- ✿ Demonstrate kite flying aerodynamics
- ✿ Research hot air balloons and how they work
- ✿ Engineer a model glider and create a display of your engineering process and outcomes
- ✿ Build a model airplane from a kit or your own design
- ✿ Create a poster with pictures of places you've visited, your first plane ride, programs you've participated in, types of planes, etc.
- ✿ Build a model (helicopter, etc.)
- ✿ Design, make, and display your own paper airplanes
- ✿ Design and build a kite from a kit
- ✿ Design and build a kite on your own without using a kit
- ✿ Make a model of the cockpit of an airplane. Build and fly a remote control airplane

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