



Redbird STEM Lab at EAA AirVenture – July 24 – 29, 2017
Redbird Flight Simulations Exhibit – Booth Space 304

[Click here to register.](#)

Aerodynamics and Airplanes (9th – 12th Grade)

Learning Objective: For students to understand why airplanes can do certain things and why they can't do others.

Description: A higher level discussion of the physics of flight.

Aeronautical Decision Making

Learning Objective: Understand the ramifications of the choices they make.

Description: Every successful flight begins and ends with good decision making. Students will learn a decision-making matrix that will help them make better choices not just in the airplane, but in life.

Airport Ops and Traffic Patterns

Learning Objective: Students will understand the organized the ballet on and around the airport.

Description: Airport safety is a high priority for everyone in aviation. This mini course will teach students the basics of the flow on the ground and in the air on and above airports.

Airspace, Nav Basics, Charts

Learning Objective: Students will understand the segments of our nation's airspace, how to navigate between and through them by using aeronautical charts.

Description: Ever heard of a "highway in the sky"? Did you also know those highways include on ramps, off ramps, high-speed lanes, and traffic cops?

Aviation Weather Topics

Learning Objective: Students will understand the type of weather they will fly through, around, **or not**.

Description: One of the atmospheric constants is change. See what weather is flyable and what weather is not.

Communications 101

Learning Objective: For students to understand the importance of clear and concise aircraft communications.

Description: What is one of the more challenging things for student pilots to learn? It may surprise you to know it is talking and, more importantly, *listening!*

Form and Function – Aircraft Design

Learning Objective: To understand why airplanes look different.

Description: Aircraft are built for particular missions. Learn why certain aircraft look so much different than other aircraft.

Intro to Flight and Aviation

Learning Objective: To understand the benefits of becoming a pilot.

Description: Why should someone learn how to fly? This class will provide answers.

Instrument Flying

Learning Objective: Students will understand the principles involved in instrument flight.

Description: Is flying an airplane different when you can't see the ground? YES! Flying in IMC requires a different skill set than fair weather flying. It also requires an additional rating. Come see why!

Navigation – Which way? How far? How long?

Learning Objective: Students will understand the basics of air travel from A to B.

Description: You've learned how to fly an airplane. Congratulations! Now, how do you go places beyond the traffic pattern?

Stalls – The Wing is the Thing

Learning Objective: To understand why an aircraft wing allows an airplane to fly – **OR NOT!**

Description: For students to see the relationship between the shape of an airfoil and the atmospheric conditions necessary for flight.

Weather Basics

Learning Objective: Students will understand the genesis of all weather on the planet.

Description: Where does our weather come from? What types of weather do we have? And what are our weather considerations when flying?

Weight & Balance and Aircraft Performance (9th – 12th Grade Level)

Learning Objective: Students will understand why there are limits to aircraft weight and its center of gravity.

Description: Ever wonder why more people don't fly with grand pianos? Find out why weight is important, but where we put it can be even more critical.