



## 12th Grade Aviation STEM Curriculum Materials – Semester 1: PILOT

### Unit 1 - Advanced Aviation

**Lesson 1.A.2 Attitude Instrument Flying, Lesson 1.A.5 Flying on Instruments, and Lesson 1.B.1 What is a Commercial Pilot Certificate?**

#### **Flight Simulation Activity**

- Computer with flight simulation software or flight simulator
- Joystick or yoke
- Optional: Throttle quadrant, rudder pedals, additional monitors

**Lesson 1.A.4 Getting Down With Approaches**

#### **Flight Simulation Activity**

- A flight simulator capable of producing a reduced- or zero-visibility condition

**Lesson 1.C.2 Understanding Advanced Systems**

#### **Group Activity**

- 1 Internet-connected computer or mobile device (per group)
- Access to a printer
- 1 two-pocket folder (per student)
- Craft supplies (per group): e.g.,
- 1 poster board
- 1 bottle of glue
- 1 set of colored markers
- Additional materials as needed

## **Unit 2 - The Future of Aviation**

### **Lesson 2.B.1 Aviation Innovations Big and Small**

- Post-it Notes (5-10 per student)

## **Unit 3 - The Business of Aviation**

### **Lesson 3.A.1 Aviation Business Entrepreneurs**

- Flip chart or poster board
- Flip chart markers (assorted colors)

## **Unit 4 - Aviation Research Projects**

### **Lesson 4.A.1 Choosing a Research Topic**

#### **Choosing a Research Topic Activity (per student)**

If creating a physical (print) research portfolio:

- 1 three-ring binder
- 1 folder
- 1 packet of dividers

### **Lesson 4.A.4 Literature Review**

#### **Student Activity 1**

- Envelopes
- Clear tape

*For many lessons, an internet-connected computer or mobile device is also required.*