**AVIATOR HONOR REQUIREMENT NAD**

1. Identify, with real aircraft, the five categories of aircraft and the different classes within each category.

a.Airplanes

i. Single-engine, land

ii. Multi-engine land

iii. Single-engine sea

iv. Multi-engine sea

b. Rotor-craft

i. Helicopter

ii. Gyro plane

c. Glider

d. Powered lift

e. Lighter than air

i. Balloon

ii. Airship

2. Be involved in an interactive discussion that explores the following:

a. Bernoulli’s principle and how it applies to airplanes

b. The four forces of flight and how each affects the flight of an airplane.

c. Three types of aircraft and their uses in aviation today.

d. The three principal axes of an airplane. Demonstrate the type of movement the aircraft does on each axis and what controls that movement.

e. Different types of engines, wings, and other gear and their application/usage.

3. Correctly identify on a real plane the following exterior parts of an airplane.

a. Cowling or Nacelle

b. Propeller

c. Landing Gear

d. Wing

e. Flap

f. Right Aileron

g. Left Aileron

h. Fuselage

i. Empennage

j. Horizontal Stabilizer

k. Vertical Stabilizer

l. Elevator

m. Rudder

4. Correctly identify on a real plane the following parts of the interior of an airplane.

a. Altimeter

b. Attitude Indicator

c. Airspeed indicator

d. Magnetic compass

e. Heading Indicator

f. Turn coordinator

g. Vertical Speed indicator

h. Yoke

i. Brakes

j. Rudder Pedals

k. Throttle control

l. Trim Control

5. Choose 3 historical figures in aviation who have had an impact on aviation history. Detail their role and importance in aviation history. Some possible figures include: Leonardo da Vinci, Daniel Bernoulli, Sir George Cayley, Otto Lilienthal, Gustave Whitehead, Octave Chanute, Orville & Wilbur Wright[&](https://wiki.pathfindersonline.org/w/AY_Honors/Aviators/Requirements#cite_note-wright-1), Glen Hammond Curtiss, or Amelia Earhart.

6. Do one of the following:

a. PREFERRED: Take an intro flight in an airplane and observe the different movements made by three different control surfaces. Record your observations.

b. (If an intro flight is not possible) Demonstrate and explain on the ground the different movements made by three different control surfaces. You may do this demonstration on a real aircraft or in a flight simulator.

7. Do one of the following:

a. Interview a mission pilot or missionary who has used airplanes to help tell people about Jesus. As a result of your interview be able to:

i. List three ways God uses mission aviation to spread the gospel, based on the Great Commission of Matthew 28:18-20

ii. List three ways you as a Pathfinder can help our mission pilots

b. Interview a commercial full-time pilot. As a result of your interview be able to:

i. List three ways pilots can share Jesus within their workplace, based on the Great Commission of Matthew 28:18-20

ii. List three ways you as a Pathfinder can share Jesus within a non-church environment. The Wright brothers are one historical character