



COPA **FOR KIDS**

AVIATION PROGRAM

SPONSORED BY:

TRAVELERS 



introduction

Aviation is exciting and vital to our nation's future. The COPA For Kids Aviation Program is a - free of charge - aviation program that puts COPA member pilots together one-on-one with young people between 7 and 17 years of age to show them what aviation is all about and to give them an experience of being in the cockpit of an aircraft in flight. The participants will experience an enjoyable flight that will give them new perspectives on the world and life in general.

Participation in the COPA For Kids Aviation Program will help young people understand that a pilot is simply an ordinary individual with special skills developed through training and practice. The participants will learn the technology and science of flight and be shown the advantages of the hard work required to achieve a pilot's license. Being in the cockpit of a working aircraft in flight will help to de-mystify the art and science of aviation. Many people remember this experience for the rest of their lives. This demonstration flight is completely free.

Participants will experience:

- A chance to examine a working aircraft close up on the ground (static display).
- A short ground school session conducted by a pilot who will explain what the various parts of an aircraft are, what they do and will answer questions about aviation and flying.
- A walk around, preferably conducted on a static display aircraft, to show them how pilots prepare for each flight and to brief them on the safety aspects of their flight.
- A flight in the front seat (if possible) of an aircraft where they will be able to observe all the facets of flight from start-up to take-off to cruising to landing and shut-down. The flying should be conducted one-on-one unless the parent or guardian wishes to accompany the young person and the pilot has room and carrying capacity in his aircraft.

Aviation Program Duration:

- Ground School: about 20 minutes.
- Flight: between 20 and 45 minutes depending on the number of young people to fly, the weather and age of the participant.
- Total experience: 1 ½ to 2 ½ hours, including ground time, registration, and wait time for aircraft and pilots.

WHAT DO I HAVE TO DO TO FLY?

If you are age 7 through 17, you and your parents or guardian should read through this brochure and complete the waiver and registration forms before your flight. Once the form is ready, take it to your COPA For Kids pilot who will prepare you for your demonstration flight. You can ask your pilot as many questions as you like. In doing so, you'll learn more about aircraft and the principles of flight. That's all there is to it. It's really that simple!

DO I NEED TO PREPARE FOR THE FLIGHT?

You don't have to do anything but it would help to read "What are the different parts of an aircraft" on the back. Take a few minutes to find out what makes an aircraft fly and what the different parts of an aircraft do. This will help you to understand the things your pilot will talk about during your flight.

WHO ARE THE PILOTS?

The pilots who are participating in the COPA For Kids Aviation Program are members of COPA who are volunteering their time and aircraft to make your flight possible. (See paragraph about COPA on the next page). Each COPA For Kids pilot is licensed by Transport Canada and all the aircraft utilized are registered by Transport Canada.

IS FLYING SAFE?

Millions of people fly safely in aircraft every day. However, an airport is not a playground. Listen and follow instructions given by your pilot and follow these simple rules when you are around an aircraft:

- Stay away from moving aircraft and especially the propellers.
- Listen carefully for instructions on entering and exiting the aircraft.
 - Do not touch any part of an aircraft inside or outside, without the pilot's permission.
- Stay with your pilot or ground crew at all times.
- Obey the safety instructions given to you in the aircraft by the pilot.



WHAT WILL MY FLIGHT BE LIKE?

First of all, your pilot will explain what you will do and see. This may include:

- Telling you about the aircraft.
- Reviewing an aeronautical chart and identifying reference points you will look for during the flight.
- Completing a careful “walk around” preflight inspection of the aircraft and identifying the parts that control the aircraft.
- Helping you buckle your seat belt and describing the interior of the aircraft, including the instrument panel.

The flight will be conducted according to Canadian Aviation Regulations. In addition, no aerobatic maneuvers will be performed.

WHAT HAPPENS AFTER THE FLIGHT?

Your pilot will retain a record of the flight and will register the flight in the COPA Junior Aviator Logbook.

You can check the COPA for Kids web site Junior Aviator Logbook to find your name: <http://www.copaforkids.org>.

WHAT IS COPA?

COPA is the Canadian Owners and Pilots Association, a Canadian non-profit Association representing some 18,000 pilots, aircraft owners and aviation enthusiasts across all the provinces and territories of Canada. Members are of every age group, including many airline and commercial pilots, engineers and business people. They fly all types of aircraft, including “amateur-built” (a category of aircraft designated by Transport Canada, built by individual

craftsmen instead of on a factory assembly line). The 16,000 aircraft belonging to COPA members represent more than half of all the 31,000 aircraft in Canada and can be seen on every airport in Canada.



COPA “Flights” are groups of COPA members from a particular town, city or area, organized into a named Flight which is democratically elected and which follows the rules, principles and objectives of the national COPA organization. Each COPA Flight is provided insurance coverage so that they may carry on a variety of aviation events on a regular basis, including COPA For Kids introductory flights. There are approximately 150 Flights located across Canada.

www.copanational.org | www.copaforkids.org | 613.236.4901

COPA SCHOLARSHIPS

COPA has a scholarship program to recognize excellence among students who are learning the skills needed in the field of aviation. Through these scholarships, individuals who have a financial need are able to accomplish their goals. For more information, visit

<http://www.copanational.org/>

COPA FOR KIDS AVIATION PROGRAM SPONSOR - TRAVELERS www.travelers.com

Written through its Lloyd's of London Syndicate, Travelers provides insurance coverage to a number of prominent Canadian aircraft operators and is the insurer of COPA Gold and Silver Wings insurance plans. Travelers is one of the leading providers of specialist aviation insurance with clients ranging from major international airlines to smaller specialist operators and private owners. Its team of underwriters combine specialist knowledge and industry expertise to provide clients with solutions across a broad spectrum of risk management needs.

The Travelers Companies, Inc. is a worldwide property and liability insurance organization based in Saint Paul, Minnesota, USA. In Canada, Travelers operates through its licensed insurers St. Paul Fire and Marine Insurance Company and Travelers Guarantee Company of Canada. It offers commercial products which, coupled with its specialty expertise, meet a range of business insurance needs in different industry segments. All of its products are available through independent insurance brokers.

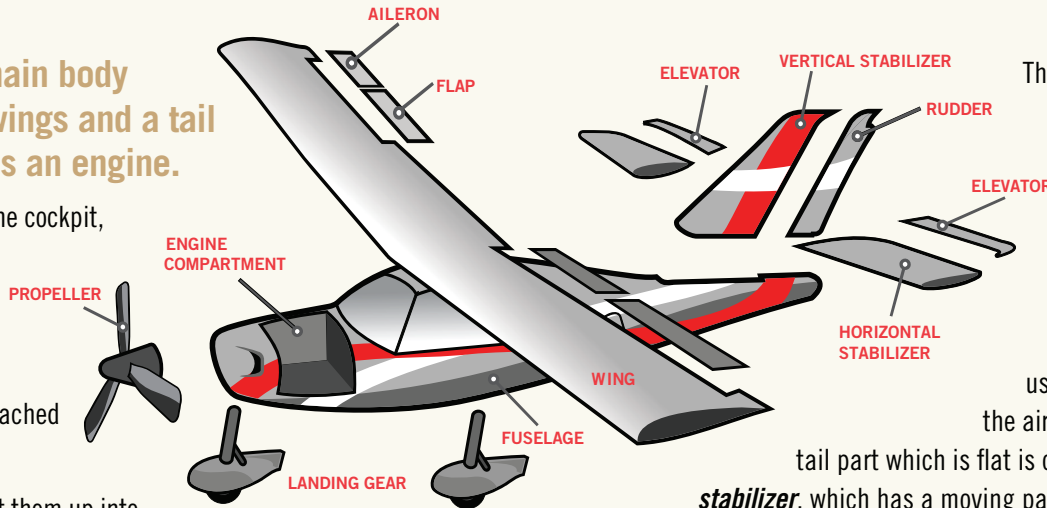
Throughout the United States and in selected international markets, Travelers provides a wide variety of property and casualty insurance and surety products and services to businesses, organizations and individuals. The company can meet insurance needs in more than 90 countries worldwide through its network of insurers and at the end of 2007 had assets worth around \$114 billion. Travelers consistently achieves high independent credit ratings which reflect its financial strength and ability to pay claims.

how aircraft fly

Aircraft have a main body (**fuselage**), and wings and a tail (**empennage**) plus an engine.

The **fuselage** includes the cockpit, where the pilot sits during the flight. The **fuselage** in small aircraft usually has the engine and propeller attached in front of it.

Aircraft have **wings** to lift them up into the sky. On the rear side of each wing is a part that moves up and down called an **aileron**. Ailerons help the aircraft turn right or left. Other parts of the wings include the **flaps** which help the aircraft to land.



The tail part that sticks up straight is called the **vertical stabilizer**. The moving part of the **vertical stabilizer** is called the **rudder**. The rudder is used to turn the nose of the aircraft right or left. The tail part which is flat is called the **horizontal stabilizer**, which has a moving part called the **elevator**.

The elevator makes the aircraft move up or down.

The **engine** makes the aircraft go forward. The **engine** turns the propeller and the **propeller** pulls the aircraft through the sky.

The pilot's office... the aircraft cockpit

The **cockpit** instruments tell the pilot where he/she is, how high the aircraft is and how fast it is going. Switches inside the cockpit operate things like radios and lights, **landing gear**, **flaps** and **deicing heaters**.

The **aircraft ailerons** and **elevators** are controlled by the pilot using a control wheel or a control stick. These controls let the pilot point the aircraft where it is needed to go.

The **elevators** are moved by pulling back and pushing forward on the controls. When the pilot moves the controls to the right or to the left, the **ailerons** on the wings move up or down.

On the floor of the **cockpit** are pedals. These pedals are not to accelerate



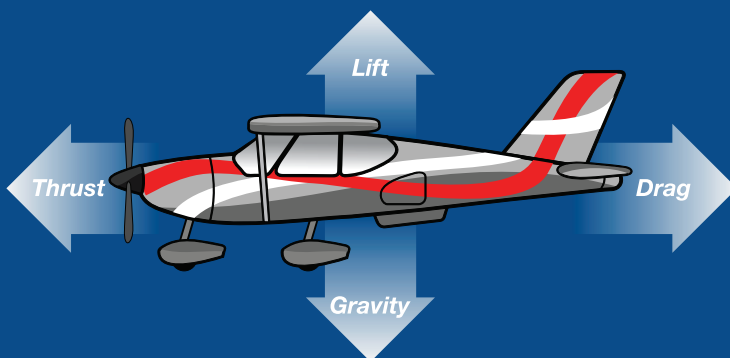
Example of an older cockpit instrument panel



Example of a modern cockpit instrument panel

or brake, instead they are used to operate the **rudder**. When the pilot pushes the right pedal, the **rudder** moves to the right. It will move left when the left pedal is pushed. On some aircraft the brakes (which are used only on the ground), are located on the top of the floor pedals.

Flight depends on four basic forces: **Lift**, **Gravity**, **Thrust** and **Drag**.



LIFT is a force that an aircraft must create to go up and stay up against gravity. The aircraft wing makes lift as the aircraft moves forward.

GRAVITY is the force that holds us on the ground. When we hold something up and then let it go, it drops because of gravity.

THRUST is created by the **engine** and the rotating **propeller**, and pulls the aircraft forward so the **wings** create **lift**. Just as **lift** overcomes the force of gravity during flight, **thrust** must overcome the force known as

DRAG, which comes from resistance with the air — in this case, produced by moving our aircraft forward through the air!