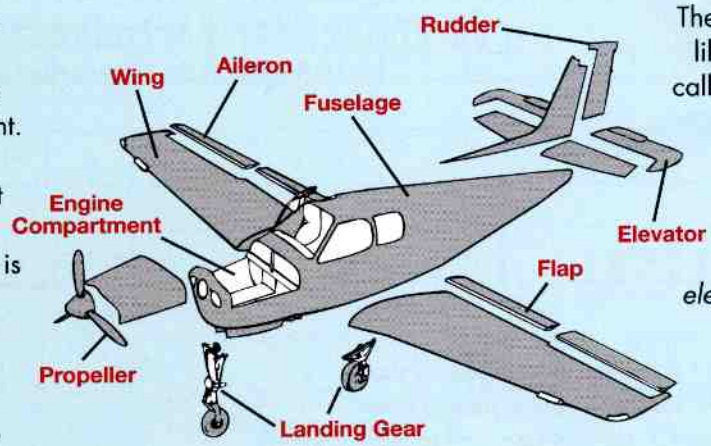
What are the different parts of an airplane?

Airplanes come in many shapes and sizes, but they all have similar parts.

The body of the airplane is called the *fuselage*. This includes the cockpit, where the pilot sits during the flight.

Airplanes 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 airplane turn right or left. *Flaps* help the airplane fly slowly for landing.



The tail that sticks straight up like a shark's fin has a part called the *rudder*. The rudder helps turn the nose of the airplane right or left.

The flat part of the tail has a part called the *elevator*. The elevator makes the airplane's nose move up or down.

Since the wings on an airplane don't move up and down like a bird's wings do, something has to make the airplane go forward. That's where the *engine* and the *propeller* come in. The engine turns the propeller and the propeller pulls (or in some cases *pushes*) the airplane through the sky.

A typical airplane cockpit

The pilot sits inside the airplane in what is known as the *cockpit*. There are many instruments and switches to operate things like radios and lights.

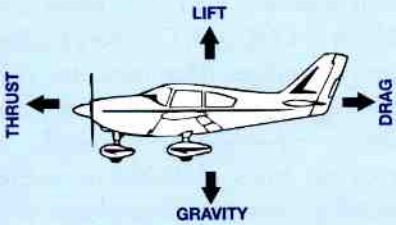
The pilot controls the airplane by using either a *control wheel* or a *control stick*. These controls let the pilot move the elevators on the tail and the ailerons on the wings, which in turn move the airplane.

The elevators move by pulling back and pushing forward on these 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 that operate the brakes and rudder. When the pilot pushes the right pedal, the rudder turns to the right. It will turn left when the left pedal is pushed.

Four basic forces of flight

There are four forces that affect an airplane in flight: **Lift, Gravity, Thrust and Drag.**



GRAVITY is the force that keeps all objects on earth. If we pick up a ball and let it go, it will drop quickly to the ground because of gravity. LIFT is a force that an airplane must create to overcome the force of gravity. An airplane does this by making lift with its wings as the airplane moves forward. An airplane's forward movement is produced by THRUST. Thrust is created by the engine and the rotating propeller. Just as lift overcomes the force of gravity during flight, thrust must overcome the force known as DRAG, which resists movement of an object — in this case, our airplane!