

# AIRPLANE INSTRUMENTS

Let's learn about an airplane's control panel! Print out this page and use them to decorate the inside of your cardboard airplane!

Airplane Control Panels have instruments that help a pilot maintain control. Using these instruments to monitor an airplane's position, rather than outside visual references, is known as attitude instrument flying. All airplanes have six basic instruments: Airspeed Indicator, Attitude Indicator, Altimeter, Turn Coordinator, Heading Indicator, and Vertical Speed Indicator.



## Air Speed Indicator

**How fast am I going?** The airspeed indicator shows the speed of the airplane through the air, which it calculates by measuring the difference between total air pressure and static air pressure.

## Attitude Indicator

**Where's the horizon?** Pilots use the horizon to help them judge how an airplane is oriented. When darkness and weather obscure the horizon, they refer to the attitude indicator, which uses a gyroscope to show the position of the airplane's wings in relation to an "artificial horizon."

## Altimeter

**How high am I?** The altimeter, basically a barometer, shows the airplane's height above sea level. It senses the change in static air pressure caused by a change in altitude.

## Turn Coordinator

**Is my turn coordinated?** The turn coordinator helps guide the pilot through a turn. It uses a gyroscope to show the rate and direction of a turn and whether the airplane is slipping toward the inside or skidding toward the outside of the turn.

## Heading Indicator

**What direction am I headed?** The heading indicator, connected to a gyroscope, shows the direction in which the airplane is flying. It is easier to use than a simple magnetic compass, which is affected by the acceleration of the airplane.

## Vertical Speed Indicator

**How fast am I going up or down?** The vertical speed indicator shows the airplane's rate of climb or descent by measuring how fast static pressure changes as the aircraft climbs or descends.