

Stability and Motion: Science of Flight Key Terms

Please note the following Key Terms are provided as a reference. Vocabulary terms are embedded within the curriculum and are addressed within that context. Students are not expected to commit the list of terms to memory.

Term	Definition
Aircraft	All types of vehicles that fly or move through the air.
Climb	A flight condition where the airplane increases altitude (or height). This motion is due to imbalanced forces acting on the airplane. The lift is greater than the weight of the airplane.
Constraint	A limitation or a restriction. Constraints might include limits on time, materials, or size.
Criteria	Guidelines or rules used to judge or make a decision about something.
Cruising Flight	A flight condition where the airplane maintains a constant speed and altitude. The forces acting on the airplane are balanced. The lift is equal to the weight, and the thrust is equal to the drag.
Descent	A flight condition where the airplane decreases altitude (or height). This change is due to imbalanced forces acting on the airplane. The lift is less than the weight of the airplane.
Design Process	A step by step way to solve problems that is used to develop many possible solutions to a problem and then narrow down the possible solutions to one final choice.
Drag	Resistance that slows an object down in the air.
Engineer	A person who is trained to use technology, mathematics, and science to solve problems.
Engineering	The use of technology, mathematics, and science to solve problems.
Force	A push or pull that can make an object move, stop moving, or change directions.

Fuselage	The body of an aircraft.
Glider	An aircraft that is designed to fly without an engine.
Gravity	A force that pulls two objects toward one another.
Horizontal Stabilizer	A surface on an aircraft that stabilizes the up and down motion of the nose.
Lift	A force that pushes objects upward.
Prototype	A working model than can be tested and evaluated.
Takeoff	The part of the flight when an aircraft gains speed and becomes airborne.
Thrust	The force or push that comes from a power source, such as propellers, jet engines or rockets, or a launcher in the case of a glider.
Weight	In aviation terms, weight is the force that pushes an aircraft down and is one of four forces that act upon an aircraft. Lift is the key force that counters weight.
Wings	A part of an aircraft that provides lift for an aircraft. Wings are also called airfoils.