**Terminology for Flight**

**Acceleration**: the rate of change of an objects speed with tiem. To speed up, an object must accelerate; to slow down, it decelerates.

**Aerodynamics:** the science that deals with the flow of air around an object in motion.

**Ailerons:** hinged sections of aircraft wings that can move up or down to roll the airplane from side to side.

**Air pressure:** the amount of force (per unit area) air exerts on an object.

**Airfoil:** a streamlined shape, usually with a rounded leading edge and a sharp trailing edge and a sharp trailing edge, as in the cross-section of a wing or propeller blade.

**Balanced forces:** forces that do not produce motion when they interact. For example, when you sit in a chair, gravity pulls you toward the Earth. At the same time, the chair pushes you upward, away from the Earth. The force of the chair cancels out the force of gravity, and you remain motionless.

**Control surfaces:** the rudder, ailerons, and elevator, which work together to control the direction of an airplane. Control surfaces change the airflow around the surfaces of an aircraft.

**drag:** the aerodynamic force that acts against an object moving through air or another fluid. When you swim, you are slowed down by the drag of the water.

**Elevators:** hinged sections on an aircraft’s stabilizer/ When the elevators go up, the stabilizer acts like an upside-down wing, pushing the aircrafts tail down, so its nose points up.

**Flap:** hinged sections of wings, close to the aircraft’s body. When lowered, the increase lift during take-off and drag during landing.

**Force:** a push or a pull that makes an object move, or change speed or direction if it is already moving.

**Fuselage:** the main body of an aircraft.

**Gravity:** the force that attracts things toward the centre of large objects. Earth’s gravity causes people and objects to have weight.

**Lift:** the aerodynamic force that acts perpendicular (at right angles) to the direction of motion, causing an object to rise.

**Mass:** the amount of matter in an object. In jet propulsion, hot gases forced out of the back of an aircraft, rocket, or boat push the craft forward.

**Rudder:** the hinged section of the fin of an aircraft, which helps the aircraft move left of right.

**Stabilizer:** the horizontal surface of an aircraft’s tail.

**Thrust:** the force that pushes a flying object forward. An aircraft engine produces thrust that propels the craft.

**Unbalanced forces**: forces applied at the same time that produce acceleration when they interact. For example, when two people push a stalled car forward, the combined forces they apply overcome the friction between the road and the tires. When a steady speed is reached, the forces are balanced and there is no further acceleration.