

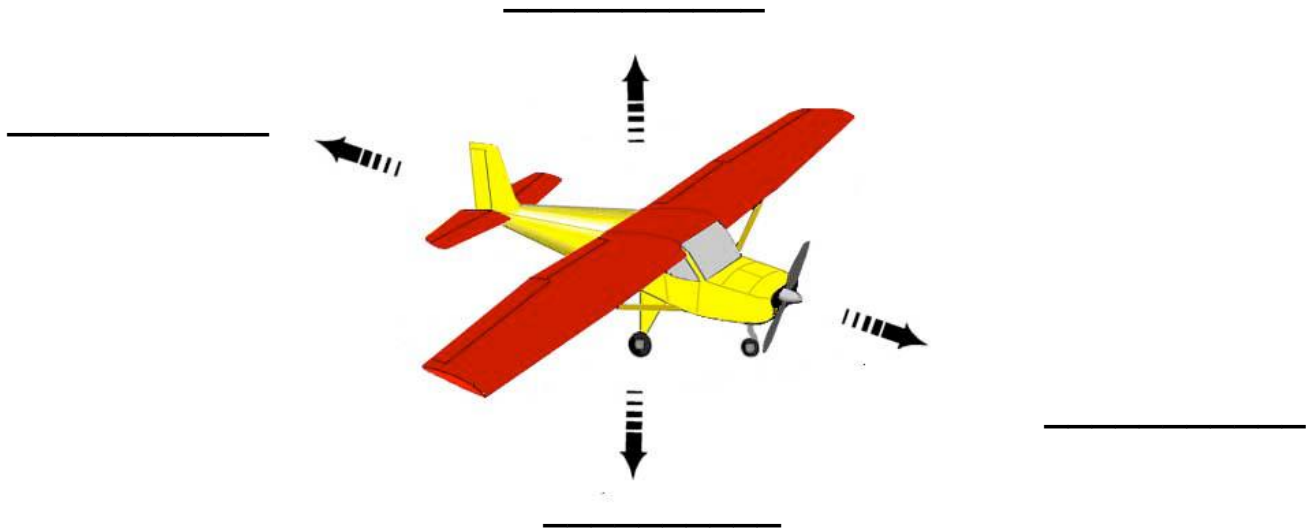
# SOAR for Science: Airplanes, Speed, and Motion Grades 6-8 Pre-Visit Assessment

First Name: \_\_\_\_\_

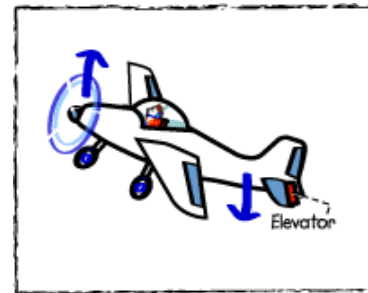
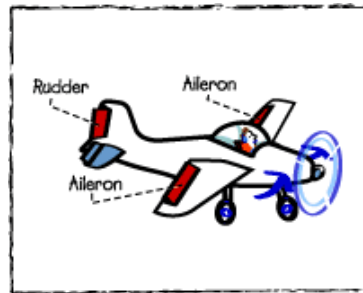
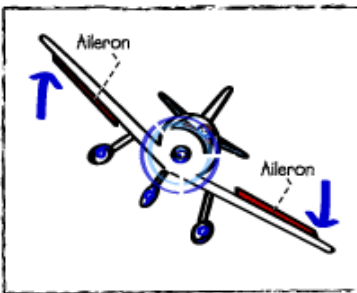
Date: \_\_\_\_\_

School: \_\_\_\_\_

1. Label the **four forces of flight** on the diagram below.



2. According to Newton's First Law of Motion, an airplane in a state of rest will remain at rest, and an airplane in a state of motion will remain in motion unless \_\_\_\_\_.
3. Newton's Second of Law of Motion states that  $F = MA$ . This means the heavier an airplane is, the more \_\_\_\_\_ you will need to make it accelerate.
4. During flight, Newton's Third Law of Motion is demonstrated when...
- ...An airplane wing creates lift
  - ...An airplane's propeller or jet engine creates thrust
  - ...An airplane rolls, yaws, or pitches
  - All of the above



5. The tilting of a plane from side to side is called \_\_\_\_\_.

- The movement of a plane's nose from left to right is called \_\_\_\_\_.

- The movement of a plane's nose up and down is called \_\_\_\_\_.