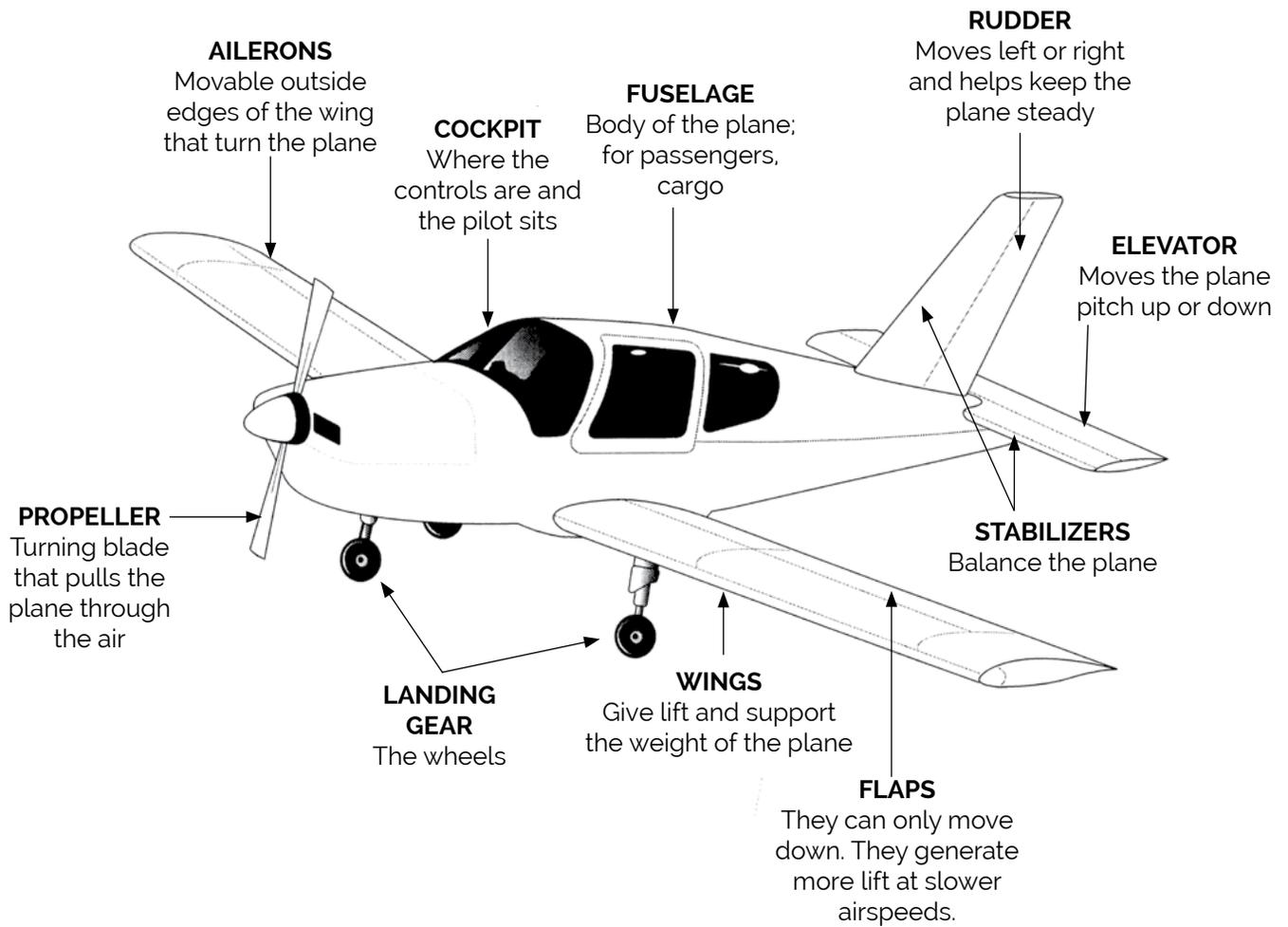


10 Airplane Terms

Watch a video on the **Aviation for Girls App** and learn more.



What is a Helicopter?

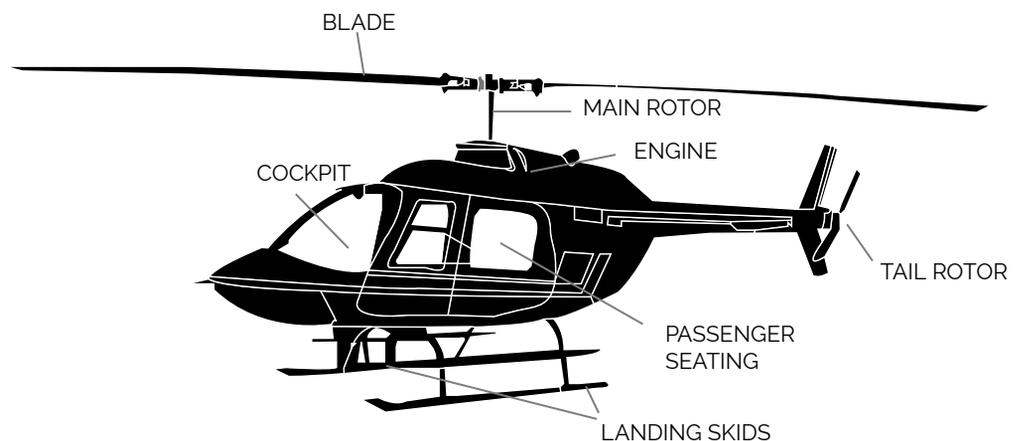


A helicopter is a type of aircraft that uses rotating, or spinning, wings called blades to fly.

Unlike an airplane or glider, a helicopter has wings that move.

Unlike a balloon, a helicopter is heavier than air and uses an engine to fly.

A helicopter's rotating blades, or rotor, allow it to do what an airplane cannot.

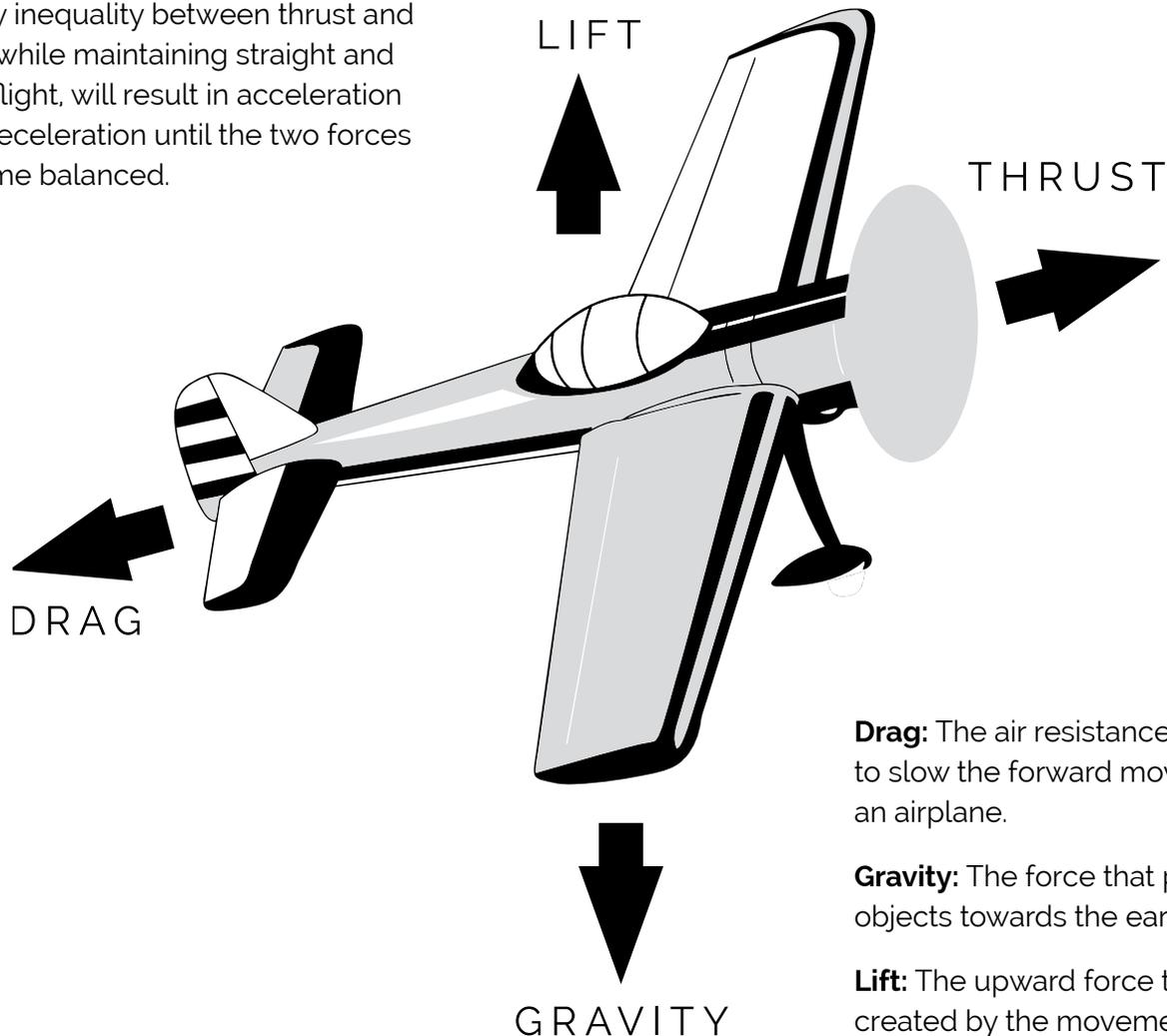


The Four Forces of Flight

An aircraft in straight and level flight is acted upon by four forces: **lift, gravity, thrust, and drag**.

The opposing forces balance each other; lift equals gravity, and thrust equals drag.

Any inequality between thrust and drag, while maintaining straight and level flight, will result in acceleration and deceleration until the two forces become balanced.



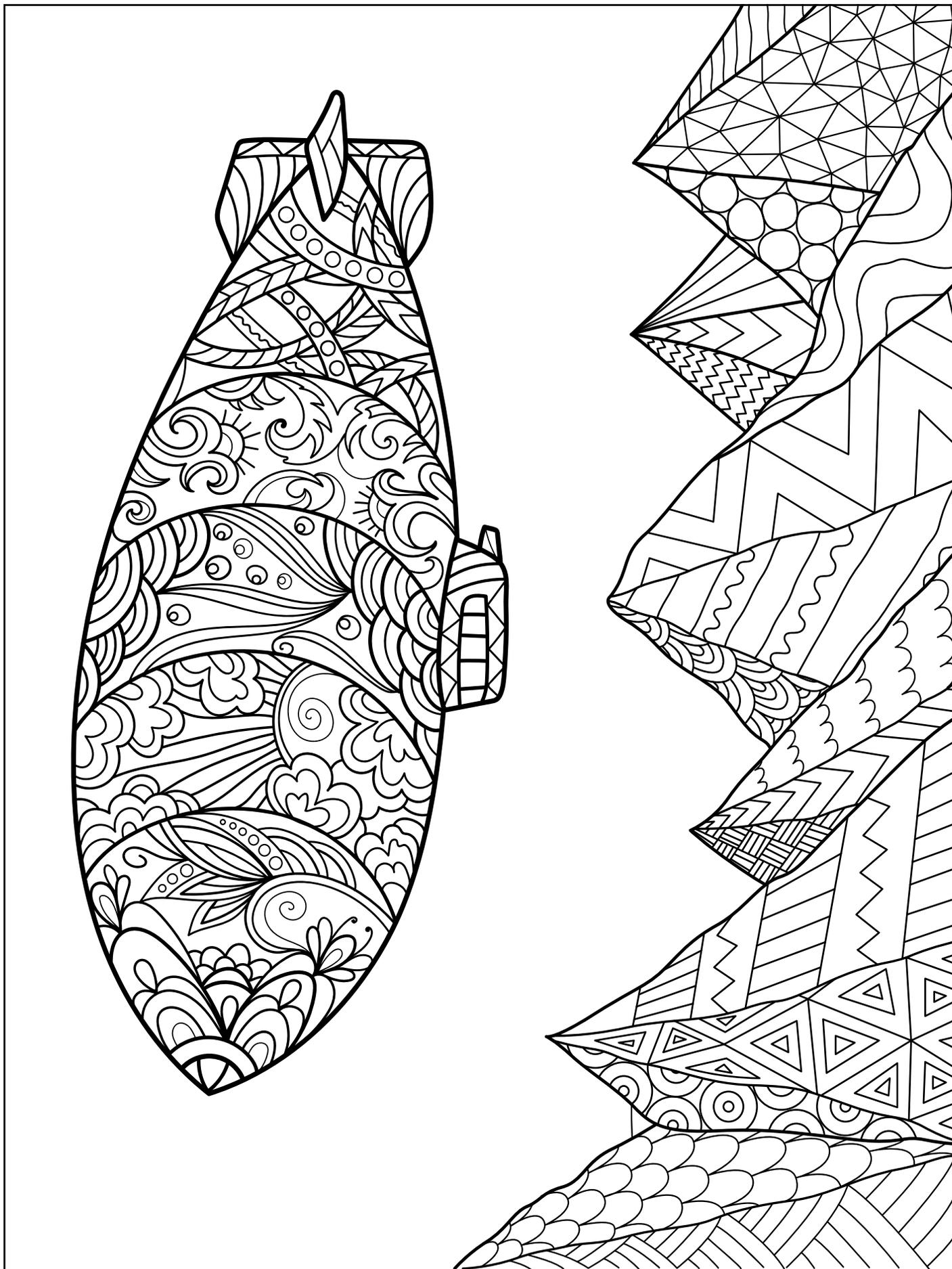
Drag: The air resistance that tends to slow the forward movement of an airplane.

Gravity: The force that pulls all objects towards the earth.

Lift: The upward force that is created by the movement of air above and below a wing. Air flows faster above the wing and slower below the wing, creating a difference in pressure that tends to keep an airplane flying.

Thrust: The force that moves a plane forward through the air. Thrust is created by a propeller or a jet engine.

Meet female Goodyear blimp pilot Taylor Deen and learn more about airships by watching a video on the **Aviation for Girls App**.



Jacqueline Cochran Crossword

Jacqueline Cochran is one of the most famous women in aviation history. She learned to fly in only three weeks. She later broke an existing altitude record by flying a biplane to 33,000 feet in the air.

Jacqueline became very interested in air racing and participated in several races including the Bendix Cross Country Air Race. She had to convince Mr. Bendix to allow her to fly since the race had been open to male pilots only. She won the race in 1937.

Jacqueline also won speed records for flying. The most famous record she holds for speed was when she became the first woman to break the sound barrier in 1953. She was named "the fastest woman in the world."

Before learning to fly, she had worked for several years in a beauty shop. She later began a company manufacturing beauty products. She named her company Jacqueline Cochran Cosmetics.

When World War II began, Jacqueline was involved in testing new aviation equipment being developed for the war. She also had the idea the military should include women as pilots during the war. After several meetings with the Chief of the Army Air Force General Hap Arnold, she was able to convince him to use women pilots to fly non-combat missions. She became the director of the new organization which was named the Women Airforce Service Pilots (WASP).

When the war was over the WASP had delivered more than 12,600 planes and flown more than 75 different types of airplanes.

Crossword Clues:

ACROSS

- Jacqueline _____ is one of the most famous women in aviation history.
- Women pilots were used for _____ missions.
- Jacqueline Cochran became the first woman to break the _____ barrier.
- Women Airforce Service Pilots (another name)
- Cochran flew in the _____ Cross Country Air Race.
- Jacqueline was named "the _____ woman in the world."
- Jacqueline learned to _____ in three weeks.

DOWN

- General Hap _____ was the Chief of the Army Air Force.
- Jacqueline Cochran broke an _____ record by flying a biplane to 33,000 feet.
- She also broke _____ records.
- Before learning to fly, Jacqueline worked for several years in a _____ shop.

