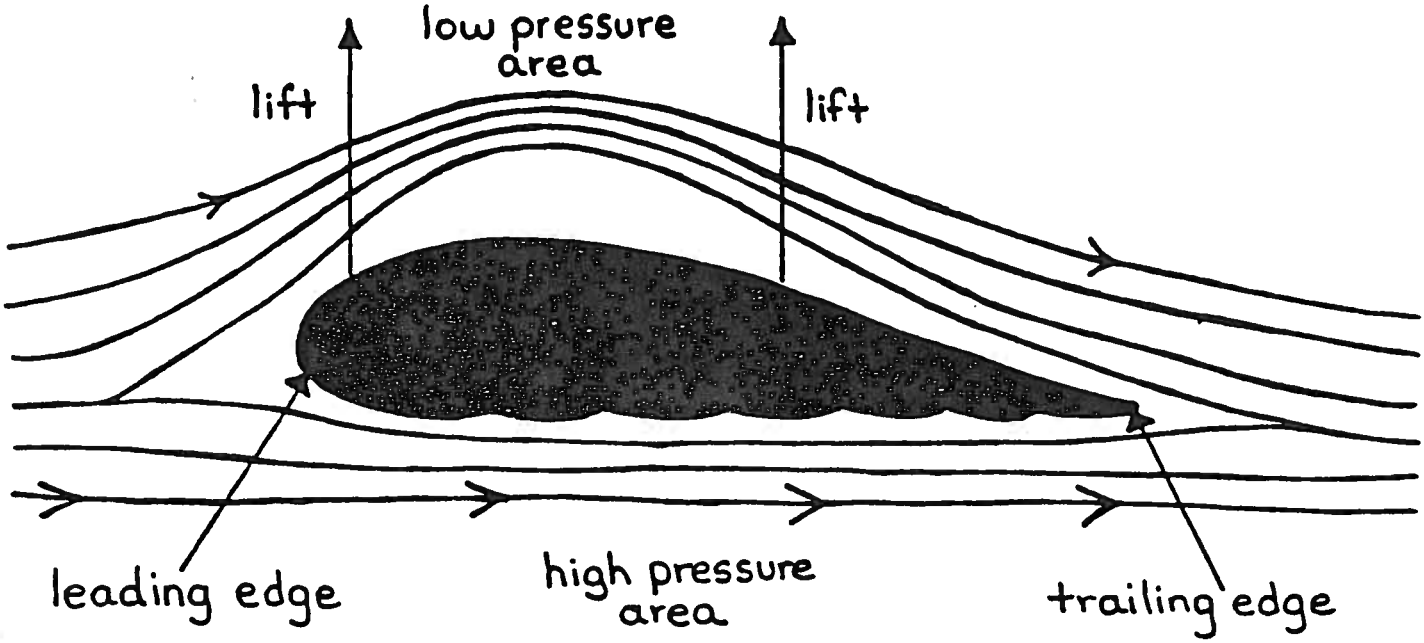
The Wing

The picture below shows a side view of a bird's wing which is similar to the wing of a glider, airplane or helicopter blade.



1) **When air hits the front of the wing (leading edge) it splits up.**

2) **The air flowing over the curved top of the wing has further to go than the air going under the flat bottom of the wing.**

3) **For the two streams of air to reach the back of the wing (trailing edge) at the same time, the top stream must travel faster than the bottom. (It has further to go)**

4) **This fast moving air creates a low pressure area on the top of the wing and a high pressure area on the bottom of the wing. (Bernoulli's Law)**

5) **Since objects tend to go from high pressure to low pressure, lift is created, which is how birds and planes stay in the air. (Note that for the wing to have lift, it must be moving forward through the air)**

Bill Nye - Flight

Name: _____

1. **Lift** is created when _____ moves over/under the wings of an airplane. This creates differences in _____.

Air	Pressure (higher/lower)	Under/Over the wing
Faster moving air creates…	_____ pressure…	_____ the wing
Slower moving air creates…	_____ pressure…	_____ the wing

…This is called the _____

2. Draw a diagram of how air moves over and under an airplane wing

3. Why do airplanes take off and land into the wind?

Date: _____ Name: _____

Bernoulli's Principle

Draw a labelled diagram of one of the investigations showing Bernoulli's Principle.

Describe what happened in this investigation. Include these words in your explanation:

air	low pressure	exert	force
stationary	moving		high pressure