

What makes a kite fly?

A kite lifts when wind pressure being deflected along the face of the kite pushes the kite up into the sky. If the wind is removed, the kite will fall. At the same time, wind passing over the top of the kite creates an area of low pressure, like a vacuum, along the back of the kite. This creates a pull from behind.

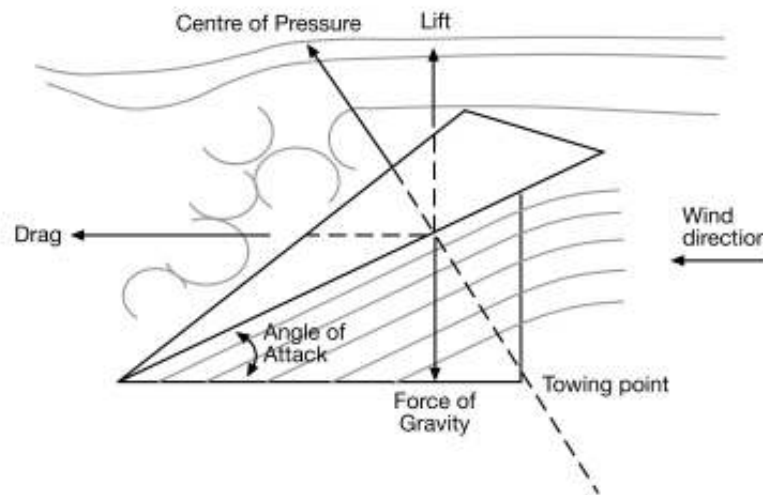
A kite is effected by drag and by gravity:

- Drag is created by wind resistance on the kite's surface and tail. Drag can also result from turbulence behind the kite.
- Gravity is the downward force created by the weight of the kite.

To fly, a kite needs to have enough lift to overcome gravity and drag.

All of these forces - lift, drag, gravity, and the force of the wind – come together in the kite at a place called the centre of pressure, which is where you tie the kite line – the towing point.

By moving the towing point, you can change the amount of lift that is created. You do this by changing what we call the angle of attack, which is the angle that the kite leans into the wind.



Properly balancing the kite, adjusting the towing point and even the tail, will affect the stability of your kite.

If the kite rotates to the right or left, the towing point may be too far forward, or the kite may need more tail to stabilise it.

If the bridle is incorrect or the spars are not strong enough, the kite may flap or pitch. This can be corrected by adding more bridle lines, or using stronger spars.

When the kite rolls, dipping from one side to the other, you can move the towing point forward, add more tail, or bow the kite to create a dihedral.