

Weight need a
stronger engine, a
stronger



**ASSIGN
BUSTER**

Weight is a massive factor when making a contraption that needs to fly.

Something that is too heavy, won't budge, the attraction of gravity would be strong. If an engineer would want to make a larger payload fly, they would need a stronger engine, a stronger engine would need a heavier engine, and heavier engine would be need more fuel, and more fuel would be more weight, this is the dilemma that NASA faces when putting satellites into orbit.

Weight is obviously a key factor, which segways into the propulsion system.

Whether it be mechanical, or whether it may be natural, propulsion is needed for something to fly, otherwise it would just fall. There are many different types of propulsion, rockets and other man made flying machines use petroleum products, its cheap, expendable, and can be combust at a very quick rate, which is necessary for reaching escape velocity. Airplanes actually function quite differently. Of course planes need engine to lift off and to continue flying, but because of the way planes and the wings are shaped, it allows the cabin to go straight through the air, and allows the wing to be used however with the rudders and flaps, using the speed the airplane has acquired as well as air resistance. Another flying device that has a different form of movement is a helicopter. It has an engine like an airplane, but it depends on the atmosphere.

It uses air resistance to fly, so in an environment with no oxygen or any gases, the helicopter would not be able to fly, it would just be a couple of spinning blades. Another flying device that humans have made is the hot air balloons. Instead of using an engine, it uses a what is called a burner, which is a controlled flame. The flame heats up the air around it, and because hot air rises, it collects inside the balloon, causing the air density inside of the

balloon to be less than the air around it, making it rise, AND FLY. Another factor of flight is called lift, it is the difference in air pressure, like I said in the description for the hot air balloon, the air pressure inside the balloon is actually less than the air pressure around it, causing it to rise. And the last factor of flight is drag. Like I talked about in the section for the rudders and wings of a plane, it optimizes drag to control itself.

The wings direct the wind in whatever direction pleased. If the plane wants to increase its altitude, the pilot will point the rudders downward, pushing the wind hitting it downward, pushing the airplane upward because of its speed. And those are the four factors of flight;? Drag? Thrust? Lift? Weight These factors apply to drones, like it would to any aircraft, but there are obviously a challenge to making something fly at this size. I recently bought a one inch drone, and it got annihilated by simply the forces of the Earth. I flew it outside and I had zero control over it.

It hit the ground and hairs and very small string got into its propellers. Factors like this need to be considered when making a drone. Will the tiny battery powered engines be able to lift the drone, which would be propellant, would it work in lower pressure areas, where it would have as much atmosphere to work with, this especially applies to high end drones that can fly thousands of feet into the air. Thrust is very necessary to drones, how else would it fly! If you put nothing on machine and expect it to fly, that would be silly. That's why a propelling or engine would be necessary, as well as a source to power to these tools.

Drag applies less to drones than it would to a much larger aircraft with more surface area. Drones have a relatively low weight to surface area ratio, which minimizes drag. Because drones also need other factors in order to fly, or perform other functions, here are the other ones.?

- Active Track (Profile, Spotlight, Circle)?
- Draw Waypoints?
- TapFly?
- Terrain Follow Mode?
- Tripod Mode?
- Gesture Mode?
- S-Mode (Sport)?
- P-Mode (Position)?
- A-Mode (Attitude)?
- Beginner Mode?
- Course Lock?
- Home Lock?
- Obstacle Avoidance