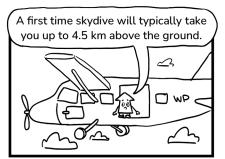
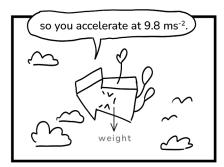
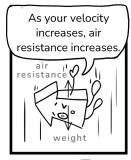
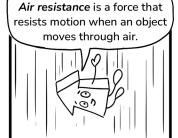
6.4 Skydiving and air resistance

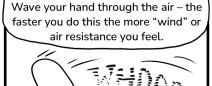






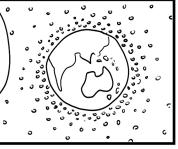




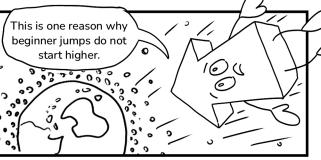


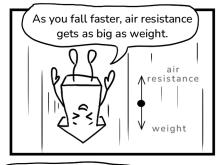


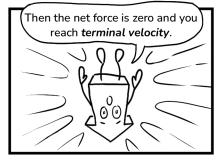
Air resistance also decreases if the air is less dense, for example on a hotter day or at high altitudes where the atmosphere is thinner.











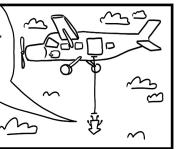
Skydivers say this feels like floating, not falling. If you close your eyes, you might even think you weren't moving!



If you weigh less, air resistance does not have to get as big to balance your weight, so you will reach a smaller terminal velocity.



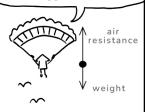
Terminal velocity at this point can reach 200 kmh⁻¹, after falling for around 12 seconds and through 500 m from the time you jumped.



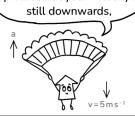
To slow down, you deploy a parachute! This might happen around 1500 m from the ground.



Bigger surface area equals MUCH bigger air resistance.



The acceleration is now upwards but your velocity is still downwards,



slowing down to around 5 ms⁻¹ for a safe landing.



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