

All About Air Resistance



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What Is Air Resistance?

Air resistance is a type of **friction**.

As you move, you create **air resistance**. When you run or ride your bike, it is air resistance that pushes your hair back and makes your clothes ripple. The faster you move, the more air resistance you feel.



What Is Air Resistance?

When an object moves through the air (including across the ground), an invisible force called **air resistance** acts upon it.

Air particles hit an object and create air resistance. The faster an object moves, the more air resistance it encounters.

Parachutes use air resistance by trapping the air which slows down the parachute and the falling object that is attached to it.



Streamlining



The shape of an object affects its air resistance. Some objects are **streamlined** which means that they will have less air resistance and travel easier through the air and across the ground.

Formula One cars, like those designed by Scuderia Ferrari, have a streamlined shape so the air can travel around them more easily; their shape makes them less air resistant and allows them to travel faster. We call this an '**aerodynamic**' shape.

Downforce

Too much speed can cause objects to **lift** from the ground.

For a Formula One car to remain stable on the road, it is important that they are shaped to allow for the right amount of **downforce**: the force that presses the car to the ground.



The downforce on a Formula One car is achieved by the two wings on the front and the back of the car. These wings push the air around the car in a way that reduces air resistance but also creates downforce to give the car a good grip on the road.



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