

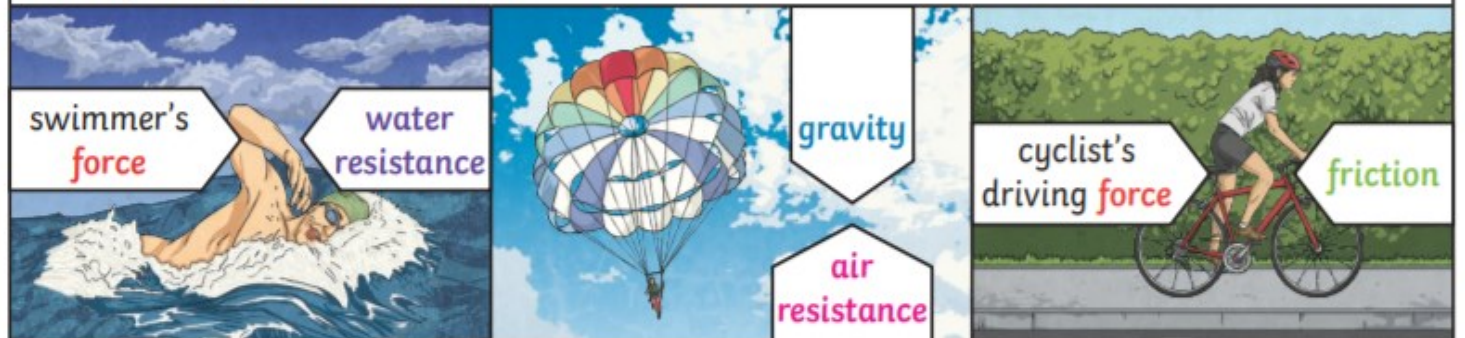
# Y5: 'Forces' Science knowledge organiser

## Key Vocabulary

*accelerate*  
*air resistance*  
*brake*  
*buoyancy*  
*decelerate*  
*forces*  
*friction*  
*gravity*  
*gravitational pull*  
*mass*  
*mechanism*  
*streamlined*  
*transfers*  
*water resistance*  
*weight*

## Key Knowledge

Examples of **forces** in action:



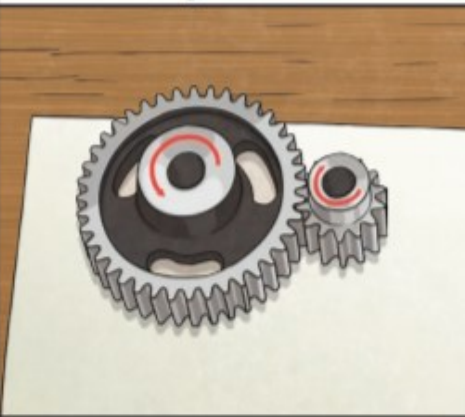
Water resistance and air resistance are forms of friction. Friction is sometimes helpful and sometimes unhelpful. For example, air resistance is helpful as it stops the skydiver hitting the ground at high speed. Friction on a bike chain can make the bike harder to pedal so it is unhelpful.

### Pulleys



Pulleys can be used to make a small **force** lift a heavier load. The more wheels in a pulley, the less **force** is needed to lift a **weight**.

### Gears/Cogs



Gears or cogs can be used to change the speed, **force** or direction of a motion. When two gears are connected, they always turn in the opposite direction to each other.

### Levers



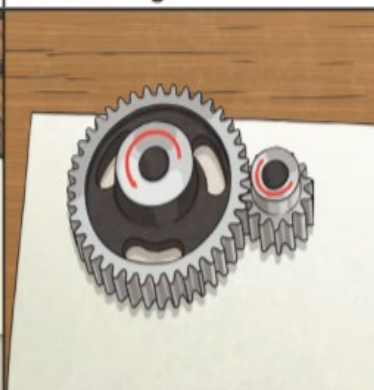
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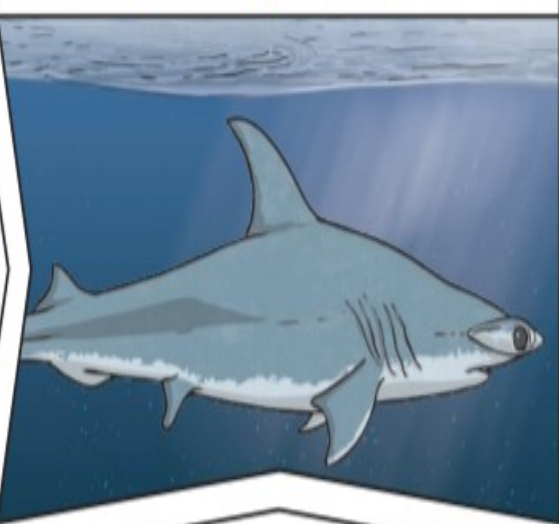
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### Levers



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This shark is **streamlined**.



It has a pointed nose to cut through the water, and a smooth, low, curved back to allow the water to flow over and around it.

It does not create much **water resistance** so it can move through the water quickly.