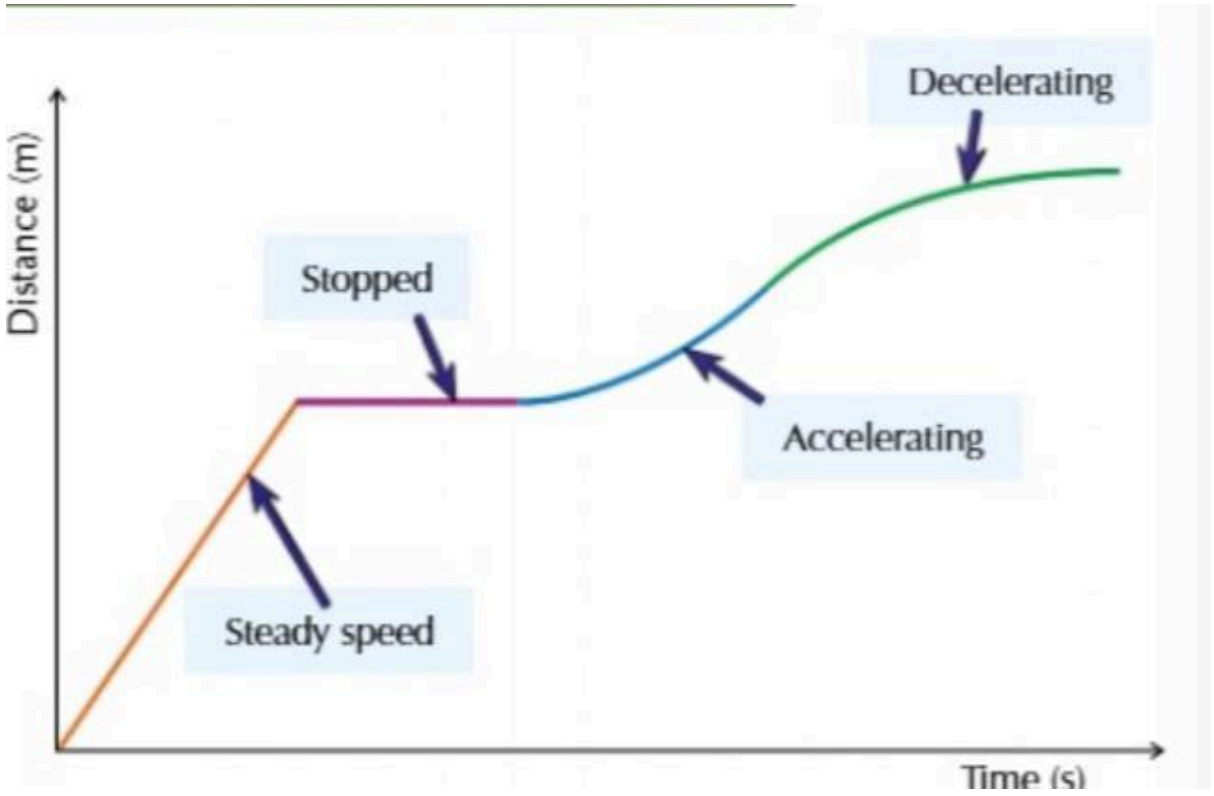
Physics

Distance time graph

Distance time graph can look confusing but they give a lot of information about the Journey
If you learn rules they become easy to understand

Distance time graphs show journey

If something moves in a straight line we can draw it's distance on a vertical axis and its time on horizontal axis



The graph can show

- **Accelerating**
- **decelerating**
- **steady speed**

- stopped

What the shape of the graph means

- Gradient= speed
- Stepper line means a faster speed
- Because speed = distance / time = change in vertical / change in horizontal
- Flat sections mean object is not moving it is stopped
- straight up hill line mean a steady speed
- Curve line shows acceleration on the acceleration
- Curve that get steeper means the object is speeding up
- A curve that becomes flatter means the objective slowing down
- if the object is accelerating you find that the speed at the point by drawing a tangent at that point and finding its

Be careful

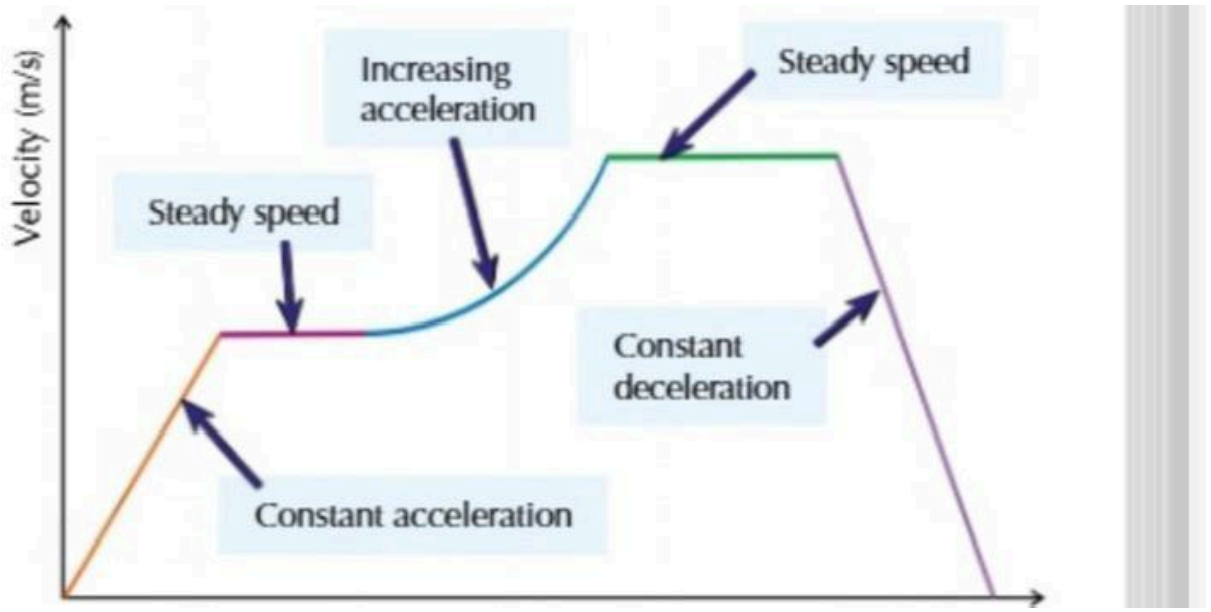
- Always read the axis carefully
- Do not confuse distance time graphs with velocity time graphs
- they look similar but show different things and follow different rules

Velocity time graph

Velocity time graph also show Journeys they show how an object changes speed with time

What velocity time graph shows

- **Velocity is on the vertical axis and time is on the horizontal axis**



What that does the graph means

- **Gradient = acceleration**
- **because acceleration is equal to change in velocity divided by time**
- **Acceleration formula**
- **A= change in velocity / time**
- **Flat sections means steady speed**
- **the stepper the graph the greater the acceleration or Deaccelaration**
- **Uphill lines will be equal to acceleration**

- Downhill lines will be equal to Deacceleration
- curve show changing acceleration

Area under the graph = distance travelled

- The area under the line shows how far the object has travelled
- If the shape is irregular count the squares and multiply by value of 1 square