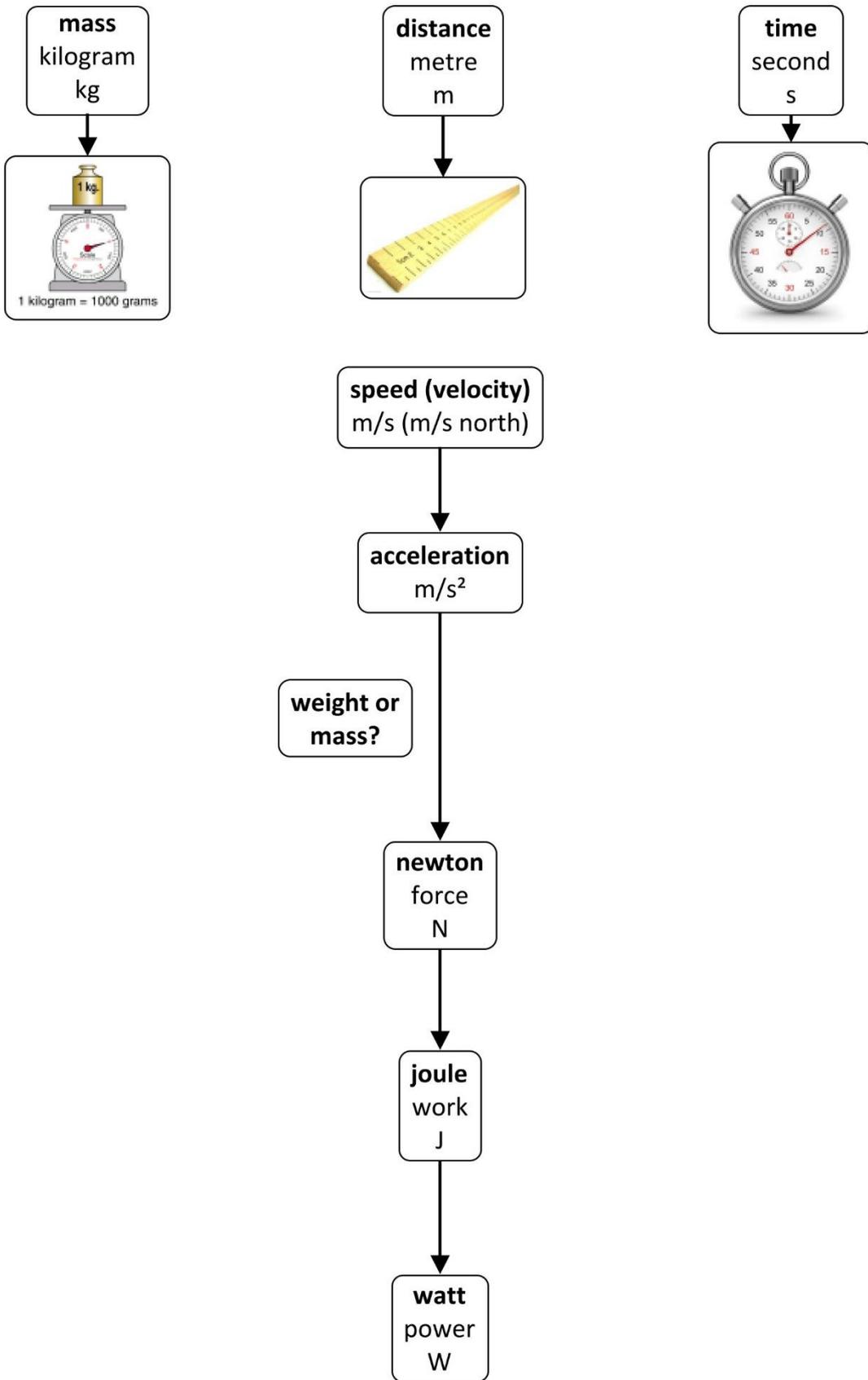




Basic Physics





acceleration	the change of velocity in metres per second (m/s) in 1 second (s) - the unit is m/s/s or m/s ² (metres per second squared) the rate of change (Δ) of velocity (v) with respect to time $a = \frac{V_1 - V_0}{t} = \frac{\Delta v}{\Delta t}$	Beschleunigung
acceleration formula	$a = \frac{V_1 - V_0}{t} = \frac{\Delta v}{\Delta t}$	
displacement or distance	distance measured in a particular direction from a reference point Symbol: d Unit: meters (m)	
force	A push or pull on something that changes it from a state of rest to one of motion or changes its rate of motion. The magnitude (size) of the _____ is equal to the product of the mass of the body and its acceleration - force=mass · acceleration $F=ma$	Kraft
force formula	$F=ma$	
joule	The work done when a force of one newton (1N) is applied for 1m in the same direction. 1 Newton per metre = N · m. Symbol: J	
mass	a physical quantity expressing the amount of matter in a body. Unit = kilogram kg.	Masse
newton	the SI unit of force, equal to the force that produces an acceleration of one meter per second per second on a mass of one kilogram. (1kg·m/s ² =1N)	newton
power	a measure of the rate of doing work expressed as the work done per unit time. It is measured in watts , horsepower, etc Symbol: P	
power formula	$P = \frac{F \cdot d}{t}$	
speed	a scalar measure of the rate of movement of a body expressed either as the distance travelled divided by the time taken (average _____) or the rate of change of position with respect to time at a particular point (instantaneous _____). (m/s). Speed =distance/time - $v = d/t$	Geschwindigkeit
speed formula	$v = d / t$	
velocity	ratio of change of position to time interval over which change takes place m/s 90° (=East) – a vector quantity = speed and direction	
watt	The watt is a method of measuring the rate of energy transfer of an appliance = power . A one watt lightbulb, for example, will change one joule of electrical energy into light energy (and some heat/sound) every second. It is a measure of an appliance's power. The watt is the rate a source of energy uses or produces one joule during one second, so the same quantity may be referred to as a joule per second, with the symbol J/s. It can also be written as kg·m ² ·s ⁻³ . The more watts, the more energy used per second. That is why a higher-watt electrical appliance works faster than a lower-watt appliance. Symbol: W	
weight	the force that gravitation exerts upon a body, equal to the mass of the body times the local acceleration of gravity (unit=N) – weight=mass · gravity - $W=mg$ *compare this to $F=ma$ (g on Earth=9.8m/s ² or about 10m/s ²)	Gewicht
weight formula	$W \text{ (weight)} = mg$	
work	the transfer of energy expressed as the product of a force and the distance through which its point of application moves in the direction of the force Symbol: W. Formula $W = F \cdot d$ Unit: joules J	
work formula	$W \text{ (work)} = F \cdot d$	