Basic Physics

30   Retrieval Practice   Graphical Glossary   20

mass
kilogram
kg

distance
metre
m

time
seconds
s

1 kilogram = 1000 grams

BP A1 Speed &
Show Your Calculation
Video & Study G 60

speed (velocity)
m/s (m/s north)

acceleration
m/s²

BP A2 Acceleration
Video & Study G 45

BP A3 Weight and Mass
Video & Study G 45

weight or mass?

newton
force
N

BP A4 Newton
Video & Simulation G 90

BP A5 Joule
Video & Study G 60

joule
work
J

BP A6 Watt
Video & Study G 60

watt
power
W

BP A8 Notated Cmap
G 60

Basic Physics
Final Examination

BP A7 Final Examination
G 60

Information   Activity   Examination   Graphical Glossary   Retrieval Practice

els724.com > 7-8 Physics > Basic Physics > Course Overview

Plan: Before you start show MrD your plan.

	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6	Lesson 7
Date							
Plan							

B.Dalgleish c:01.02.2019 s:01.02.2019 p:01.02.2019   I:\0708\0708 PHYSICS\BASIC PHYSICS\MOODLE\BP Overview\STUDENT WS\BP_OverviewPlanGlossaryNCmap.docx

www.els724.com   1 from 3

acceleration	the change of velocity in metres per second (m/s) in 1 second (s) - the unit is m/s/s or m/s² (metres per second squared) the rate of change (Δ) of velocity (v) with respect to time **$a = V_1 - V_0 / t = \Delta v/\Delta t$**
acceleration formula	**$a = V_1 - V_0 / t = \Delta v/\Delta t$**
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
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.
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/s² =1N)
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	**$P = (F \cdot d) / t$**
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
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 SI derived unit used to measure power, equal to one joule per 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 $kg \cdot m^2 \cdot s^{-3}$ In electricity, a watt is equal to current (in amperes) multiplied by voltage (in volts). 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/s² or about 10m/s²)
weight formula	**W (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 · d** Unit: joules J
work formula	**W (work) = F · d**

B.Dalgleish c:01.02.2019 s:01.02.2019 p:01.02.2019   I:\0708\0708 PHYSICS\BASIC PHYSICS\MOODLE\BP Overview\STUDENT WS\BP_OverviewPlanGlossaryNCmap.docx

www.els724.com   2 from 3

Basic Physics

mass
kilogram
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1 kilogram = 1000 grams

distance
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speed (velocity)
m/s (m/s north)

↓

acceleration
m/s²

↓

weight or mass?

newton
force
N

↓

joule
work
J

↓

watt
power
W

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www.els724.com   3 from 3