

Summer Term – Remote Learning Plan

Year 10 – Physics (combined Science)

Week:	Instructions to Parents/Students
28B – 20 th April	Contact and Non-contact forces - define contact force, define non-contact force. Give examples of contact and non-contact forces. Learn the difference between a Scalar and vector quantity. Watch https://www.youtube.com/watch?v=xxK8N23nx9M to help. Use BBC bitesize for practice questions: https://www.bbc.co.uk/bitesize/guides/zcxfcw/revision/1 read the link and answer the test questions for contact and non-contact forces. https://www.bbc.co.uk/bitesize/guides/zskn2nb/revision/1 read the link and answer the test questions for scalar and Vector quantities.
29A – 27 th May	Weight, Mass and Gravity: define weight, define mass, define gravity. learn the equation which links weight, mass and gravity: $W=m \times g$. Watch https://www.youtube.com/watch?v=W2aBVbcHr_k to help. Look at https://www.bbc.co.uk/bitesize/guides/z77mbdm/revision/1 to support learning and answer the test section at the end.
30B – 4 th May	Resultant force– Define resultant force and calculate resultant force. Use https://www.youtube.com/watch?v=PL8ATKipoB4 to support learning. complete quiz and worksheet at https://study.com/academy/practice/quiz-worksheet-calculating-the-resultant-force.html
31A – 11 th May	Work done: Know that if a resultant force moves an object work must be done. Use the equation $W = Fs$ to calculate work done. Know the units for Work done, Force and distance. Convert Joules to Newton-metres. Use https://www.youtube.com/watch?v=PY80j_iNT9Y to support learning. pause the video when told and attempt the questions. Use https://www.bbc.co.uk/bitesize/guides/z2mm8mn/revision/3 for further support. Take notes and try the question.
32B – 18 th May	Forces and Elasticity– To know what happens when you apply a force to an object. Understand the relationship between extension and force applied. Draw a graph representing force added to a spring, including elastic deformation, inelastic deformation and limit of proportionality (define these). Use sections 1-4 on https://www.bbc.co.uk/bitesize/guides/z9hk3k7/revision/1 then answer the test questions on the link.
33A – 1 st June	Extension on a spring required practical: Watch https://www.youtube.com/watch?v=QQCJeAqBumE and write out a comprehensive method detailing all the equipment used. How could you calculate spring constant? And what does spring constant mean?
34B – 8 th June	Distance displacement – define distance. Define displacement. State whether they are a scalar or vector quantity? Use the following to support learning: https://www.youtube.com/watch?v=21BwUNDOQno Speed and velocity- define speed. Define velocity. Are they scalar or vector quantities? Know the typical values for speed for someone walking, cycling, running, in a car, on a train or in an aeroplane. Calculate speed using the equation $\text{speed} = \text{distance}/\text{time}$. Use the following video to support learning https://www.youtube.com/watch?v=R8m9VJfwYrc and https://www.youtube.com/watch?v=M_QFRIX8wIM and bbc bitesize https://www.bbc.co.uk/bitesize/guides/ztdbpbk/revision/1

35A – 15 th June	Acceleration – define acceleration. Calculate acceleration by using the equation $a = \text{change in velocity} / \text{time taken}$. Use the following video for support https://www.youtube.com/watch?v=r5iXzDCRMSE and take notes from revision 2 on https://www.bbc.co.uk/bitesize/guides/z2wy6yc/revision/2
36B – 22 nd June	Distance time graph and velocity time graph: be able to interpret a journey on a distance time graph. Be able to interpret a journey on a velocity time graph. What does a horizontal line mean on both? Distance time graph video: https://www.youtube.com/watch?v=DkCw2C-DkT0 then use revision 3 and 4 on the following link to support understanding https://www.bbc.co.uk/bitesize/guides/z2wy6yc/revision/4 . Task : design your own written story which matches a distance time graph and velocity time graph you have created.
37A – 29 th June	Newtons laws of motion. What is the definitions for Newtons 1st 2nd and 3rd Laws. Understand the relationship between force, mass and acceleration. Use for 1 st law: https://www.youtube.com/watch?v=W3VbonFNcw 2 nd law: https://www.youtube.com/watch?v=SqdCCxv9Yzl 3 rd law: https://www.youtube.com/watch?v=wANmggaC9pY Also use bitesize for questions and test: https://www.bbc.co.uk/bitesize/guides/zqb9hv4/revision/2
38B – 6 th July	Stopping distances and reaction time - Define stopping distance. Define thinking distance. Define Braking distance. Make a list of factors which effect braking and thinking distances. Use the following video for support https://www.youtube.com/watch?v=drMKdcMq3o0 Use the following bitesize website for support and questions: https://www.bbc.co.uk/bitesize/guides/zgv797h/revision/7
39A – 13 th July	Reaction time investigation: Practical: Test reaction time before and after drinking a sugary drink such as coca cola. Watch the video for support: https://www.youtube.com/watch?v=Fm02i4vEi5Q

Useful resources:

exampapersplus.co.uk

BBC Bitesize

Physicsandmathstutor.com

Seneca (revision website)

AQA GCSE Physics (for past papers and markschemes)