Year 11 – Physics – Forces – Half Term 4 – KNOWLEDGE PLANNER

Year group:	Unit:		Date (from and to):	
Week beginning:	Big question / concept:	Learning intentions:	Resources	
			Offline:	Online including links on how to access these:
22/02/2021	What is the difference between a scalar quantity and vector quantity ?	Identify a State the difference between scalar quantity and vector quantity. Describe the difference between scalar and vector quantity. Explain how a vector quantities are represented.	Read through slides 5 to 8. Make notes on each slide. Once you have written the notes you can then complete the question on slide 9. Check your answers on slide 10.	Watch the following video https://classroom.thenational.academy/lessons/forces-an-introduction-cgwk0d?activity=video&step=1 make notes from the video. You can also access GCSEpod and there are two pods to watch, you will need your user name and password. The link to use is https://members.gcsepod.com/shared/podcasts/title/10483/64293
		State what is a contact and non-contact force Describe the impact gravity has on an object Calculate weight of an object	Read through slides 11 to 16. Make notes on each slide. Once you have written the notes you can then complete the question on slide 17. Check your answers on slide 18.	Watch the following video https://classroom.thenational.academy/lessons/weight-mass-and-gravity-74t32d make notes from the video.
01/03/2021	How do you calculate resultant force?	State the unit of force Describe examples of forces acting on an isolated object	Read through slides 19 to 23. Make notes on each slide. Once you have written the notes you can then complete the question on slides 24-26. Check your answers on slide 27-28.	Watch the following video https://classroom.thenational.academy/lessons/resolving-forces-ht-6hgp4r Make notes from the video. You can also watch the following pod on GCSEpod: https://members.gcsepod.com/shared/podcasts/title/10483/64293 The pod : resultant force.
		State the equation for work done Identify the unit of work done Calculate work done Explain work done against frictional forces acting on an object causes a rise in temperature	Read through slide 30 to 34. Make notes on each slide. Once you have written the notes you can then complete the question on slide 35. Check your answers on slide 36.	Watch the following video https://classroom.thenational.academy/lessons/forces-and-work-6ngkec Make notes from the video. You can also watch the following pod on GCSEpod: https://members.gcsepod.com/shared/podcasts/title/10484/64295 the pods: work done part 1 & 2. Make notes from the video

08/03/2021	What is the relationship between force affect elasticity?	State elastic deformation Describe the relationship between extension and force	Read through slides 38 to 49. Make notes on each slide. Once you have written the notes you can then complete the question on slides 50-52. Check your answers on slide 53-54.	Watch the following video(s) Video 1 : https://classroom.thenational.academy/lessons/forces-and-elasticity-part-1-6tjp8c?activity=video&step=1 Video 2 : https://classroom.thenational.academy/lessons/forces-and-elasticity-part-2-70vk6t Make notes from the video. You can also watch the following pod on GCSEpod: https://members.gcsepod.com/shared/podcasts/title/10485/64296 The pods: Elastic Potential Energy & Hooke's Law Make notes from the video.
	Is the object in motion or motionless if the resultant force acting on it is zero?	State the difference between distance and displacement	Read through slide 57, Make notes on each slide. Answer the following question: Can you explain why person running on a track will register zero displacement however will display 400m as they run around the track?	Watch the following video(s) Video 1 : https://classroom.thenational.academy/lessons/speed-c5jp4t Make notes from the video. You can also watch the following pod on GCSEpod: https://members.gcsepod.com/shared/podcasts/title/10487/64304 Make notes from the pod named : speed
15/03/2021		State the typical value for a person walking, running and cycling Recall the speed of sound in air Calculate the speed, time and distance travelled	Read through slides 58 to 65. Make notes on each slide. Once you have written the notes you can then complete the question on slides 66-68. Check your answers on slide 69.	
	What does a distance-time relationship look like?	Calculate the speed of an object using a D-T graph Determine the speed of an object by drawing a tangent and measure the gradient	Read through slides 70 to 73. Make notes on each slide. Once you have written the notes you can then complete the question on slides 74-76. Check your answers on slide 77.	Watch the following video(s) Video 1: https://classroom.thenational.academy/lessons/distance-time-graphs-68rp8c Make notes from the video. You can also watch the following pod on GCSEpod: https://members.gcsepod.com/shared/podcasts/title/10487/64304 Make notes from the pod named : Distance time graph

22/03/2021		State the units for acceleration Calculate acceleration	Read through slides 78 to 89. Make notes on each slide. Once you have written the notes you can then complete the question on slides 90-92. Check your answers on slide 93-95.	Watch the following video(s) Video 1: https://classroom.thenational.academy/lessons/acceleration-60r3ar Make notes from the video. You can also watch the following pod on GCSEpod: https://members.gcsepod.com/shared/podcasts/title/10487/64304 Make notes from the pod named : Acceleration
	Newton's laws	State Newton's 1st, 2nd and 3rd law of motion Calculate force of an objected using mass and acceleration Explain Newton's 3rd law relating to two objects interacting.	Read through slides 97 to 105. Make notes on each slide. Once you have written the notes you can then complete the question on slides 106-107. Check your answers on slide 108.	Watch the following video(s) Video 1: https://classroom.thenational.academy/lessons/newtons-laws-c9k3at Make notes from the video. You can also watch the following pod on GCSEpod: https://members.gcsepod.com/shared/podcasts/title/10487/64304 Make notes from the pod named : Newton's Second law and Newton's second law in impacts