

# Year 9 & 10 Physics Homework Term 3.1

Week	Title	Task	Staff Signature
1	Vectors and Scalars	<p>Explain the statements below and give examples:</p> <ul style="list-style-type: none"><li>• Speed of an object has the same value as its velocity</li><li>• The displacement of an object from its starting point is often not the same as the distance it has travelled.</li><li>• The displacement of an object at the end of a journey can never be greater than the distance travelled.</li></ul>	
2	Braking distances	<p>The braking distance of a vehicle is affected by its mass, its speed and the state of its brakes. Explain how these factors affect the braking distance.</p>	
3	Generating electricity	<p>Hydroelectric power and solar power can be used as alternatives to fossil fuels. Assess hydroelectric power and solar power as energy resources for the large scale generation of electricity in the UK.</p>	
4	waves	<p>Compare and contrast waves on water, light waves and sound waves</p>	
5	EM waves	<p>Compare and contrast the harmful effects of infra red and ultraviolet waves</p>	

# Year 9 & 10 Physics Homework Term 3.2

Week	Title	Task	Staff Signature
6	Background Radiation	Scientists carry out an experiment to measure the radioactivity in a factory. They measure the background radiation before and after the experiment. They take the background count at the same place explain how this procedure helps to make sure the results of the experiment are valid.	
7	Work and power	A man is walking up a windy path to the top of a hill. Another man is walking directly from the bottom to the top. Explain who has exerted the greater power and who has transferred the most energy.	
8	Electricity	A 3 pin plug is used to connect a television to the mains electrical supply. In the plug there is a 5amp fuse and an Earth connection. Explain how these safety features are used to make the television safer.	
9	Magnetic Fields	Describe the shapes of a magnetic field around a straight wire and a solenoid and the factors that affect the direction and strength of the field.	
10	Specific Heat capacity	Storage heater use electricity to warm storage materials, during the day, energy is transferred to the surrounding by these materials, water has a specific heat capacity 4200. Brick 900J assess the suitability of these materials in a storage heater.	