Stewards Academy

Science Department **ASSESSMENT FEEDBACK** Year 9 Combined Science (PHYSICS)

Attainment Band :	**P1 Energy (AQA)**
	Knowledge and Understanding
Yellow Plus/ Yellow	Apply the equations for gravitational potential energy and elastic potential energy in a variety of contexts, and change the subject of these equations. Use the equation for kinetic energy to solve problems, including changing the subject of the equation. Use the equation for work done to solve problems, including changing the subject of the equation. Calculate temperature changes, masses or specific heat capacities given the other values. Evaluate an experiment to measure the specific heat capacity of a material. Explain how thermal conductivity affects the rate of energy transfer across a material and affects the rate of cooling of a building. Recognise that in a closed system there may be energy transfers that change the way energy is stored, but there is no net change to the total energy. Evaluate and justify the use of various energy resources for different applications.
Blue	Use the equations for gravitational potential energy and elastic potential energy. Know that kinetic energy is related to mass and velocity squared and use the equation to calculate it. Calculate the work done by a force from the size of the force and the distance moved. Describe what is meant by the specific heat capacity of a material and use the equation for specific heat capacity. Plan an experiment to measure the specific heat capacity of a material. Describe how lubrication and insulation can be used to reduce unwanted energy transfer Calculate energy efficiency. Describe how some energy transfers are more useful than others. Describe the advantages and disadvantages of fossil fuel, nuclear and renewable energy resources.
Green	Describe how energy can be stored by raising an object up or by stretching or compressing it. Describe how a moving object has kinetic energy Recognise that when a force moves an object along the line of action of the force, work is being done State that various devices do work and, in doing so, transfer energy. State that some materials require more energy than others to increase a certain mass by a certain temperature rise. Recognise that some energy transfers are unwanted. State that various resources are used as fuels and to generate electricity.
White	Some elements of the above have been achieved