CORE SCIENCE P1: PHYSICS	Video	Exam Q	☺ 😐 ☹
TRANSFER OF ENERGY IN HEATING			
State what infrared radiation is and that objects emit and absorb it.			
Describe how the amount of infrared radiation can vary.			
Describe how different surfaces vary in their absorption of infrared radiation.			
Describe how different surfaces vary in their reflection of infrared radiation.			
Describe the particle arrangement and different levels of energy in the states of matter.			
Explain the different energy states using the kinetic theory.			
Describe the bonds between particles in the different states of matter			
Describe what is meant by conduction, in terms of particles, including the role of free electrons.			
Describe what is meant by convection, in terms of particles, including explaining changes in density.			
Describe how energy is transferred in evaporation and condensation and factors affecting each.			
Describe the factors that affect the rate of heat transfer from an object.			
State the use of U-values.			
Describe how solar panels work.			
Describe what is meant by specific heat capacity and use the equation.			
ENERGY AND EFFICIENCY			
Describe how energy is wasted and what happens to it.			
Construct and Read information from a Sankey diagram			
Calculate the efficiency of a device using the equation.			
Describe payback time and calculate it.			
USEFFULNESS OF ELECTRICAL APPLIANCES			
Describe energy transfers in everyday electrical appliances.			
Link the amount of energy transferred to the power and the amount of time switched on.			
Calculate the energy transferred when you know the time and power.			
Calculate the cost of electricity given the cost per kilowatt-hour.			
GENERATING ELECTRICITY			
State some energy sources that are used to generate electricity (heat water).			
Describe the processes that occur in different power stations			
Describe alternative methods of generating electricity.			
Evaluate alternative methods of generating electricity.			
Explain what a pumped storage system does			
Explain the advantages and disadvantages of small scale energy production.			
State what the National Grid is.			
Label the different essential parts of the National Grid.			
Explain the use of transformers.			
USING WAVES			
Describe the difference between and transverse and longitudinal wave, using sound and electromagnetic waves as			
Define and calculate the speed, frequency or wavelength of a wave.			
State the speed of an electromagnetic waves and describe what is meant by the electromagnetic spectrum.			
State which electromagnetic waves are used for communication.			
Describe the hazards associated with electromagnetic waves.			
Describe what happens when a wave is reflected including law of reflection and images in a plane mirror.			
Explain how waves can be refracted.			
Explain how waves can be diffracted.			
Describe what is meant by frequency and how this relates to pitch.			
Describe what an echo is.			
Explain the Doppler Effect and relate this to frequency and wavelength of waves.			
Explain how the evidence from red-shift supports the Big Bang Theory.			
Describe what Cosmic Microwave Background Radiation (CMBR) is.			