Y9 PHY	9I Harnessing Energy Learning Checklist	I can do this already	Covered in Class	Strength or weakness?	Revised it?
Energy transfers (Y7 revision)	**Developing:** List eight forms of energy.				
	Securing: describe common energy transfers.				
	Securing: explain how waster forms of energy are 'lost'.				
Conduction	**Developing:** draw accurate particle diagrams for solids, liquids and gases.				
	Developing: list examples of good and bad Thermal conductors.				
	Developing: draw diagrams to explain the process of Thermal conduction.				
	Securing: explain using keywords what happens to particles during Thermal conduction.				
	Extending: explain why solids conduct better than other states of matter.				
	Extending: explain why metals are very good Thermal conductors.				
Convection	**Developing:** explain what is meant by Convection.				
	Developing: describe how Convection occurs in hot water tanks and radiators.				
	Securing: explain why Convection occurs using the concept of Density.				
	Extending: explain why Convection occurs using the Particle model.				
Radiation	**Developing:** explain why Infrared radiation can travel through space.				
	Developing: list examples of objects that give out Infrared radiation.				
	Developing: describe how different surfaces give out different amounts of Infrared radiation.				
	Securing: describe how different surfaces absorb Infrared radiation.				
Making electricity	**Developing:** describe how elecricity is generated.				
	Developing: list ways to generate a larger amount of electricity using a generator.				
	Securing: describe two reasons why electricity is useful.				
Power stations	**Developing:** list the four main parts of a coal power station and describe the function of each.				
	Developing: describe some of the energy transfers that take place within a power station.				
	Developing: describe the rules for drawing Sankey diagrams.				
	Developing: describe in detail energy transfers that take place in a power station.				
	Securing: draw a correctly scaled and labelled Sankey diagram for a coal power station.				
	Extending: compare the design of coal and gas power stations, explaining why gas is more efficient.				
Nuclear power	**Developing:** correctly label a diagram of a nuclear power station.				
	Developing: identify similiarities and differences between fossil-fuel and nuclear power stations.				
	Securing: describe advantages and disadvantages of nuclear power.				
	Extending: explain what happens during nuclear fission, and how control rods affect this process.				