

C5 Energy Changes

Can you...?	😊	😐	😞
5.1.1 Energy transfer during exothermic and endothermic reactions			
Recall that Energy is conserved in chemical reactions. The amount of energy in the universe at the end of a chemical reaction is the same as before the reaction takes place. If a reaction transfers energy to the surroundings the product molecules must have less energy than the reactants, by the amount transferred.			
Describe what an exothermic reaction is and give examples.			
Describe what an endothermic reaction is and give examples.			
State every day uses of exothermic reactions.			
State every day uses of endothermic reactions.			
Distinguish between exothermic and endothermic reactions on the basis of the temperature change of the surroundings.			
Evaluate uses and applications of exothermic and endothermic reactions given appropriate information.			
5.1.2 Reaction profiles			
State what must occur for particles to react.			
Explain what the activation energy is.			
Recall that reaction profiles can be used to show the relative energies of reactants and products, the activation energy and the overall energy change of a reaction.			
Draw simple reaction profiles (energy level diagrams) for exothermic and endothermic reactions showing the relative energies of reactants and products, the activation energy and the overall energy change, with a curved line to show the energy as the reaction proceeds.			
Use reaction profiles to identify reactions as exothermic or endothermic.			
5.1.3 The energy change of reactions (HT only)			
Recall that during a chemical reaction energy must be supplied to break bonds in the reactants and energy is released when bonds in the products are formed.			
Recall that the energy needed to break bonds and the energy released when bonds are formed can be calculated from bond energies.			
State how the energy needed to break bonds and the energy released when bonds are formed differ in endothermic and exothermic reactions.			
Calculate the energy transferred in chemical reactions using bond energies supplied.			