

CHEMISTRY

Learning objectives I can:	I can do this very well	I can do this quite well	I need to do more work on this
5.1 Measure temperature changes accompanying some of the following types of change: a salts dissolving in water			
b neutralisation reactions			
c displacement reactions			
d precipitation reactions			
5.2 Define an exothermic change or reaction as one in which heat energy is given out			
5.3 Define an endothermic change or reaction as one in which heat energy is taken in			
5.4 Describe the breaking of bonds as endothermic and the making of bonds as exothermic			
5.5 Demonstrate an understanding that the overall heat energy change for a reaction is: a exothermic if more heat energy is released making bonds in the products than is required to break bonds in the reactants			
b endothermic if less heat energy is released making bonds in the products than is required to break bonds in the reactants			
H 5.6 Draw and interpret simple graphical representations of energy changes occurring in chemical reactions			
HSW 3 Describe how phenomena are explained using scientific models			
5.7 Investigate the effect of temperature, concentration and surface area of a solid on the rate of a reaction such as hydrochloric acid and marble chips			
5.8 Recall that the rates of chemical reactions vary from very fast, explosive reactions to very slow reactions			
5.9 Describe the effect of changes in temperature, concentration and surface area of a solid on the rate of reaction			
HSW 11 Present information using scientific conventions and symbols			
5.10 Describe how reactions can occur when particles collide H and explain how rates of reaction are increased by increasing the frequency and/or energy of collisions			
H 5.11 Demonstrate an understanding that not all collisions lead to a reaction, especially if particles collide with low energy			
5.12 Recall the effect of a catalyst on the rate of reaction			
5.13 Demonstrate an understanding that catalytic converters in cars: a have a high surface area to increase the rate of reaction of carbon monoxide and unburnt fuel from exhaust gases with oxygen from the air to produce carbon dioxide and water			
b work best at high temperatures			
HSW 13 Explain how and why decisions about uses of science and technology are made			