Reactive Chemistry

CH11-10

3 inquiry questions · 16 dot points

1 What are the products of a chemical reaction?

- investigate a variety of reactions to identify possible indicators of a chemical change
- use modelling to demonstrate
- conduct investigations to predict and identify the products of a range of reactions, for example:...
- investigate the chemical processes that occur when Aboriginal and Torres Strait Islander Peoples detoxify poisonous food items
- construct balanced equations to represent chemical reactions

2 How is the reactivity of various metals predicted?

- conduct practical investigations to compare the reactivity of a variety of metals in:...
- construct a metal activity series using the data obtained from practical investigations and compare this series with that obtained from standard secondary-sourced information
- analyse patterns in metal activity on the periodic table and explain why they correlate with, for example:...
- apply the definitions of oxidation and reduction in terms of electron transfer and oxidation numbers to a range of reduction and oxidation (redox) reactions
- conduct investigations to measure and compare the reduction potential of galvanic half-cells
- construct relevant half-equations and balanced overall equations to represent a range of redox reactions
- predict the reaction of metals in solutions using the table of standard reduction potentials
- predict the spontaneity of redox reactions using the value of cell potentials

3 What affects the rate of a chemical reaction?

- conduct a practical investigation, using appropriate tools (including digital technologies), to collect data, analyse and report on how the rate of a chemical reaction can be affected by a range of factors, including but not limited to:...
- investigate the role of activation energy, collisions and molecular orientation in collision theory
- explain a change in reaction rate using collision theory