



Use this alongside our Walkthrough Guides to tick off the concepts you're confident with to plan your study and find areas of improvement!

### Reaction Rate

- I can describe and explain **collision theory**
- I can describe and explain the term **activation energy**
- I can describe and explain the effect that changing **concentration** has on reaction rate
- I can describe and explain the effect that **surface area** has on reaction rate
- I can describe and explain the effects that changing **temperature** has on the reaction rate
- I can describe and explain the effect that adding a **catalyst** has on the reaction rate

## Equilibrium

- I can describe what a **two-way** reaction is
- I can describe and explain the term **equilibrium**
- I can construct an equilibrium constant ( $K_c$ ) expression for a given reaction
- I can explain the meaning of the value of  $K_c$  for a given reaction
- I can state **Le Chatelier's Principle**
- I can describe and explain the effects that adding a catalyst has on an equilibrium system
- I can describe and explain the effects that changing concentrations have on an equilibrium system
- I can describe and explain the effects that changing pressure has on an equilibrium system
- I can describe and explain the effects that changing temperature has on an equilibrium system

## Acids and Bases

- I can define an **acid**
- I can calculate the pH of a strong acid solution
- I can define a **base**
- I can calculate the pH of a strong base
- I can identify conjugate acid-base pairs in a given acid-base reaction solution
- I can define the term **strong acid/base**
- I can define the term **weak acid/base**
- I can describe and explain what makes a solution conductive and predict whether a solution will be conductive or not
- I can compare and contrast the pH of a strong acid, weak acid, strong base and weak base.
- I can describe, explain and state the value of  $K_w$