



# Learning Journey Map

## Year 11 – Chemistry Separates



# OCR

Oxford Cambridge and RSA

Year 11 Survival Top Tips	
Tip 1	Learn and revise vocabulary weekly, use glossaries given and - Quizlet/Seneca/Educake
Tip 2	Use Youtube- e.g. myGCSE, MrExham to help review key skills and concepts
Tip 3	Use GCSE Bitesize/Kerboodle resources/past OCR questions
Tip 4	Use the Pixl Resources on Firefly & therapy questions
Tip 5	Read online science news, watch science documentaries

Move on to A level  
★★★★★  
★★★★★  
Next Level  
★★★★★

**C6.2 Organic chemistry**

- Alkanes
- Alkenes
- Alcohols
- Carboxylic acids
- Alkanes from crude oil
- Cracking oil fractions
- Addition, biological and condensation polymers
- Producing electricity using chemistry

$\begin{array}{c} \text{H} & & \text{H} \\ & \backslash & / \\ & \text{C} = \text{C} \\ & / & \backslash \\ \text{H} & & \text{H} \end{array}$ 

ETHENE

$\begin{array}{c} \text{H} & \text{H} \\ | & | \\ \text{H}-\text{C} & - & \text{C}-\text{OH} \\ | & | \\ \text{H} & \text{H} \end{array}$ 

ETHANOL

YEAR 11



### C6 Global challenges

#### C6.1 Improving processes and products

- Fertilisers and making fertilisers
- The Haber process and the Contact process
- Making ethanol
- Extracting metals (iron and aluminium)
- Biological metal extraction
- Alloys



#### C6.1 Improving processes and products continued

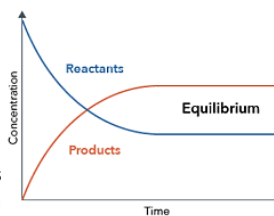
- Corrosion
- Reducing corrosion
- Different materials
- Composite materials
- Choosing materials
- Recycling materials



YEAR 11

#### C5.3 Equilibria

- Reversible reactions
- Equilibrium position
- Choosing reaction conditions



#### C5.2 Controlling Reactions

- Rate of reaction and...
  - Temperature
  - Concentration and pressure
  - Particle size
  - Catalysts



YEAR 11

#### C4.2 Identifying the products of chemical reactions

- Detecting gases
- Detecting cations
- Detecting anions
- Instrumental methods of analysis



#### C5 Monitoring and controlling chemical reactions

##### C5.1 Monitoring chemical reactions

- Theoretical yield
- Percentage yield and atom economy
- Choosing a reaction pathway
- Concentration of solution
- Titrations and titration calculations
- Gas calculations

#### C4 Predicting and identifying reactions and products

##### C4.1 Predicting chemical reactions

- Group 1 – The alkali metals
- Group 7 – The halogens
- Halogen displacement reactions
- Group 0 – The noble gases
- The transition metals
- Reactivity of elements



#### Review of summer learning

##### C6.3 Interpreting and interacting with Earth Systems

- Forming the atmosphere
- Pollution of the atmosphere
- Climate change
- Water for drinking



YEAR 11

CURRICULUM OVERVIEW

Development of key scientific skills: planning valid experiments, carrying out practicals safely, displaying & processing data, as well as analysing & evaluating results

#### Possible careers

Research scientist   Chemist   Doctor   Nurse   Pharmacist  
Forensic scientist   Biochemical engineer   Civil Engineer  
Paramedic   CSI   Police officer   and many more!!

CURRICULUM OVERVIEW