



SC11 Obtaining and using metals

Personal learning checklist | 1 of 1

GCSE Edexcel Separate Sciences | Chemistry Paper 1

Name _____ Class _____ Date _____

Tick one box for each statement. Red: need help. Amber: partly confident.
Green: can do independently.

I can	Red	Amber	Green
Reactivity and displacement			
Recall the reactivity series and use water, acid and salt-solution evidence to compare metals.	☐	☐	☐
Explain reactivity through positive-ion formation and distinguish oxide barriers from underlying reactivity.	☐	☐	☐
Predict displacement reactions and describe their products and observations.	☐	☐	☐
Explain displacement as paired electron loss and gain, identifying oxidised and reduced species (Higher).	☐	☐	☐
Extraction			
Explain oxidation and reduction in terms of oxygen and apply them to metal extraction.	☐	☐	☐
Explain ores, native metals and extraction choices using reactivity, metal concentration and costs.	☐	☐	☐
Compare carbon reduction for iron with molten electrolysis for aluminium and explain energy requirements.	☐	☐	☐
Describe and evaluate bioleaching and phytoextraction, including subsequent metal recovery (Higher).	☐	☐	☐
Oxidation resistance			
Explain corrosion resistance, iron rusting conditions and aluminium's protective oxide layer.	☐	☐	☐
Describe barrier coatings and sacrificial protection and explain their limitations.	☐	☐	☐
Recycling and evaluation			
Evaluate metal recycling using resource conservation, energy, sorting costs and environmental impacts.	☐	☐	☐
Compare life-cycle assessments for the same service, using evidence, assumptions and repeated-use calculations.	☐	☐	☐

My next revision priority _____