

LESSON PLAN TEMPLATE

Class/Subject: Year 10 Science

Lesson date/period: 28/5/10 P2

Unit Topic: Chemistry

Lesson focus/sub-topic: ■ Electrolysis Experiment Part 2

Planned Lesson outcomes: By the end of this lesson, students will have developed:

- Knowledge: Understand the different processes used to separate mixtures.
- Processes & Skills: Successfully separate copper sulfate from an “ore”.
Calculate percentage yields.

Lesson Preparation Checklist:

	✓ or N/A	Checklist
Safety	✓	■ Adequate safety equipment for all students in laboratory/classroom eg. Fire extinguisher, safety goggles
	✓	■ Students briefed on safety procedures – evacuation, first aid, following lab rules
	✓	■ Safety strategy for students of concern has been developed. Students whose behaviour may place them/others at risk identified and plan to address developed
	✓	■ Technical equipment in room – data projector, laptop, smart whiteboard

Time	Task/Activity (Planning considerations)	Resources/Equipment	Focus questions
10mins	<p>INTRODUCTION</p> <p>Write brief notes on the board about electrolysis as well as a diagram of how to set up the electrolysis equipment. Students copy this down.</p>	<ul style="list-style-type: none"> - Whiteboard and markers - Copper “ore” - Scales - Mortar and pestle - Beakers - filter funnel and stand - Filter paper - Bunsen burner - Tripods - Gauze mats - Hand lens - Spatulas - Sodium chloride - Stirring rod - Power pack - Lead strips - Wires - Steel Wool 	<p>What was the purpose of crushing the “ore”?</p>
60mins	<p>ENHANCING PROCESS/SKILL DEVELOPMENT</p> <p>Students are briefed about experimental procedure as well as safety. Students are then able to collect equipment and conduct experiment.</p>		<p>In words describe what is meant by the term “percentage yield”.</p>
70mins	<p>CONSOLIDATION</p> <p>Clean up and answer discussion questions. Go through the answers to the discussion questions and the who wants to be a millionaire questions should there be extra time.</p>		<p>How does adding salt to the solution help it conduct electricity? Explain with the aid of a diagram.</p> <p>Sodium chloride, oil, sand and iron filings are mixed together in a beaker of water. Devise a series of steps to separate these substances.</p>

Professional Standard focus: During this lesson, I will focus on:

Standard 1	Use of experimentation to give students firsthand experience with the concept.
Standard 7	Ensure all students are all working safely and communicate clear expectations in reads to laboratory conduct. Ensure all students are working to the best of their ability.