Chemistry 11 Unit 1 Worksheet

Name:	Date:	/43	%

Safety & Planning

Part 1: Applying Foundational Safety Procedures (2 marks each scenario) **/12**

Safety rules aren't abstract—they're direct actions. For each scenario, state the **specific rule being violated** and the **immediate action** required to fix the situation or respond to the emergency.

Scenario	Rule Violated (Be Specific)	Immediate Corrective Action
1. Sarah, rushing to finish, adds a full scoop of sodium hydroxide (a solid base) directly to the bottle of acid to neutralize it.		
2. John is heating a test tube of liquid, but he points the open end towards his partner, David.		

3. A small amount of hot liquid suddenly "bumps" (spills) onto your hand.		
4. Fatima cuts her finger on a piece of broken beaker glass that she tried to pick up with her fingers.		
5. While waiting for a reaction to finish, Maria rests her chin in her hand and takes a large bite out of an energy bar.		

6. David smells a chemical by putting his nose directly over the open container.		

Part 2: WHMIS 2015 Pictograms (2 marks each) **/8**

Identify the WHMIS pictogram name and explain the specific precaution required for safe handling of a chemical bearing that symbol.

Pictogram	Pictogram Name	Specific Precautionary Action
		
		
		
		

Part 3: Emergency Equipment and Skill Check /4

1. Explain the Acid-to-Water Rule and its rationale using the terms exothermic and splashing. (2 marks)

2. What is the critical sign that you have achieved the optimal flame for heating, and what part of the burner do you adjust to achieve it? (2 marks)

Optimal Flame Sign: _____

Adjustment Part: _____

Part 4: Scientific Inquiry and Language /19

1. Define: (2 marks)

Empirical Statement:

Theoretical Statement:

2. Classification: Classify each statement as **Empirical (E)** or **Theoretical (T)**. (1 mark each)

Statement	Classification
The atoms of magnesium transfer two electrons to the oxygen atom.	
The magnesium metal ribbon is shiny and flexible.	
The pH of the unknown solution was measured as 12.5.	

Statement	Classification
A molecule of water has a bent geometry due to lone pair repulsion.	
When mixed, the two clear liquids formed a cloudy white solid precipitate.	

3. Application: An experiment requires you to heat an unknown clear solution until it evaporates. Write a safe, step-by-step **Procedure** for this task, ensuring you address the **Safety Notes** and **Waste Disposal** required at the end. (2 marks each)

Step	Procedure Details
1	
2	
3	
4	
Safety Notes	
Waste Disposal Plan	