

SENSE	TITLE	TIMING
	The PH Detective	 45 minutes

AUTHORS	KEY WORDS	LANGUAGE
João Mouro	Acid, Base, Neutral, Sour, Bitter, Reaction, Litmus paper, Lemon, Vinegar, Baking soda	English

LEVEL	GROUP LEVEL	AGE
A2	Secondary Education (High School)	12-15

COMPETENCES			
•	Global	•	Oral Production
•	Oral comprehension	•	Written Expression
•	Oral expression	•	Written Comprehension

OBJECTIVES	
COMMUNICATIVE	• Expressing logical deductions ("If it is sour, it is an acid").
FUNCTIONAL	• Describing sensory experiences.
CULTURAL	• Understanding the link between taste (sour/bitter) and chemical properties (pH scale).

METHODOLOGY	• Lab groups (pairs), • Scientific logging
TECHNIQUES	• Pair work • Sensory exploration prediction • Ph testing and scientific recording.
RESOURCES	• Blindfolds • Safe food samples • Vinegar • Baking soda, • pH strips/litmus paper • An interactive pH scale.
ICT TOOL	• Digital pH Scale Simulator / Interactive Whiteboard

ASSESSMENT

Part 1 - Sensory & Chemical

SENSORY WORD		CHEMICAL CLASSIFICATION
A. Sour	(___)	1. pH of 7 (Example: Pure Water)
B. Bitter	(___)	2. A substance with a pH less than 7
C. Sweet	(___)	3. Typical taste of a Base
D. Acid	(___)	4. Typical taste of an Acid
E. Neutral	(___)	5. Not chemically classified (Energy Source)

Part 2 - Observing and Reporting (5 points)

Complete the sentences below using the correct English vocabulary from the lesson (sour, bitter, acid, base, red, blue).

The orange juice tasted _____ and turned the litmus paper _____. This means it is an _____.

The substance smelled like soap, so I predicted it was a _____.

Foods that taste _____ (like coffee) are often examples of a _____ (acid/base).

Part 3 - Critical Thinking (10 points)

Imagine you tasted an unknown liquid and described it as "strong and very acidic.

Write one English sentence describing what you *think* the pH strip would look like:

Write one English sentence describing why you must not taste a substance in the Chemistry lab without permission:

DESCRIPTION OF ACTIVITIES		
Appetizer	10'	Activity 1 - The Molecule Sort
		Teacher writes "ACID" (Sour) and "BASE" (Bitter) on the board. Students brainstorm.
Salad	5'	Activity 2 - Safety Check
		Quick matching game using symbols. Match the danger symbol (Skull, Fire) to the English instruction (Don't drink, Handle with care). Introduction to "Edible vs. Chemical".
Main Dish	15'	Activity 3 - Taste & Test
		Students work in pairs 1. Taste: Student A tastes a safe sample (e.g., lemon juice) and describes it using English adjectives: "It is extremely sour!" 2. Predict: Student B predicts: "I think it is an Acid." 3. Verify: They dip a pH strip into the liquid and compare the color to the scale to confirm.
Dessert	10'	Activity 4 - Lab Report
		Students complete a simple table sentence frame: "The vinegar tasted _____ (sour), so it is an _____ (acid). The pH strip turned _____ (red)."
Smile	5'	Activity 5 - The Human pH Scale
		Students stand in a line. Left is Acid (Sour face), Right is Base (Bitter face). Teacher calls out a food ("Grapefruit!"), students jump to the correct side to exit the class.



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