

SENSE	TITLE	TIMING
	The Reaction Observer	 45 minutes

AUTHORS	KEY WORDS	LANGUAGE
João Mouro	Bubbling, fizzing, explosion, color change, gas, liquid, solid, melting, freezing	English

LEVEL	GROUP LEVEL	AGE
A2/B1	Secondary Education (High School)	12-16

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

OBJECTIVES	
COMMUNICATIVE	• Describing processes and changes in real-time.
FUNCTIONAL	• Reporting observations.
CULTURAL	• Identifying signs of a chemical reaction (formation of gas, color change, temperature change).

METHODOLOGY	• Observation pairs • Class discussion
TECHNIQUES	• Pair work • Scientific observation • Class discussion • Role-play • Visual reporting.
RESOURCES	• Reaction videos • Projector • Vinegar • Baking soda • Glow sticks • Observation worksheets.
ICT TOOL	• YouTube (Slow-motion chemical reactions) • Projector

ASSESSMENT

Part 1 - Describing the Change (10 points)

Watch the short video clip of the chemical reaction (Teacher plays a video of Mentos in Coca-Cola). In English, use the Present Continuous Tense to describe what you SEE and HEAR.

SIGHT: (Describe visual changes using "is + -ing")

HEARING: (Describe sounds using "is + -ing" or "are + -ing")

Part 2 - Scientific Classification (5 points)

Circle the correct answer in English.

- What is the main sign of a chemical reaction in the video? a) A change of location b) The formation of a gas (Bubbles / Fizzing) c) A change in size
- When ice melts into water, the solid becomes a liquid. This is an example of a: a) Chemical Change b) Physical Change c) A Nuclear Reaction

Part 3 - Vocabulary and Action (5 points)

- The sound of liquid rapidly turning into gas (like in boiling water):
- The sound of a substance making many small bubbles:



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DESCRIPTION OF ACTIVITIES		
Appetizer	10'	Activity 1 - States of Matter Charades
		Teacher whispers "Solid", "Liquid", or "Gas" to a student. The student must act it out (e.g., Gas = moving fast and spreading out arms). Class guesses in English.
Salad	5'	Activity 2 - Sound of Science
		Play audio only of chemical events (Bunsen burner lighting, liquid pouring, effervescence/fizzing). Students match the sound to the vocabulary word.
Main Dish	15'	Activity 3 - Observation Log
		Teacher performs a live demo (e.g., mixing baking soda and vinegar OR snapping a glow stick). Students must draw what they SEE (bubbles, light) and write what they HEAR (fizzing, cracking). They write one scientific observation sentence: "The solid mixed with the liquid and created a gas."
Dessert	10'	Activity 4 - Reaction Comic Strip
		Students draw a 3-panel comic of the reaction. Panel 1: Before (The ingredients). Panel 2: During (The reaction/Action). Panel 3: After (The result). They add English captions.
Smile	5'	Activity 5 - Element Exit Ticket
		To leave the class, students must say one English word related to the experiment (e.g., "Bubbles", "Gas", "Reaction") and identify if it was a physical or chemical change.



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