

3. Assessment

Criteria for formative assessment

The assessment formative instruments used to evaluate the students are based on the Teacher’s Oral Questioning and/or on the Teacher’s Observations within the classroom, and the second one on the Teacher’s Marking of Written Materials.

3.1. The student assesment tool based on the Teacher’s Oral Questioning and/or on the Teacher’s Observations within the classroom (following patterns of Holbrock, 2007)

No.	Dimension	Criteria for evaluation a student: The student.....	Date:			
			1	2	3	4
Question 1	Questions to individuals in whole class setting and/or in settings of group-work	answers questions at an appropriate (cognitive) level				
		shows willingness to participate in activities				
		tries to challenge/support the problem solving processes during the class/group discussion/s				
		is able to explain the work of the class/group				
		can explain the actions undertaken by each member				
		can exhibit (demonstrate) non-verbal activity				
		shows knowledge of the science terms related to the task				
		understands the science related to the task				
		thinks in a creative manner (exhibits vision)				



No.	Dimension	Criteria for evaluation a student: The student.....	Date:			
			1	2	3	4
		offers appropriate scientific problem solving ideas				
		uses appropriate scientific language				
		can make justified decisions				
		is willing to support other members in the class/group in giving answers on finding problem solving ideas				
Observation 1	Functioning in the group during experimentation or discussion	contributes to the group discussion during the inquiry phases (e.g. by raising questions, planning investigation/experiment, putting forward hypotheses / predictions, analyzing data, drawing conclusions, making justified decisions)				
		cooperates with others in a group and fully participates in the work of the group				
		takes ownership for work group (e.g. by guiding the group, thinking creatively, helping those who need assistance, encouraging group members)				
		shows tolerance towards group members				
		knows which tests and measurements to perform				
		is able to summarise outcomes				
Observation 2	Performing the investigation or experiment	performs the investigation/experiment according to the instructions or plan created				
		uses laboratory tools or the measurement equipment in a safe and appropriate manner				
Observation 3	Presenting the investigation or experiment orally	understands the objectives of the investigation/experimental work				
		presents the activity in a clear and practical manner with appropriate justified decisions				



		presents by illustrating knowledge and understanding of the subject				
		presents with clarity and confidence using an audible voice				
		uses an appropriate scientific language				

3. 2. The student assesment tool based on the Teacher's Marking of Written Materials (Holbrock, ICASE)

No.	Dimension	Criteria for evaluation a student: The student.....	Date:			
			1	2	3	4
W1	<i>Writing a plan or report of an investigation</i>	puts forward an appropriate research / scientific question and / or knows the purpose of the investigation / experiment				
		creates an appropriate investigation or experimental plan to the level of detail required by the teacher				
		puts forward an appropriate prediction / hypotheses				
		develops an appropriate procedure (includind apparatus/chemicals required and safety procedures required) and indicates variables to control				
W2	<i>Recording experimental data collected</i>	makes and records observations / data collected appropriately (in terms of numbers of observations deemed acceptable / accuracy recorded / erros given)				
W3	<i>Interpreting or calculating from data collected and drawing conclusions</i>	interprets data collected in a justifiable manner including the use of appropriate graphs, tables and symbols				
		draws appropriate conclusions related to the research / scientific question				
W4	<i>Answering questions</i>	provides correct written answers to quaestions given orally or in written format				



No.	Dimension	Criteria for evaluation a student: The student.....	Date:			
			1	2	3	4
		provides answers in sufficient detail especially when is called upon to give an opinion or decision				
W5	<i>Drawing charts / diagrams / tables / models / symbolic representations</i>	is able to provide graphical representation as required				
		is able to present graphical representations of a suitable size and in suitable detail				
		is able to provide full and appropriate headings for diagrams, figures, tables				
W6	<i>Scientific or socio-scientific reasoning</i>	illustrates creative thinking/procedures in solving problems				
		gives a justified socio-scientific decision to an issue or concern, correctly highlighting the scientific aspect				

