

# Boiling point as a matter of geography

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## Assessment criteria

The assessment is based on the teacher's observations and on the evaluation of the group report that was done by the students during the inquiry activity.

During the activity, the teacher observes the students and grades them according the rubrics that are included in the "Student evaluation tool based on the teacher's observations assessment tool". Writing a group report is one of the duties of the students concerning the inquiry activity. This report is assessed by the teacher according the "Student evaluation tool that assesses a report of a research experiment".

## Student evaluation tool that assesses a report of a research experiment

Name of experiment: \_\_\_\_\_ Date: \_\_\_\_\_

Names of students in the group: \_\_\_\_\_

The component	Dimensions	Criteria for the assessment	Assessment	Average	
Observations (at the pre-research stage and during the research)	Recording and organizing the observations	Record various observations (include qualitative and quantitative components)			
		Record precise and detailed observations			
		Distinguish between the observation and the interpretation (describe the observation and do not interpret)			
		Organize the observations in a logical manner (in a table based on the experiment's stages)			
10%					
The theoretical stages of the research	Asking the questions	Ask a variety of questions (at least 5 questions)			
		Ask relevant questions (Appropriate to the findings from the pre-research phase)			
	The research question	Select a relevant research question for the pre-research phase			
		Select a research question that can be examined in the school's lab			
		Phrase the research question in a clear and relevant manner (based on the rules)			
		Ask a high level research question (if possible, a question that associates 2 variables)			
	The Hypothesis	Set a hypothesis that corresponds to the selected research question			
		Reason the hypothesis in a serious manner			
		Base the hypothesis on relevant scientific knowledge			
		Base the hypothesis on correct scientific knowledge			
		Phrase the hypothesis in a clear and relevant manner			
	35%	Designing the experiment	Design the research that examines the hypothesis		
			Present the experimental phases in a detailed manner (including the control)		
			Present the experiment in a clear and logical manner		

		Submit a detailed list of the materials and the equipment that is appropriate for the planned research		
The post-research stage  30%	Presenting the results	Present the results in a clear and scientific manner (by using table, chart, graph, etc.)		
		Interpret the observations and analyze the data		
	Drawing the conclusion	Draw conclusions that are based on the research's results		
		Draw conclusions that refer and that are appropriate to all the research's results		
		Explain and reason the conclusions while basing them on relevant and appropriate scientific knowledge		
		Relate the conclusions with the research question		
	Concluding group discussion	Critically examine the results (precision of the measurements, the experiment's limits, etc.)		
		Critically refer to the conclusions (the correlation between the conclusion and the hypothesis)		
		Following the experiment, phrase new hypothesis or raise new questions		
	The experiment's report  5%	Written expression	Use a precise and proper scientific language throughout the report	
Submit a readable, aesthetic, and organized report				

## Student Evaluation Tool Based on the Teacher's Observations

Experiment's Name: \_\_\_\_\_

Date: \_\_\_\_\_

Dimension	Criteria for evaluation The student:	Students' name in the group			
<b>Performing the experiments</b> (at the pre-inquiry and inquiry phases)  <b>25%</b>	Performs the experiment according to the instructions				
	Maintains an orderly and clean work table				
	Knows which tests and measurements to perform				
	Uses properly the lab tools and the measurement equipment				
	Average				
<b>Functioning in the group</b>  <b>25%</b>	Contributes to the group discussion during the theoretical inquiry phases (raises questions and hypotheses, designs the experiment, and -draws conclusions)				
	Has patience for the group's members				
	Knows and understands the objectives of the inquiry's various phases (active observation)				
	Thinks in a creative manner and exhibits vision				
	Average				
<b>Presenting the experiment - orally</b>  <b>50%</b>	Presents the activity in a clear and practical manner				
	Presents knowledge and understanding of the subject				
	Uses precise and proper scientific language				
	Average				