Assessment

Which cleaning agent do we choose ?

Developers:

Institute: Learning Lund, Lund University
Country: Sweden

Assessment Criteria

Part A Assessment of Application of Skills

Process Skill

1. Seek and collect information related to the study of cleaning agents, from the books, computers networks and web pages.

- The teacher observes the materials presented by the students, and the analysis made about them.

A. Not able to collect work material.
B. Able to collect material, but is not able to select the relevant one.
C. Able to collect material and able to select the relevant information.

2. To design and carry out experimental determinations, in situ, and at the lab.

- The teacher observes the students carrying on the work, in the domestic science room, and lab too.

A. Not able to devise a experimental determination to do during the field trip, and the lab either.
B. The student devise the experimental determinations, but is not able to do it in the field trip and lab either.
C. The student devise the experimental work, and do it correctly, obtaining experimental results.

Intellectual Skill

3. Explain the advantages and disadvantages of different types of cleaning agents.

- The teacher listens to the students´ opinion and analyse the tables and charts.

A. Not able to explain the advantages and disadvantages of different types of cleaning agents.
B. Able to explain the advantages and disadvantages, but is not able to present it in tables and charts.
C. Able to explain correctly and make comparatives charts and tables explaining the advantages and disadvantages of different kind of cleaning agents.

4. Explain the importance of pH for the agent’s action and how pH can be determined.

- The teacher asks some questions about the concepts of pH and surface tension and the impact of these on the ability of the agent to remove unwanted substances from kitchen and bathroom surfaces. The teacher listens to the students´ ideas about removing unwanted substances from kitchen and bathroom surfaces..

A. The student is not able to comprehend the concepts of pH and surface tension.
B. The student explains correctly the concepts of pH and surface tension, but is not able to devise a way to determinate them experimentally.
C. The student explain correctly the concepts of pH and surface tension, and is able to devise a simply and practical way to determine these quantities.

5. Explain the connection between cleaning and bacterial growth.

- The teacher asks some questions about the conditions of bacterial growth and the impact of the cleaning agent to remove bacteria from kitchen and bathroom surfaces. The teacher listens to the students´ ideas about removing bacteria from kitchen and bathroom surfaces..

D. The student is not able to comprehend the conditions of bacterial growth and does not see any connection between these and the cleaning agent.
E. The student explains correctly the conditions of bacterial growth and does not see any connection between these and the cleaning agent, but is not able to devise a way to determinate them experimentally.
F. The student explains correctly the conditions of bacterial growth and does not see any connection between these and the cleaning agent, and is able to devise a simply and practical way to study this.

Social Skill

6. To cooperate with partners in the group in undertaking an experimental investigation.

- The teacher observes the development of the group work, during the investigation, both in the lab and the domestic science romm and the elaboration of findings for the final report.

A. Not able to have related with the rest of the group members.
B. The student is integrated to the group, but does not shows interest for the work, that the group is doing.
C. The student is integrated to the group, and works co-operatively with his/ her partners, developing the tasks of investigation and elaborating conclusions.

7. Decide, with reasons, which cleaning agent Mr. Clean should buy.

- The teacher reads the final report presented to Mr. Clean.

A. Not able to inform what cleaning agent would be appropriate to buy by Mr. Clean.
B. The student indicates what cleaning agent Mr. Clean should buy, but does not justify the reasons for this election.
C. The student decide what cleaning agent Mr. Ground should buy, and justify it, basing its election in the experimental data

Personal Skill

8. Communicate

Part B Assessment by Lesson

Part C Assessment by Teaching Strategy

Student Assessment Tool based on the Teacher's Marking of Written Material

	Dimension	**Criteria for evaluation The student:**	**Students' name in the group**			
1	Socio-scientific decision making	Gives a justified socio-scientific decision to an issue or concern, correctly highlighting the scientific component				
2	Writes a report of the decision made	Puts forward a well argued decision as to which cleaning agent Mr Clean should purchase based on experimental and other data.				

Student Assessment Tool based on the Teacher's Oral Questioning

	Dimension	**Criteria for evaluation The student:**	**Students' name in the group**			
1	Questions to individuals in a Whole Class setting on the concept of density	Answers questions at an appropriate cognitive level using appropriate scientific language				
		Shows interest and a willingness to answer				
		Willing and able to challenge/ support answers by others, as appropriate				
	Explain the advantages and disadvantages of different types of cleaning agent					

Student Assessment Tool based on the Teacher's Observations

	Dimension	Criteria for evaluation The student:	Students' name in the group			
1	To cooperate with partners in the group in undertaking an experimental investigation.	Contributes to the group discussion during the inquiry phases (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.				
		Illustrates leadership skills – guiding the group by thinking creatively and helping those needing assistance (cognitive or psychomotor); summarising outcomes.				
		Shows tolerance with, and gives encouragement to, the group members.				
2	Seek and collect information related to the study of soil, from the books, computers networks and web pages	Understands the objectives of the investigation/experimental work and knows which tests and measurements to perform.				
		Performs the investigation/experiment according to the instructions/plan created.				
		Uses lab tools and the measurement equipment in a safe and appropriate manner.				
		Behaves in a safe manner with respect to him/herself and to others.				
		Maintains an orderly and clean work table.				
3	To design and carry out experimental determinations, in situ, and at the lab.	Presents the activity in a clear and practical manner with justified decisions.				
		Presents by illustrating knowledge and understanding of the subject.				
		Uses precise and appropriate scientific terms and language.				
		Presents with clarity and confidence using an audible voice.				