
Templates for Assessment and Evaluation

Rating Scale Template

1)	_____	_____
		1 2 3 4 5
2)	_____	_____
		1 2 3 4 5
3)	_____	_____
		1 2 3 4 5
4)	_____	_____
		1 2 3 4 5
5)	_____	_____
		1 2 3 4 5
6)	_____	_____
		1 2 3 4 5
7)	_____	_____
		1 2 3 4 5
8)	_____	_____
		1 2 3 4 5
9)	_____	_____
		1 2 3 4 5
10)	_____	_____
		1 2 3 4 5
11)	_____	_____
		1 2 3 4 5
12)	_____	_____
		1 2 3 4 5
13)	_____	_____
		1 2 3 4 5
14)	_____	_____
		1 2 3 4 5

Checklist of Laboratory Procedures

Name

Date

Activity

Key: 1 = Rarely 2 = Occasionally 3 = Frequently

1 2 3

Instructions followed

Safety precautions observed

Equipment handled correctly

Equipment cleaned thoroughly

Equipment stored properly

Lab area kept clean

Spills cleaned promptly

Chemical disposed of properly

Cooperation with others

Improvisation

Appropriate use of time

Observations noted and recorded

Other: _____

Group Self-Assessment of Laboratory Activities

Group _____

Date _____

Activity _____

Use these descriptors to assess how effectively your group performed a specific activity. Choose one or several numbers from the list of criteria.

1 = yes

2 = no

3 = we think so

4 = needs improvement

5 = satisfactory

6 = excellent

Things to consider	
Did we develop a clear plan before we began?	
Did each group member have specific things to do?	
Were we able to work together as a team?	
Did we discuss the purpose for doing the activity?	
Was a hypothesis developed and recorded?	
How well did we predict what took place?	
Were instructions followed correctly?	
How well did we use equipment and materials?	
Did we observe all safety precautions?	
Were measurements made accurately?	
How well were data recorded?	
Did we clean up thoroughly after the activity?	
Were the data examined closely to search for meaning?	
Did we use accepted techniques for data analysis?	
Were the conclusions consistent with the data?	
Did we re-examine our initial hypothesis?	
Did we account for experimental error?	
Was relevant research used to support our work ?	
Other:	

Self-Assessment of Performance as a Group Member

Your name

Topic

Group Members

Date

Circle the following on working within the group. Additional written responses may be included.

- | | | | |
|--|--------|-----------|-------|
| 1. I encouraged others. | Seldom | Sometimes | Often |
| 2. I shared ideas and information. | Seldom | Sometimes | Often |
| 3. I checked to make sure that others in the group knew what they were doing. | Seldom | Sometimes | Often |
| 4. I was willing to help others. | Seldom | Sometimes | Often |
| 5. I accepted responsibility for completing the work properly and on time. | Seldom | Sometimes | Often |
| 6. I was willing to listen to others in the group. | Seldom | Sometimes | Often |
| 7. I was willing to receive help from others in the group. | Seldom | Sometimes | Often |
| 8. I offered encouragement and support to others in the group. | Seldom | Sometimes | Often |
| 9. Others in the group shared ideas and information. | Seldom | Sometimes | Often |
| 10. The group checked with the teacher to make sure we knew what we were supposed to be doing. | Seldom | Sometimes | Often |
| 11. All members of the group contributed equally to this project. | Seldom | Sometimes | Often |

Answer the following questions about working in a group.

- How did you distribute the workload within your group?
- What problems, if any, arose within your group?
- What would you do differently next time?
- How is working in a group different from working by yourself?

Science Report Evaluation Form*

Name:

Date:

Activity:

Written Presentation	Weight	Score
Title Page	5	
Introduction	10	
Body	30	
Conclusion	20	
Supporting References	5	
Neatness	10	
Organization	20	
Content		
Communication Skills	25	
Originality	25	
Accuracy	20	
Appropriateness	30	
Creativity	25	
Overall Impression	10	
Total Score	185	

Other Comments:

- * Criteria for an oral presentation may be developed. Teachers are encouraged to develop criteria for each element on this page (e.g, Title page must include title centered left/right and vertically, student's name and class number) and share those with the students before they do their report.

Laboratory Report Evaluation

Name _____

Date _____

Activity _____

	Excellent	Good	Satisfactory	Unsatisfactory
Completeness				
Accuracy				
Organization				
Presentation				

Comments: _____

Overall Report Grade: _____

Data Collection/Notebook Checklist*

Name

Date

A checkmark indicates that the criterion is satisfactory. No mark indicates that the criterion is either missing or unsatisfactory.

Documentation is complete.	
The information or data collected is accurate.	
Written work is neat and legible.	
Tables and diagrams are completed neatly.	
Each new section begins with an appropriate heading.	
Errors are crossed out but not erased.	
Spelling and language usage are edited and corrected.	
Information is recorded in a logical sequence.	
Technological aids are used appropriately.	
Notes are collected in a folder or binder.	
Colour or graphics are used to enhance the appearance.	
Rough work is done separately.	

Comments/Overall Impressions:

* This checklist may be used by teachers, or by students for self-evaluation. It may be used to evaluate notebooks, laboratory data collection done during investigations, or more formal written laboratory reports. Students should be made aware of these criteria at the start of the term.

Observation of Group Behaviours

Student or Group _____

Activities:

- a _____
- b _____
- c _____
- d _____
- e _____
- f _____

1 = rarely 2 = occasionally 3 = frequently 4 = consistently

	a	b	c	d	e	f
Remains on task						
Follows directions						
Exhibits leadership						
Respects the ideas of others						
Works cooperatively						
Communicates effectively						
Shares tasks equitably						
Works safely						
Handles equipment correctly						
Displays initiative						
Exhibits scientific curiosity						

Science Challenge Suggested Marking Scheme

Name

Description of Activity

Due Date

	Weight	Score
Content		
Accuracy	5	_____
Completeness	10	_____
Range of coverage	10	_____
Concept attainment	30	_____
Presentation of Material		
Layout	5	_____
Neatness	5	_____
Organization of ideas	10	_____
Language usage	10	_____
Originality	10	_____
Sources acknowledged	5	_____
Graphs, tables, and charts	10	_____
Supporting exhibits (models, etc.)	10	_____
Deadline met	5	_____
Interest level	10	_____
	_____	_____
Oral Report	25	_____
	_____	_____
Bonus (submitted before due date)	5	_____
Total		_____

Factors of Scientific Literacy Developed in Middle Level Science

These checklists may be used in a variety of ways. Teachers may wish to use them to determine which factors have been covered throughout the entire year to ensure that adequate coverage has been provided for them. The checklists could also be used when covering a particular topic. Once factors which have not been emphasized in that topic have been identified, teachers can then use that information in their planning of subsequent topics to ensure that all of the factors have been given sufficient coverage by the end of the course. Columns for core and optional units are shown.

Dimension A Nature of Science

Factors								
1. public/private								
2. historic								
3. holistic								
4. replicable								
5. empirical								
6. probabilistic								
7. unique								
8. tentative								
9. human/culture related								

Dimension B Key Science Concepts

Factors								
1. change								
2. interaction								
3. orderliness								
4. organism								
5. perception								
6. symmetry								
7. force								
8. quantification								
9. reproducibility of results								
10. cause-effect								
11. predictability								
12. conservation								
13. energy-matter								
14. cycle								
15. model								
16. system								
17. field								
18. population								
19. probability								
20. theory								
21. accuracy								
22. fundamental entities								
23. invariance								
24. scale								
25. time-space								
26. evolution								
27. amplification								
28. equilibrium								
29. gradient								
30. resonance								
31. significance								
32. validation								

Dimension C Processes of Science

Factors								
1. classifying								
2. communicating								
3. observing and describing								
4. working cooperatively								
5. measuring								
6. questioning								
7. using numbers								
8. hypothesizing								
9. inferring								
10. predicting								
11. controlling variables								
12. interpreting data								
13. formulating models								
14. problem solving								
15. analyzing								
16. designing experiments								
17. using mathematics								
18. using time-space relationships								
19. consensus making								
20. defining operationally								

Dimension D Science-Technology-Society-Environment Interrelationships

Factors								
1. science and technology								
2. scientists and technologists are human								
3. impact of science and technology								
4. science, technology, and the environment								
5. public understanding gap								
6. resources for science and technology								
7. variable positions								
8. limitations of science and technology								
9. social influence on science and technology								
10. technology controlled by society								
11. science, technology, and other realms								

Dimension E Scientific and Technical Skills

Factors								
1. using magnifying instruments								
2. using natural environments								
3. using equipment safely								
4. using audiovisual aids								
5. computer interaction								
6. measuring distance								
7. manipulative ability								
8. measuring time								
9. measuring volume								
10. measuring temperature								
11. measuring mass								
12. using electronic instruments								
13. using quantitative relationships								

Dimension F Values that Underlie Science

Factors								
1. longing to know and understand								
2. questioning								
3. search for data and their meaning								
4. valuing natural environments								
5. respect for logic								
6. consideration of consequence								
7. demand for verification								
8. consideration of premise								

Dimension G Science-Related Interests and Attitudes

Factors								
1. interest								
2. confidence								
3. continuous learner								
4. media preference								
5. avocation								
6. response preference								
7. vocation								
8. explanation preference								
9. valuing contributors								