

Classroom Observation Protocol

BACKGROUND INFORMATION

Teacher Name _____ Start Time _____ End Time _____
Date of Observation _____ Observer (s) _____
Grade Level _____

SECTION ONE: LESSON CHARACTERISTICS

I. Lesson Purpose

According to the teacher, what was the purpose of this lesson and how does the lesson relate to the goals of the unit?

II. Description

In a paragraph or two, describe the lesson you observed. Include where this lesson fits in the overall unit of study.

SECTION TWO: LESSON RATINGS

I. Science Content

Reflect on the extent to which:

- The lesson content was consistent with the stated purposes of the unit.
- The science content was significant and worthwhile.
- The science content was appropriate for the developmental levels of the students in this class.
- The problem, question, representation (or other identified purpose) presented to students was comprehended by, and interesting to, students.
- Students were intellectually engaged with important science ideas relevant to the purpose of the lesson.
- Teacher-provided content information was accurate.
- The teacher displayed an understanding of science concepts (e.g., in his/her dialogue with students).
- Science was portrayed as a dynamic body of knowledge continually enriched by conjecture, investigation analysis, and/or proof/justification.
- Appropriate connections were made to other areas of mathematics/science, to other disciplines, and/or to real-world contexts.
- The degree of "sense-making" of science content within this lesson was appropriate for the developmental levels/needs of the students and the purposes of the lesson.

Synthesis Rating

1	2	3	4	5
Science content of lesson was not at all reflective of current standards for science education				Science content of lesson was extremely reflective of current standards for science education

Supporting Evidence for Synthesis Rating:

II. Implementation

Reflect on the extent to which:

- Instructional strategies were consistent with the stated purposes of the unit.
- The instructional strategies were consistent with investigative science.
- The pace of the lesson was appropriate for the developmental levels/needs of the students and the purposes of the lesson.
- The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, and/or learning styles.
- The teacher was able to "read" the students' level of understanding and adjusted instruction accordingly.
- The instructional strategies and activities reflected attention to issues of access, equity, and diversity for students (e.g., cooperative learning, language-appropriate strategies/materials).
- The teacher appeared confident in his/her ability to teach science.
- The teacher's questioning strategies were likely to enhance the development of student conceptual understanding/problem solving (e.g., emphasized higher order questions, appropriately used "wait time," identified prior conceptions and misconceptions).
- The teacher's classroom management style/strategies enhanced the quality of the lesson.

Synthesis Rating

1	2	3	4	5
Implementation of the lesson was not at all reflective of best practice in science education				Implementation of the lesson was extremely reflective of best practice in science education

Supporting Evidence for Synthesis Rating:

III. Science Classroom Culture

Reflect on the extent to which:

- Active participation of all was encouraged and valued.
- There was a climate of respect for students' ideas, questions, and contributions.
- Interactions reflected collegial working relationships among students (e.g., students worked together, talked with each other about the lesson).
- Interactions reflected collaborative working relationships between teacher and students.
- The climate of the lesson encouraged students to generate ideas, questions, conjectures, and/or propositions.
- Students were engaged in reporting, expressing, clarifying, and justifying their ideas.
- Intellectual rigor, constructive criticism, and the challenging of ideas were evident.

Synthesis Rating

1	2	3	4	5
Classroom culture interfered with student learning				Classroom culture facilitated the learning of all students

Supporting Evidence for Synthesis Rating

IV. Overall Ratings of the Lesson

A. Likely Impact of Instruction on Students' Understanding of Science

While the impact of a single lesson may well be limited in scope, it is important to judge whether the lesson is likely to help move students in the desired direction. For this series of ratings, consider all available information (i.e., your previous ratings of science content, implementation, and classroom culture, and the pre- and post-observation interviews with the teacher) as you assess the likely impact of this lesson. Feel free to elaborate on ratings with comments in the space provided.

Select the response that best describes your overall assessment of the *likely effect* of this lesson in achieving the science learning goals for this class.

	Negative <u>effect</u>	Mixed or neutral <u>effect</u>	Positive <u>effect</u>	Don't know	N/A
1. Students' understanding of science as a dynamic body of knowledge generated and enriched by investigation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Students' understanding of important science concepts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Students' capacity to carry out their own inquiries.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Students' ability to apply or generalize skills and concepts to other areas of science, other disciplines, and/or real-life situations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Students' self-confidence in doing science.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Students' interest in and/or appreciation for science.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B. Capsule Description of the Quality of the Lesson

In this final rating of the lesson, consider all available information about the lesson, its context and purpose, and your own judgment of the relative importance of the ratings you have made. Select the capsule description that best characterizes the lesson you observed. Keep in mind that this rating is *not* intended to be an average of all the previous ratings, but should encapsulate your overall assessment of the quality and likely impact of the lesson. Please provide a brief rationale for your final capsule description of the lesson in the space provided.

Level 1: Ineffective Instruction

There is little or no evidence of student thinking or engagement with important ideas of science. Instruction is *highly unlikely* to enhance students' understanding of the discipline or to develop their capacity to successfully "do" science. Lesson was characterized by either (select one below):

Passive "Learning"

Instruction is pedantic and uninspiring. Students are passive recipients of information from the teacher or textbook; material is presented in a way that is inaccessible to many of the students.

Activity for Activity's Sake

Students are involved in hands-on activities or other individual or group work, but it appears to be activity for activity's sake. Lesson lacks a clear sense of purpose and/or a clear link to conceptual development.

Level 2: Elements of Effective Instruction

Instruction contains some elements of effective practice, but there are *serious problems* in the design, implementation, content, and/or appropriateness for many students in the class. For example, the content may lack importance and/or appropriateness; instruction may not successfully address the difficulties that many students are experiencing, etc. Overall, the lesson is *very limited* in its likelihood to enhance students' understanding of science or to develop their capacity to successfully "do" science.

Level 3: Beginning Stages of Effective Instruction (Select one below.)

Low 3 Solid 3 High 3

Instruction is purposeful and characterized by quite a few elements of effective practice. Students are, at times, engaged in meaningful work, but there are *weaknesses*, ranging from substantial to fairly minor, in the design, implementation, or content of instruction. For example, the teacher may short-circuit a planned exploration by telling students what they "should have found"; instruction may not adequately address the needs of a number of students; or the classroom culture may limit the accessibility or effectiveness of the lesson. Overall, the lesson is *somewhat limited* in its likelihood to enhance students' understanding of science or to develop their capacity to successfully "do" science.

Level 4: Accomplished, Effective Instruction

Instruction is purposeful and engaging for most students. Students actively participate in meaningful work (e.g., investigations, teacher presentations, discussions with each other or the teacher, reading). The lesson is well-designed and the teacher implements it well, but adaptation of content or pedagogy in response to student needs and interests is limited. Instruction is *quite likely* to enhance most students' understanding of science and to develop their capacity to successfully "do" science.

Level 5: Exemplary Instruction

Instruction is purposeful and all students are highly engaged most or all of the time in meaningful work (e.g., investigation, teacher presentations, discussions with each other or the teacher, reading). The lesson is well-designed and artfully implemented, with flexibility and responsiveness to students' needs and interests. Instruction is *highly likely* to enhance most students' understanding of science and to develop their capacity to successfully "do" science.

Please provide your rationale for the capsule rating:

SECTION THREE: TEACHER AND OBSERVER REFLECTIONS

I. Teacher as Reflective Practitioner

Reflect on the extent to which:

- The teacher demonstrates an understanding of how this lesson fits into the achievement of the learning goals of the unit. (Pre-observation Interview)
- The teacher's assessment plan for the unit demonstrates an understanding of appropriate opportunities to assess student understanding of the concepts in the unit. (Pre-observation Interview)
- The teacher has a good understanding of the strengths and weaknesses of the observed lesson. (Post Observation Interview)
- The teacher demonstrates an understanding of the extent to which students are "getting it". (Post Observation Interview)
- The teacher demonstrates an understanding of the appropriate "reteaching" or other next steps for this class in achieving the learning goals of the lesson/unit. (Post Observation Interview)
- The teacher's ideas about continued professional growth are insightful and likely to improve his/her skill as a science teacher. (Post Observation Interview)

1	2	3	4	5
Teacher's abilities as a reflective practitioner were minimally evident				Teacher's abilities as a reflective practitioner were fully evident

II. Based on your observation and lesson ratings, what are the teacher's particular strengths? Areas for improvement?

III. What feedback can you provide in the teacher-designated focus areas?

IV. Based on your observation and the teacher's reflections, what recommendations do you have for helping the teacher continue his/her professional growth as a science teacher?