

Inside the Classroom Observation and Analytic Protocol

Observation Date: _____ Time: Start: _____ End: _____

School: _____ District: _____

Teacher: _____

PART ONE: THE LESSON

Section A. Basic Descriptive Information

1. Teacher Gender: ___ Male ___ Female

Teacher Ethnicity: ___ American Indian or Alaskan Native
 ___ Asian
 ___ Hispanic or Latino
 ___ Black or African-American
 ___ Native Hawaiian or Other Pacific Islander
 ___ White

2. Subject Observed: ___ Mathematics ___ Science

3. Grade Level(s): _____

4. Course Title (if applicable) _____

Class Period (if applicable) _____

5. Students: _____ Number of Males _____ Number of Females

6. Did you collect copies of instructional materials to be sent to HRI?

Yes No, explain:

I. Design

A. Ratings of Key Indicators

	Not at all		To a great extent			Don't know	N/A
	1	2	3	4	5	6	7
1. The design of the lesson incorporated tasks, roles, and interactions consistent with investigative mathematics/science.	1	2	3	4	5	6	7
2. The design of the lesson reflected careful planning and organization.	1	2	3	4	5	6*	7*
3. The instructional strategies and activities used in this lesson reflected attention to students' experience, preparedness, prior knowledge, and/or learning styles.	1	2	3	4	5	6	7
4. The resources available in this lesson contributed to accomplishing the purposes of the instruction.	1	2	3	4	5	6	7
5. The instructional strategies and activities reflected attention to issues of access, equity, and diversity for students (e.g., cooperative learning, language-appropriate strategies/materials).	1	2	3	4	5	6*	7*
6. The design of the lesson encouraged a collaborative approach to learning among the students.	1	2	3	4	5	6	7
7. Adequate time and structure were provided for "sense-making."	1	2	3	4	5	6*	7*
8. Adequate time and structure were provided for wrap-up.	1	2	3	4	5	6	7
9. _____	1	2	3	4	5		

* We anticipate that these indicators should be rated 1-5 for nearly all lessons. If you rated any of these indicators 6 or 7, please provide an explanation in your supporting evidence below.

B. Synthesis Rating

1	2	3	4	5
Design of the lesson not at all reflective of best practice in mathematics/science education				Design of the lesson extremely reflective of best practice in mathematics/science education

C. Supporting Evidence for Synthesis Rating

Provide a brief description of the nature and quality of this component of the lesson, the rationale for your synthesis rating, and the evidence to support that rating.

II. Implementation

A. Ratings of Key Indicators

	Not at all					To a great extent					Don't know	N/A
	1	2	3	4	5	1	2	3	4	5	6	7
1. The instructional strategies were consistent with investigative mathematics/science.											6	7
2. The teacher appeared confident in his/her ability to teach mathematics/science.											6	7
3. The teacher's classroom management style/strategies enhanced the quality of the lesson.											6*	7*
4. The pace of the lesson was appropriate for the developmental levels/needs of the students and the purposes of the lesson.											6*	7*
5. The teacher was able to "read" the students' level of understanding and adjusted instruction accordingly.											6	7
→ 6. 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).											6	7
7. _____												

* We anticipate that these indicators should be rated 1-5 for nearly all lessons. If you rated any of these indicators 6 or 7, please provide an explanation in your supporting evidence below.

B. Synthesis Rating

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

C. Supporting Evidence for Synthesis Rating

Provide a brief description of the nature and quality of this component of the lesson, the rationale for your synthesis rating, and the evidence to support that rating. (If available, be sure to include examples/quotes to illustrate ratings of teacher questioning (A6).)

III. Mathematics/Science Content

A. Ratings of Key Indicators

	Not at all				To a great extent	Don't know	N/A
→1. The mathematics/science content was significant and worthwhile.	1	2	3	4	5	6*	7*
→2. The mathematics/science content was appropriate for the developmental levels of the students in this class.	1	2	3	4	5	6*	7*
→3. Teacher-provided content information was accurate.	1	2	3	4	5	6	7
→4. Students were intellectually engaged with important ideas relevant to the focus of the lesson.	1	2	3	4	5	6*	7*
5. The teacher displayed an understanding of mathematics/science concepts (e.g., in his/her dialogue with students).	1	2	3	4	5	6	7
6. Mathematics/science was portrayed as a dynamic body of knowledge continually enriched by conjecture, investigation analysis, and/or proof/justification.	1	2	3	4	5	6	7
7. Elements of mathematical/science abstraction (e.g., symbolic representations, theory building) were included when it was important to do so.	1	2	3	4	5	6	7
8. Appropriate connections were made to other areas of mathematics/science, to other disciplines, and/or to real-world contexts.	1	2	3	4	5	6	7
→9. The degree of “sense-making” of mathematics/science content within this lesson was appropriate for the developmental levels/needs of the students and the purposes of the lesson.	1	2	3	4	5	6*	7*
10. _____	1	2	3	4	5		

* We anticipate that these indicators should be rated 1-5 for nearly all lessons. If you rated any of these indicators 6 or 7, please provide an explanation in your supporting evidence below.

B. Synthesis Rating

1	2	3	4	5
Mathematics/science content of lesson not at all reflective of current standards for mathematics/science education				Mathematics/science content of lesson extremely reflective of current standards for mathematics/science education

C. Supporting Evidence for Synthesis Rating

Provide a brief description of the nature and quality of this component of the lesson, the rationale for your synthesis rating, and the evidence to support that rating. (If available, be sure to include examples/quotes to illustrate ratings of quality of content (A1, A2, A3), intellectual engagement (A4), and nature of “sense-making” (A9).)

IV. Classroom Culture

A. Ratings of Key Indicators

	Not at all					To a great extent					Don't know	N/A
→1. Active participation of all was encouraged and valued.	1	2	3	4	5						6*	7*
→2. There was a climate of respect for students' ideas, questions, and contributions.	1	2	3	4	5						6*	7*
3. Interactions reflected collegial working relationships among students (e.g., students worked together, talked with each other about the lesson).	1	2	3	4	5						6	7
4. Interactions reflected collaborative working relationships between teacher and students.	1	2	3	4	5						6*	7*
5. The climate of the lesson encouraged students to generate ideas, questions, conjectures, and/or propositions.	1	2	3	4	5						6	7
→6. Intellectual rigor, constructive criticism, and the challenging of ideas were evident.	1	2	3	4	5						6*	7*
7. _____	1	2	3	4	5							

* We anticipate that these indicators should be rated 1-5 for nearly all lessons. If you rated any of these indicators 6 or 7, please provide an explanation in your supporting evidence below.

B. Synthesis Rating

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

C. Supporting Evidence for Synthesis Rating

Provide a brief description of the nature and quality of this component of the lesson, the rationale for your synthesis rating, and the evidence to support that rating. (If available, be sure to include examples/quotes to illustrate ratings of active participation (A1), climate of respect (A2), and intellectual rigor (A6). While direct evidence that reflects particular sensitivity or insensitivity toward student diversity is not often observed, we would like you to document any examples you do see.)

Section D. Lesson Arrangements and Activities

In question 1 of this section, please divide the total duration of the lesson into instructional and non-instructional time. In question 2, make your estimates based only on the *instructional time* of the lesson.

1. Approximately how many minutes during the lesson were spent:

a. On instructional activities? _____ minutes

b. On housekeeping unrelated to the lesson/interruptions/other non-instructional activities? _____ minutes

Describe:

c. Check here if the lesson included a major interruption (e.g., fire drill, assembly, shortened class period):

2. Considering only the *instructional time* of the lesson (listed in 1a above), approximately what percent of this time was spent in each of the following arrangements?

a. Whole class _____ %

b. Pairs/small groups _____ %

c. Individuals _____ %

100 %

Section E. Overall Ratings of the Lesson

1. Likely Impact of Instruction on Students' Understanding of Mathematics/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 design, implementation, content, and classroom culture, and the interview with the teacher) as you assess the likely impact of this lesson. 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 each of the following areas.

	<u>Negative effect</u>	<u>Mixed or neutral effect</u>	<u>Positive effect</u>	<u>Don't know</u>	<u>N/A</u>
a. Students' understanding of mathematics/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"/>
b. Students' understanding of important mathematics/science concepts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Students' capacity to carry out their own inquiries.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Students' ability to apply or generalize skills and concepts to other areas of mathematics/science, other disciplines, and/or real-life situations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Students' self-confidence in doing mathematics/science.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Students' interest in and/or appreciation for the discipline.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

2. Capsule Rating of the Quality of the Lesson

In this final rating of the lesson, consider all available information about the lesson, its context and the teacher's 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.

O Level 1: Ineffective Instruction

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

O 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.

O 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.

O 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 the discipline or to develop their capacity to successfully "do" mathematics/science.

O 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 the discipline or to develop their capacity to successfully "do" mathematics/science.

O 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 the discipline and to develop their capacity to successfully "do" mathematics/science.

O 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 the discipline and to develop their capacity to successfully "do" mathematics/science.

Section F. Descriptive Rationale

1. Narrative

In 1–2 pages, describe what happened in this lesson, including enough rich detail that readers have a sense of having been there. Include:

- Where this lesson fit in with the overall unit;
- The focus of this lesson (e.g., the extent to which it was review/practice versus addressing new material; the extent to which it addressed algorithms/vocabulary versus mathematics/science concepts);
- Instructional materials used, if any;
- A synopsis of the structure/flow of the lesson;
- Nature and quality of lesson activities, including lecture, class discussion, problem-solving/investigation, seatwork;
- Roles of the teacher and students in the intellectual work of the lesson (e.g., providing problems or questions, proposing conjectures or hypotheses; developing/applying strategies or procedures; and drawing, challenging, or verifying conclusions);
- Roles of any other adults in the classroom, e.g., teacher's aide; and
- The reasoning behind your capsule rating, highlighting the likely impact on students' understanding of science/mathematics.

This description should stand on its own. Do not be concerned if you repeat information you have already provided elsewhere, e.g., in your supporting evidence for your synthesis ratings (e.g., implementation).

2. Lesson Features

Indicate which of the following features were included in this lesson, however briefly. Then, if NOT already described in the descriptive rationale, provide a brief description of the applicable features in this lesson.

	Check all that apply	Describe, if NOT in descriptive rationale
a. High quality “traditional” instruction, e.g., lecture	<input type="radio"/>	
b. High quality “reform” instruction, e.g., investigation	<input type="radio"/>	
c. Teacher/students using manipulatives	<input type="radio"/>	
d. Teacher/students using calculators/computers	<input type="radio"/>	
e. Teacher/students using other scientific equipment	<input type="radio"/>	
f. Teacher/students using other audio-visual resources	<input type="radio"/>	
g. Students playing a game	<input type="radio"/>	
h. Students completing labnotes/journals/worksheets or answering textbook questions/exercises	<input type="radio"/>	
i. Review/practice to prepare students for an externally mandated test	<input type="radio"/>	
j. More than incidental reference/connection to other disciplines	<input type="radio"/>	

PART TWO: INFLUENCES ON THE SELECTION OF TOPICS/INSTRUCTIONAL MATERIALS/ PEDAGOGY USED IN PLANNING THIS LESSON

Section A. Areas of Influence

Lessons are designed and selected for a variety of reasons, some of which are under the control of the teacher and some of which are not. In Part Two of the protocol, researchers should draw upon the teacher interview in considering how each of a number of factors influenced the selection of topics/instructional materials/pedagogy in planning for this lesson.

1. Policy and Support Infrastructure

a. Curriculum and Assessment Policies

- i. When talking about why s/he chose the mathematics/science topics/concepts/skills included in this lesson, the teacher spontaneously mentioned (Check all that apply):
- They are included in the curriculum/textbook/test; s/he is expected/required to teach them
 - They have always been taught in this grade/course
 - They are important for kids to learn
 - The students need knowledge of/exposure to these topics/concepts/skills for future units in this class/course
 - The students need knowledge of/exposure to these topics/concepts/skills for future classes/courses

In the interview, the teacher was explicitly asked about state and district curriculum and assessments. Please summarize the information the teacher provided about each of the following, including quotes when appropriate, being sure to note particular influences on the selection of topics, instructional materials, and/or pedagogy for this lesson. Then rate the extent of influence of each.

ii. State and district curriculum standards/frameworks

Describe:
Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. <input type="radio"/> Not at all <input type="radio"/> Somewhat <input type="radio"/> To a great extent <input type="radio"/> Not Applicable

iii. State and district science or mathematics tests/accountability systems/rewards and sanctions

Describe:
Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. <input type="radio"/> Not at all <input type="radio"/> Somewhat <input type="radio"/> To a great extent <input type="radio"/> Not Applicable

iv. Textbook/program designated for this class

Describe:
Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. <input type="radio"/> Not at all <input type="radio"/> Somewhat <input type="radio"/> To a great extent <input type="radio"/> Not Applicable

b. Support Infrastructure

In the interview, the teacher was asked about the professional development opportunities provided or encouraged by the district, as well as the influences of the principal, parents/community, school board, and other teachers in the school. Please summarize the information the teacher provided about each of the following, including quotes when appropriate, being sure to note particular influences on the selection of topics, instructional materials, and/or pedagogy for this lesson. Then rate the extent of influence of each.

i. Teacher professional development that is provided or encouraged by the district

Describe:
Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. <input type="radio"/> Not at all <input type="radio"/> Somewhat <input type="radio"/> To a great extent <input type="radio"/> Not Applicable

ii. Principal

Describe:
Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. <input type="radio"/> Not at all <input type="radio"/> Somewhat <input type="radio"/> To a great extent

iii. Parents/community

Describe:
Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. <input type="radio"/> Not at all <input type="radio"/> Somewhat <input type="radio"/> To a great extent

iv. School board/district administration

Describe:
Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. <input type="radio"/> Not at all <input type="radio"/> Somewhat <input type="radio"/> To a great extent

v. Teacher collegiality (within the school/district)

Describe:
Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. <input type="radio"/> Not at all <input type="radio"/> Somewhat <input type="radio"/> To a great extent

c. Other Elements of the Policy and Support Infrastructure

In the interview, the teacher may have mentioned other aspects of the policy environment and support infrastructure. For each of the following that were mentioned, please summarize the information the teacher provided, including quotes when appropriate, being sure to note particular influences on the selection of topics, instructional materials, and pedagogy for this lesson. Then, rate the extent of the influence of each.

i. National standards documents Not mentioned

Describe:

Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. <input type="radio"/> Not at all <input type="radio"/> Somewhat <input type="radio"/> To a great extent

ii. School/district tracking/course assignment policies, including multi-age grouping and/or students remaining with the same teacher for multiple years Not mentioned

Describe:

Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. <input type="radio"/> Not at all <input type="radio"/> Somewhat <input type="radio"/> To a great extent

iii. State and/or district tests of subjects other than the one observed Not mentioned

Describe:

Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. <input type="radio"/> Not at all <input type="radio"/> Somewhat <input type="radio"/> To a great extent

iv. School/district scheduling policies, including class length/block scheduling Not mentioned

Describe:

Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. Not at all Somewhat To a great extent

v. Teacher evaluation system Not mentioned

Describe:

Rate the extent to which this aspect influenced the selection of topics/instructional materials/pedagogy for this lesson. Not at all Somewhat To a great extent

2. The Physical Environment

We are defining the physical environment as including:

- Size and “feel” of the room, including what’s on the walls;
- State of repair of classroom facilities;
- Appropriateness and flexibility of furniture;
- Availability of running water, electrical outlets, storage space; and
- Availability of equipment and supplies (including calculators and computers).

a. Describe the physical environment of this classroom.

b. Did the physical environment constrain the design and/or implementation of this lesson?
(Circle one.)

Yes No Don't know

If yes, explain:

3. Instructional Materials

- a. Which best describes the source of the **instructional materials** upon which this lesson was based?
(Check one.)
- Materials designated for this class/course, from a commercially published textbook/program
 - Materials designated for this class/course, developed by district, school, or other non-commercial source
 - Materials selected or adapted by the teacher, from a commercially published textbook/program
 - Materials selected or adapted by the teacher, from a non-commercial source
 - Materials developed by the teacher
- b. Describe the textbook/program/instructional materials, including publisher, title, date, and pages if applicable. If the teacher made modifications to the instructional materials for this lesson, describe the modifications, why the teacher made these modifications, and the impact of the modifications on the quality of the lesson design.

4. Student Characteristics

- a. Number of students:
- i. Total in class: _____
 - ii. For whom English is not their first language: _____
 - iii. With learning disabilities: _____
 - iv. With other special needs: _____
- b. Describe the ability level of students in this class compared to the student population in the school. (Check one.)
- Represent the lower range of ability levels
 - Represent the middle range of ability levels
 - Represent the higher range of ability levels
 - Represent a broad range of ability levels
- c. Teachers may consciously or unconsciously base their decisions on their perceptions of the characteristics of a particular group of students. Describe how the characteristics of the students in this class may have influenced the selection of topics/instructional materials/pedagogy for this lesson.

In this category, we include such factors as:

- Cognitive abilities
- Learning styles
- Prior knowledge
- Prior school experience
- Fluency with English
- Student attitudes towards science and mathematics
- Perceptions of utility of content
- Goals and aspirations
- Facility with class routines
- Student absenteeism/mobility
- Influence of parents
- Influence of peer culture

5. The Teacher

- a. Number of years teacher has taught prior to this school year: _____
- b. In most situations, teachers have considerable latitude in making instructional decisions, and their decisions are often influenced by such factors as the teacher's:
- Knowledge of/attitudes toward/beliefs about the subject matter;
 - Knowledge of/attitudes toward/beliefs about students as learners in general;
 - Knowledge of/attitudes toward/beliefs about pedagogy;
 - Pedagogical content knowledge/expertise; and
 - Choices about professional development, conferences, networks.

Describe how the teacher's background knowledge, skills, and attitudes may have affected the selection of topics/instructional materials/pedagogy for this lesson.

- c. If you think this lesson was very different from what is typical of this teacher's instruction in the class, check here and explain the likely differences and the evidence you have for them.

Section B. Why This Lesson?

In the previous section you considered separately how each of a number of factors (curriculum and assessment policies, supportive infrastructure, physical environment, instructional materials, student characteristics, teacher) may have influenced the selection of topics/instructional materials/pedagogy for this lesson. In this section, we would like you to consider how these various influences interacted, and highlight those which were most salient in determining why this lesson was taught and how it was designed. (Do not consider how well the design actually matched the students' needs, how well it was implemented, or your own judgement of the teacher's knowledge and skills. Rather, try to put yourself in the teacher's head—what s/he was thinking when planning this lesson. It would be appropriate to say "The teacher perceived himself as highly knowledgeable about..." or "The teacher indicated that the students already understood..." even if you have reason to believe that the teacher's perceptions are inaccurate.)

PART THREE: PUTTING IT ALL TOGETHER

We plan to use the data collected in this study to illustrate the status of mathematics and science education in the United States; to talk about the factors that affect the nature, substance, and quality of teaching practice in science and mathematics; and to understand how broadly and deeply “reform” has penetrated into science and mathematics classrooms. We will use narrative accounts (stories and vignettes) as devices to illustrate the nature of, quality of, and factors affecting science and mathematics lessons.

You have now had the opportunity to observe a lesson and also to find out what the teacher was thinking when s/he designed it. In this section, we ask you to “put it all together,” highlighting “the story” of this lesson and providing a tag line that together communicate to us the narrative account that you would write about this lesson. We also ask you to assess the overall quality of the lesson, provide any additional information you would like to share about this lesson, and let us know if you think this lesson would make an interesting vignette.

1. The Story of this Lesson

Summarize why this lesson was taught, why it looked the way it did, and how well it worked.

2. Tag Line

Write a phrase or brief sentence that captures the essence of the story of this lesson.

3. Overall assessment of the quality of the lesson in layperson’s terms:

_____ Bad
_____ Fair
_____ Good
_____ Very Good

4. Additional Information

Use this space to write anything else you would like to say about this lesson, e.g., to suggest specific issues that may or may not be central to the story of this lesson, but illustrate a dilemma or issue particularly well.

5. Recommendation

Check here if you would recommend that this lesson be considered for a vignette.