Evaluation of Evidence Guide

Early Adolescence/Science
Portfolio Entry 1

1. **Aspects of teaching. As you read the response, note evidence pertaining to EACH of the aspects of teaching listed below. Evidence may come from one or more data sources for any one aspect.**

   a) KNOWLEDGE OF STUDENTS (KOS): Knowledge of students (as individuals and as science learners) and teaching context.

   b) GOALS/CONNECTIONS (G/C): The selected scientific concept, process skills, and learning goals, and connections between the concept, skills, learning goals, student needs, and instruction. Also, are the selected concept and process skills central to science?

   c) INSTRUCTIONAL SEQUENCE (ISEQ): What happens in the instructional sequence; its logic, effectiveness, and appropriateness for these students and these goals. Do the instructional activities elicit scientific reasoning, deepen conceptual understanding, and establish connections to other contexts of science?

   d) ASSESSMENT (ASMT): Assessments (variety and range, furthers learning goals, enhances instruction, appropriate, integrated approach, influence subsequent instruction).

   e) TECHNOLOGY (T): Connections and use made of technology.

   f) INSTRUCTIONAL RESOURCES (IR): Use, adaptation and/or creation of instructional resources.

   g) ANALYSIS (ANA): Analysis of student responses to activities (accuracy, completeness, awareness of understandings and misunderstandings in the student work).

   h) FEEDBACK (FB): Feedback to students (verbal, as documented in the written commentary, and/or written).

   i) CONTENT KNOWLEDGE (CK): Teacher's science content and pedagogical knowledge.

   j) REFLECTION (R): Next steps, alternative approaches, ability to analyze and modify his or her own practice.

2. **Does instruction promote this student's growth in scientific understanding? (ANSWER FOR EACH STUDENT.) As you answer this question, think about the quality of and the links between the different parts of the evidence—are the parts and links logical, accurate, and complete? Here are the links to think about:**

   - information about the student ← → the goals ← → the instruction ← → assessment
   - the instruction ← → the teacher's analysis of the student work ← → the reflection
   - the teacher's analysis ← → the student work (i.e., quality of "fit": do the two sources support and enhance each other or do they conflict and undermine each other?)

3. **Does the teacher's choice and sequencing of activities and instruction support and reinforce student learning? Consider whether:**

   - the instruction is logically sequenced to build understanding of an important science concept
   - the instruction draws in relevant process skill(s) and builds students' facility with those process skills
   - the instruction provides a context for science by making connections to students' prior knowledge and experience and/or other disciplines
   - the instruction employs appropriate connections to and use of technology
   - the instructional resources support and extend student learning
   - the teacher uses the information gleaned from assessment of student work to inform his or her instruction (including, possibly, his or her assessment practices as well)
   - the assessment is appropriate, employs a range of assessments, integrated approach

4. **Think about the performance as a whole. <u>Overall, what is the nature of the evidence that the teacher is able to deepen students' understanding of an important science concept through an extended instructional sequence that connects the concept to relevant scientific process skills and technology</u>? Think about:**

   - the evidence in both analyses and the responses of both students
   - your judgment of the effectiveness of the instruction for each of the two students

Evaluation of Evidence Guide

Early Adolescence/Science
Portfolio Entry 2

1. **Aspects of teaching. As you review the response, note evidence pertaining to EACH of the aspects of teaching listed below. Evidence may come from one or more data sources for any one aspect.**

   a) KNOWLEDGE OF STUDENTS (KOS): Knowledge of students as science learners and teaching context.

   b) GOALS/CONNECTIONS (G/C): Goals, and connections between goals, student needs, and instruction.

   c) STUDENT UNDERSTANDINGS (ST/UND): The specific questioning and probing techniques used to elicit students' initial beliefs and understandings; how this information is used to guide the discussion and inform further instruction;

   d) LEARNING ENVIRONMENT (LE): Nature of the learning environment. Is it fair, equitable, and accessible? Is it conducive to scientific reasoning for all students?

   e) ENGAGEMENT (ENG): Students' engagement in discourse on the video recording, including verbal and nonverbal signs of interest; relevance of discourse to the featured concept; quality of student-student and student-teacher interactions.

   f) ANALYSIS (ANA): Analysis of the video recording—is it accurate and insightful?

   g) CONTENT KNOWLEDGE (CK): Teacher's science content and pedagogical knowledge.

   h) REFLECTION (R): Next steps, alternative approaches, ability to analyze and modify his or her own practice.

2. **Does the discussion on the video recording come together with the rest of the instruction to facilitate students' growth in scientific understanding? As you answer this question, think about the quality of and the links between the different parts of the evidence—are the parts and links logical, accurate, and complete? Here are the links to think about:**

   - information about the students ← → the goals ← → the instruction
   - the instruction ← → the teacher's analysis ← → the reflection
   - the written commentary ← → what you saw on the video recording (i.e., quality of "fit": do the two sources support and enhance each other or do they conflict and undermine each other?)

3. **Think about the performance as a whole. <u>Overall, what is the nature of the evidence that the teacher is able to use classroom discourse and questioning to elicit students' initial conceptions of an important idea in science and to use this understanding to guide instruction that deepens students' scientific understanding</u>?**
Think about:

- the written commentary, including the analysis of the lesson featured on the video recording
- the evidence from the video recording itself
- the contextual and reflective information in the commentary
- the links between the different aspects of the performance

Evaluation of Evidence Guide

Early Adolescence/Science
Portfolio Entry 3

1. **Aspects of teaching. As you review the response, note evidence pertaining to EACH of the aspects of teaching listed below. Evidence may come from one or more data sources for any one aspect.**

   a) KNOWLEDGE OF STUDENTS (KOS): Knowledge of students as science learners and teaching context.

   b) GOALS/CONNECTIONS (G/C): Goals, and connections between goals, student needs, and instruction.

   c) INSTRUCTION (INS): What students were asked to do; the specific questioning and probing techniques used to help students analyze and interpret data.

   d) USE OF DATA (UD): How data analysis and interpretation was taught, and how the processes of data analysis and interpretation were used to deepen students' understanding of the concept under investigation.

   e) LEARNING ENVIRONMENT (LE): Nature of the learning environment. Is it fair, equitable, and accessible? Is it conducive to scientific reasoning for all students?

   f) ENGAGEMENT (ENG): Students' engagement in discourse on the video recording, including verbal and nonverbal signs of interest; relevance of discourse to the featured topic; quality of student-student and student-teacher interactions.

   g) ANALYSIS (ANA): Analysis of the video recording—is it accurate and insightful?

   h) CONTENT KNOWLEDGE (CK): Teacher's science content and pedagogical knowledge.

   i) REFLECTION (R): Next steps, alternative approaches, ability to analyze and modify his or her own practice.

2. **Do the activities and interactions on the video recording come together with the rest of the instruction to facilitate students' use of scientific inquiry in examining data? As you answer this question, think about the quality of and the links between the different parts of the evidence—are the parts and links logical, accurate, and complete? Here are the links to think about:**

   - information about the students ← → the goals ← → the instruction
   - the instruction ← → the teacher's analysis ← → the reflection
   - the written commentary ← → what you saw on the video recording (i.e., quality of "fit": do the two sources support and enhance each other or do they conflict and undermine each other?)

3. **Think about the performance as a whole. <u>Overall, what is the nature of the evidence that the teacher is able to use classroom discourse to facilitate students' engagement in scientific inquiry about data collected in an investigation of an important science concept</u>? Think about:**

   - the written commentary, including the analysis of the lesson featured on the video recording
   - the evidence from the video recording itself
   - the contextual and reflective information in the commentary
   - the links between the different aspects of the performance

Evaluation of Evidence Guide

Early Adolescence/Science
Portfolio Entry 4

1. **Accomplishments:**
   - Briefly describe each accomplishment and note the documentation provided by candidates.
   - Note the aspect(s) addressed in the evidence for each accomplishment as described below:
     a) TEACHER AS PARTNER WITH FAMILIES AND COMMUNITY (P-F/C): Evidence that the teacher treats parents and other interested adults as valued partners in the child's development and education. Also, evidence that school-community connections facilitate ongoing, mutually beneficial interactions between the students and the wider community and enhance teaching and learning. Evidence that teacher fosters two-way dialogue with parents and other interested adults.
     b) TEACHER AS LEARNER (TL): Evidence that the teacher has engaged in ongoing professional development whereby she or he has strengthened his or her knowledge, skills, and abilities relevant to his or her teaching context. Does the teacher seek information on current theories and research—and their applications—through familiarity with professional literature, participate in and support professional organizations, or take advanced course work relevant to his or her teaching and learning context?
     c) TEACHER AS LEADER/COLLABORATOR (L/C): Evidence that the teacher has worked collaboratively with colleagues to improve teaching and learning (within school or in wider professional community). Also, evidence that the teacher has shared his or her expertise in a leadership role with other educators so that teaching and learning can be improved.
   - Evaluate each accomplishment and its impact on student learning.

2. **Reflective Summary: Does the teacher explain what was most effective in impacting student learning and why it was effective? Does the teacher plan for impacting student learning in the future? Describe and evaluate the teacher's summary.**

3. **Look at the descriptions and the documentation together with the Reflective Summary. What is the nature of the "fit" between them? Consider the following:**

   - Descriptions ← → supporting documentation ← → Reflective Summary (Each and every accomplishment listed by the teacher need not be verified by supporting documentation, and the documentation may not necessarily address every detail of the teacher's description.)
   - Supporting documentation ← → development as a learner; leading/collaborating with the professional community; and outreach to families and community ← → Reflective Summary

4. **Professional development, work with colleagues, and appropriateness and extent of outreach to families and the community. Consider the following evidence:**

   - Professional development activities and work with colleagues is ongoing, showing the application of improved content knowledge and/or pedagogical approaches that impact student learning.
   - Strategies used by the teacher to reach out to families and the community are appropriate for his or her students and extensive enough to engage families and the community in two-way communication for the purpose of impacting student learning.
   - Communications with families and community address substantive teaching and learning issues and student progress (As opposed to communications that are strictly procedural, such as organizing field trips, or focused on behavior or discipline issues.)

5. **Think about the performance as a whole. Overall, what is the nature of the evidence that the teacher is able to impact student learning through work with colleagues, professionals, families and the community, and as a learner? Think about this in terms of the following areas:**

   - Teacher as Partner with Families and Communities
   - Teacher as Learner
   - Teacher as Leader/Collaborator