LESSON PLANNING WITH FORMATIVE ASSESSMENT

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Sandy Chang, PhD, NBCT

Fountain, CO
February 20-21, 2018

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Lesson Review 10:30 am - 12:15 pm

- Formative assessment definitions & examples
- Write your own sample learning goal.
- Give and receive feedback on sample learning goals.
- Identify learning goals in existing lesson plans.
- Identify success criteria in existing lesson plans.
- Identify evidence-gathering opportunities in existing lesson plans.
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FROM THE COLLEGE AND CAREER READY STANDARDS TO TEACHING AND LEARNING IN THE CLASSROOM: A SERIES OF RESOURCES FOR TEACHERS

LESSON REVISION
IMPROVING LESSON PLANS WITH FORMATIVE ASSESSMENT AND COLLEGE AND CAREER READY STANDARDS

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Learning Goals

• State what students will learn in a lesson
  • Knowledge, skills, conceptual understanding, analytical principles, procedural fluency
• Can be achieved by the end of the lesson
• Establish the context and purpose of the lesson
• Are shared with students
Success Criteria

• Are observable

• Describe what students do, say, make, or write

• Align with Learning Goals

• Are shared with students
Evidence Gathering & Analysis

• Collect information about student progress toward Success Criteria
• Provide feedback to students
• Help teachers adjust instruction
• Vary participant structures
• Include peer and self-assessment
Pedagogical Action

• Predict where students may struggle
  • Misconceptions
  • Procedural errors
  • Gaps in student knowledge
  • Language and/or communication challenges
  • Mismatch of content or level

• Plan how the teacher will provide support
  • Provide feedback, model, explain, prompt, question, or tell
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Write a learning goal.
Write down questions and thoughts.
bit.ly/csaico_lessons
Questions to Ask about Learning Goals

Context

Logistics
• What standards?
• What activity?
• How many lessons?
• What is possible?
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I am a middle school science teacher-researcher engaging my students in the process of modeling about Earth science phenomena. I center my work in questions relevant to students’ lives or of interest due to my students’ innate curiosity about the world. I went through multiple trips through the feedback loop in a single day as I gradually improved the quality of the tools, data, inferences, and feedback I provided students in an eighth grade plate tectonics unit. My students find earthquakes to be a fascinating and engaging topic, so I focused my whole unit on plate tectonics around this phenomenon. I started with a puzzling question, “What causes earthquakes?”

I had already done some initial assessment at the beginning of the unit that allowed me to infer that only about 5% of my students had anything approaching a scientific explanation for the source of earthquakes. Most students used the term “plate tectonics” in a vague way that did not include an understanding of plate movement. Like Wegener’s detractors, my students were incredulous that the ground could be moving over an inner mantle of fluid rock. Where was the mechanism for that? Students also struggled with the scale of time over which these processes take place; the idea that time can extend for millions and billions of years when talking about Earth’s history is difficult for students to grasp.
THE FEEDBACK LOOP

Using Formative Assessment Data for Science Teaching and Learning

Erin Marie Furtak
Howard M. Glasser
Zora M. Wolfe
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**FIGURE 5.2** Rosters with learning goals for a sample of students

<table>
<thead>
<tr>
<th>Student</th>
<th>Mantle movement</th>
<th>Claim stated</th>
<th>Evidence reference</th>
<th>Evidence reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juan Rodriguez*</td>
<td>−</td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Kylee Munger*</td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Sean Schreter*</td>
<td>+</td>
<td>+</td>
<td>−</td>
<td></td>
</tr>
<tr>
<td>Joanna Orduna*</td>
<td>*</td>
<td>$</td>
<td>+</td>
<td>−</td>
</tr>
</tbody>
</table>

Key: − = not scientifically accurate; + = scientifically accurate but not in scientific language; $ = scientifically accurate and in scientific language. No marking indicates that student did not say anything about this.
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Lunch – until 1 pm
Lesson Revision  1:00 - 3:15 pm

• Establish context and focus in a learning goal.

• Working forwards from a learning goal, write success criteria.

• Working backwards from a culminating task, write success criteria.

• Identify gaps in an existing lesson plan and augment.
## Lesson Review with Formative Assessment

### Sample Lesson Plan “Children’s Bill of Rights”

<table>
<thead>
<tr>
<th></th>
<th>Original</th>
<th>Revision 1</th>
<th>Revision 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus Standard</strong></td>
<td></td>
<td>CCSS.ELA-LITERACY.RI.9-10.4</td>
<td>D2.Civ.10.9-12.</td>
</tr>
<tr>
<td>****</td>
<td></td>
<td>Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).</td>
<td>Analyze the impact and the appropriate roles of personal interests and perspectives on the application of civic virtues, democratic principles, constitutional rights, and human rights.</td>
</tr>
<tr>
<td>Original</td>
<td>Revision 1</td>
<td>Revision 2</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td><strong>Learning Goals</strong></td>
<td><strong>Focus on craft</strong></td>
<td><strong>Focus on human rights</strong></td>
<td></td>
</tr>
</tbody>
</table>
| Students will analyze the “Children’s Bill of Rights” by CLOSE reading the text and answering new essential questions:  
  a. What is the author saying?  
  b. How does the author say it?  
  c. What does it all mean? | Analyze words and phrases in the “Children’s Bill of Rights” to determine their effect on the tone and effectiveness of the text. | Understand how children view universal human rights and choose one you think is most important to change or improve. |
<table>
<thead>
<tr>
<th>Success Criteria</th>
<th>Original</th>
<th>Revision 1</th>
<th>Revision 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Underline unknown text</td>
<td>Determine</td>
<td>Identify and comprehend the main human rights in this text.</td>
</tr>
<tr>
<td></td>
<td>Write definitions of words</td>
<td>the overall tone of the text</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Determine [who][what]</td>
<td>Identify words and phrases that contribute to the tone</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Write 13-word summary</td>
<td></td>
<td>Discuss and contribute to a shared classroom perspective about universal human rights for children.</td>
</tr>
<tr>
<td></td>
<td>Identify and support tone and mood</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Culminating Task

- Identify claim, evidence, and reasoning for how the text demonstrates the idea of world equality
- Identify the main idea and supporting evidence
- Provide feedback to the authors. Cite examples of effective craft and provide specific suggestions on how to convey their points more effectively.
- Using the text and your own experiences, argue for the one human right you would advocate most for children.
Lesson Revision 1:00 - 3:15 pm

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Contact Information

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