

INSIGHTS ABOUT ELICITING EVIDENCE

In this eReader, you will find six insights about eliciting evidence, a key component of the formative assessment process. You will also get a sense of what each insight looks like in action and an example of how one teacher used multiple strategies to elicit evidence during a single lesson.

As you read, think about how these insights are similar to or different from your understanding of what it means to elicit evidence of learning. Also, think about how these insights might guide your lesson planning and how they might play out in a lesson plan document.

Six Insights

Insight #1: Elicit evidence aligned to the Learning Goals and Success Criteria of the lesson. The Lesson Activities teachers design as they plan lessons perform double-duty. Not only do they move learning forward, but they also provide teachers with a particular type of evidence: the students' learning status relative to the lesson's Learning Goal. As students engage in the activity, they make visible a performance of learning or an execution of skill that reflects what is articulated in the Success Criteria.

When teachers become proficient in aligning evidence in this way, they design lessons with the following key question in mind: "If I ask students to say, do, make, or write X, will this provide the information I need to understand their learning status relative to the Learning Goal?"

Insight #2: Elicit evidence intentionally and strategically. Often opportunities arise spontaneously to see how student learning is taking shape, and good teachers can capitalize on the evidence afforded by these "lucky breaks." However, the role of evidence in the formative assessment process is too critical to leave to chance. Instead, opportunities to elicit evidence are thought through in advance and placed strategically at points in the lesson where teachers know they will need information about the status of student learning.

As teachers gain expertise building evidence-gathering opportunities into their lessons, they consider questions like:

- Will evidence be needed at the start of the lesson, to determine how best to begin and frame the lesson content?
- Will evidence be needed early in the lesson, before building on introductory content?

- Will evidence be needed partway through the lesson, in order to decide among different instructional routes to the Learning Goal?
- Will evidence be needed at the end of the lesson, to help plan the next lesson?

Insight #3: Elicit evidence as a part of the instructional process. From the Feedback Loop, we know a central refrain of formative assessment is a 3-beat “evidence rhythm”: elicit-interpret-use, elicit-interpret-use. In lessons that integrate formative assessment, this 3-beat rhythm occurs multiple times, sometimes in the same breath. This is what it means for formative assessment – and evidence gathering in particular – to be part of the instructional process.

When teachers can sense this 3-beat rhythm in the course of their lessons, it is a sign that their approach to eliciting evidence is integrated into their instruction. As teachers develop fluency in this rhythm, they report that in-the-moment checks for student understanding become almost second nature. Rather than feeling like an additional task, evidence collection and use become part of the fabric of the classroom experience, serving to keep teaching and learning in sync.

Insight #4: Elicit evidence of different states of learning. Students learn according to their own unique pace, which can change over time and from lesson to lesson. Sometimes learning moves in a regular, steady progression; other times, it seems to germinate for a long time before it suddenly becomes visible. And sometimes learning is not fully developed, but on the way to maturing. This is an important consideration in eliciting evidence. Because all students will likely not be at the same place relative to the Learning Goals and Success Criteria of the lesson, they need to have opportunities to showcase where they are.

As teachers become proficient in this work, they plan to elicit evidence to show three states of student learning – *emerging, maturing, and consolidated*. Using these three states as organizers, evidence gives enough detail about where each student is in the learning progression so that teachers can make instructional adjustments and provide feedback to move learning forward.

Insight #5: Elicit evidence in multiple ways. In the context of formative assessment, “evidence” is much more than numerical data. It includes all the ways students can showcase their learning relative to the Learning Goals and Success Criteria of the lesson. When teachers use multiple strategies to establish the current state of

student learning, they are essentially triangulating evidence. By doing so, they have a much richer picture of student learning to analyze and act on.

As teachers gain expertise in this practice, they develop ways to assess students in different ways, to ensure that each student has opportunities to best showcase his or her learning. They may ask students to express their ideas verbally or arrange their ideas into a physical model, concept map, or essay. They may ask students to demonstrate understanding or proficiency of a skill by executing the skill or by critiquing a peer. Several of these approaches will be explored in more detail in the next lesson, including questioning, attending to academic discourse and dialogue, analysis of student work, observation, and peer and self-assessment.

Insight #6: Elicit evidence when (and from whom) it is needed. At any given point in a lesson, different students will be at different points on the learning progression. It is critical to know where each student is in order to make instructional moves that are tailored to that student. This means that evidence collection is targeted and specific, instead of a uniform, rote procedure.

As teachers integrate this idea into their practice, the formative assessment process starts to feel much more manageable: teachers realize that they do not have to assess all students at all times. Yes, they need to know where all students are in their learning, but in a given lesson, a teacher might have up-to-date information for several students, in which case she focuses her formative evidence collection on those students for whom she is less sure or needs more information.

Lesson Review and Analysis

On the next page, you will revisit the Roller Coaster Physics Lesson seen earlier in this Module and consider how Ms. Migdol used the instructional activities that allowed her to continuously elicit evidence of her students' understandings.

The six insights to eliciting evidence are listed below as a reminder. Elicit Evidence:

- (1) Aligned to the Learning Goals and Success Criteria of the lesson
- (2) Intentionally and strategically
- (3) As a part of the instructional process
- (4) Of different states of learning
- (5) In multiple ways
- (6) When (and from whom) it is needed

Formative Assessment Blueprint

To be applied to lesson: Roller Coaster Physics

Learning Goal(s) <i>What is the learning intended by the end of this lesson?</i>	Success Criteria* <i>What will it look like when students meet the Learning Goal(s)?</i>	Lesson Activities <i>What will students do to progress towards the Learning Goal and meet the Success Criteria during the lesson? Structure activities to enable you to notice student progress and elicit evidence of learning.</i>
<p>Understand how energy is transferred and transformed in predictable ways.</p> <p>Understand the plan-create-test-improve cycle of engineering design.</p>	<ul style="list-style-type: none"> • Analyze energy transfers and transformations within a system. (LG1) • Describe the relationship between potential energy and kinetic energy. (LG1) • Explain related concepts such as mass, acceleration, force and friction. (LG1) • Plan a roller coaster design that meets criteria for fun and safety. (LG2) • Conduct a test for safety and make modifications based on test results. (LG2) • Modify the design based on simulation results to improve the ways principles of energy are applied in the design. (LG2) • Design an optimal roller coaster run with the longest possible ride. (LG2) 	<ul style="list-style-type: none"> • Student self-assessment: Students draw an initial roller coaster design based on their knowledge of energy and systems. • Peer assessment: Students work in groups to give feedback to each other on their initial designs. • Small group instructional task: Groups create a single design for the roller coaster run and can justify their design based on principles of motion and energy. • Teacher questions: <ul style="list-style-type: none"> ○ What are the forces that act on objects in motion? ○ What is the relationship between kinetic and potential energy? ○ How does mass impact the potential energy? Kinetic energy? • Chiming activity: Have student representatives share the results of safety trials and get feedback on their work. • Simulator Feedback: Students work together to identify design/energy principles that require modifications based on simulator test results, and write modifications on post-it notes to share. • Teacher questions: <ul style="list-style-type: none"> ○ What did you learn from the safety trials? ○ What are you going to modify first? Why? ○ How can you use what you know about Newton’s laws of motion to improve the roller coaster design? ○ How can you use what you know about kinetic and potential energy to improve the roller coaster design?

Interpreting Evidence Considerations

Based on your knowledge of students and the content of this lesson, what do you need to keep in mind in order to make sense of the evidence you collect?

- Note students that are able to articulate that kinetic energy can be distinguished from the various forms of potential energy
- Listen for how students are making meaning of the relationship of potential and kinetic energy.
- Observe students using the plan-create-test-improve cycle, and provide opportunities for students to deepen key stages of the cycle that they have not yet fully engaged with.
- Listen for misconceptions through probing questions, in particular related to Newton's three Laws of Motion.

Responsive Actions by Students & Teachers

What will you and students do to move learning forward?