

**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**

JULIE PARK HAUBNER, SANDY CHANG, NICOLE MANCEVICE, AND JOAN HERMAN

National Center for Research on Evaluation, Standards, and Student Testing
University of California, Los Angeles
Graduate School of Education & Information Studies



Copyright © 2017 The Regents of the University of California

The work reported herein was supported by grant number #S283B050022A between the U.S. Department of Education and WestEd with a subcontract to the National Center for Research on Evaluation, Standards, and Student Testing (CRESST).

The findings and opinions expressed in this publication are those of the authors and do not necessarily reflect the positions or policies of CRESST, WestEd, or the U.S. Department of Education.

ORGANIZATION

INTRODUCTION	3
FORMATIVE ASSESSMENT PROCESS	4
1 » Determine Learning Objectives	6
Standards	6
Learning Goals	7
2 » Articulate Instructional Steps	10
Success Criteria	10
3 » Integrate Assessment	12
Evidence-Gathering Opportunities	12
Peer and Self-Assessment	14
4 » Plan to Adjust Instruction	16
Anticipated Responses	16
Pedagogical Actions	17
EXAMPLE OF LESSON REVISION	19
REFERENCES	23
TOOLS & TEMPLATES	24

INTRODUCTION

Formative assessment is more than a quiz or an exit ticket. It is a comprehensive system of thinking about and enacting instruction. Formative assessment is a process that teachers and students use to improve learning by clearly articulating achievable goals, continuously collecting information to inform progress toward those goals, giving and receiving feedback, and adjusting instruction as necessary (see Figure 1). The purpose of this resource is to help teachers revise existing lesson plans so that they incorporate the formative assessment process and align with College and Career Ready Standards (CCRS).

How to Use This Resource

- 1 Preview the four steps of the lesson planning process.**
Check to make sure you understand and agree with the concepts.
- 2 Select a lesson plan you wish to revise.**
Either print it out or have it available to mark up and highlight.
- 3 Print out the Formative Assessment Lesson Framework (page 28).**
- 4 Follow the directions in the “How to ... ” box at the end of each step.**

We conceptualize lesson planning with formative assessment as four complementary steps, outlined in Table 1. As you read through this resource, refer to Tables 2, 3, and 4 for definitions and examples of the formative assessment terms used throughout. A complete example of lesson revision starts on page 19. Tools and templates are available starting on page 24.

We hope you will have the opportunity to discuss these steps with peers and make connections to the instructional practices you already use. Revising a lesson plan with formative assessment is like a treasure hunt. This resource is the map to help you locate the best parts of an existing lesson plan and make them your own.

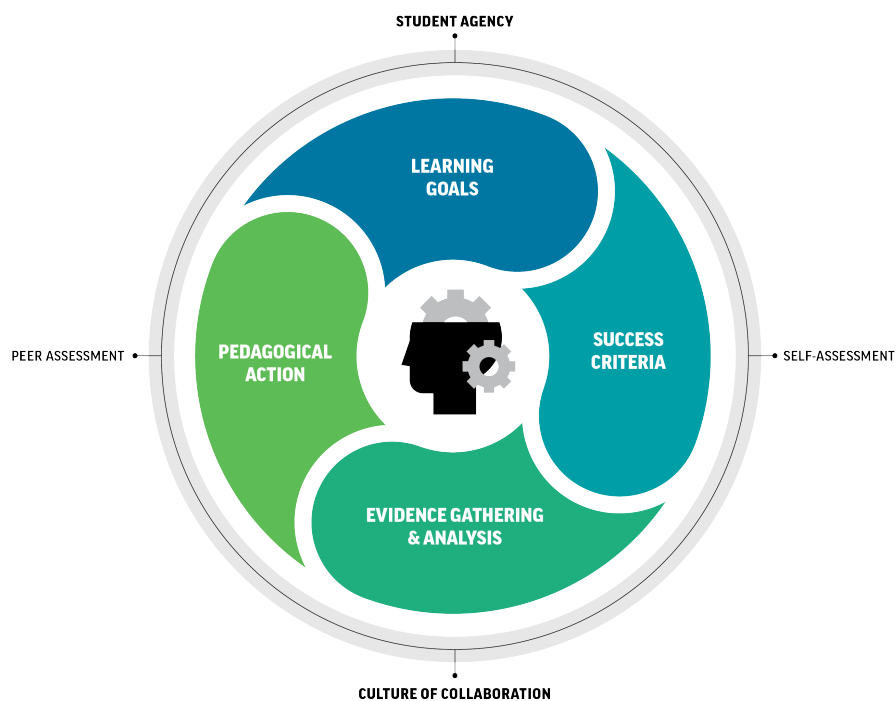
This resource is part of a series produced by the Center for Standards and Assessment Implementation (CSAI) to assist teachers and those who support teachers to plan teaching and learning from College and Career Ready Standards (CCRS) for all students, including students with disabilities, English learners, academically at-risk students, students living in extreme poverty, and gifted/talented students. The series of resources addresses key shifts in learning and teaching represented in the CCRS. The processes described and illustrated in this resource are applicable to all States' CCRS, including the CCSS.

THE FORMATIVE ASSESSMENT PROCESS

As with all the resources in CSAI’s Curriculum and Instruction series, formative assessment is used to ground teaching and deeper learning of the standards. Formative assessment, an evidence-based approach that has been shown to increase student learning, is “the process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students’ achievement of intended instructional outcomes.”¹

Figure 1 illustrates how formative assessment is an iterative process. Grounded in specific lesson Learning Goals and Success Criteria, teachers and students are continuously collecting and analyzing evidence of their learning progress over the course of the lesson and taking immediate action to bridge any gaps to facilitate students’ learning success. Through peer and self-assessment, core components enacted within formative assessment, students engage in a culture of collaboration and student agency.

FIGURE 1 › The Formative Assessment Process



¹ Formative Assessment for Students and Teachers, State Collaborative on Assessment and Student Standards of the Council of Chief State School Officers (2008).

TABLE 1 › Formative Assessment Lesson Planning Process

1	Determine Learning Objectives	Where are students going?	With students, subject matter, and standards in mind, focus on significant and relevant learning goals.	<ul style="list-style-type: none"> › Standards › Learning Goals
2	Articulate Instructional Steps	How will they get there?	Plan and communicate the observable behaviors that will show achievement of the learning objectives during the lesson.	› Success Criteria
3	Integrate Assessment	Where are they now?	Ensure that each important lesson activity has a check-in or assessment built in so that student progress is continuously monitored.	<ul style="list-style-type: none"> › Evidence-Gathering Opportunities › Peer and Self-Assessment
4	Plan to Adjust Instruction	How will they move forward?	Be prepared to address a range of student responses to the lesson. Use evidence to implement changes during or immediately after the lesson.	<ul style="list-style-type: none"> › Anticipated Student Responses › Pedagogical Actions

1 » Determine Learning Objectives

With students, subject matter, and standards in mind, focus on significant and relevant learning goals.

Standards are expectations of learning intended to be accomplished in an entire year; they do not describe what should happen in a classroom in a day, a week, or a unit of study. For students to achieve a standard, teachers lay out learning progressions to create a path of incremental conceptual steps that will lead students to success on the standard. Mapping out a learning progression for standards will enable teachers to identify or choose appropriate Learning Goals.

STANDARDS

College and Career Ready Standards (CCRS) are the foundation on which high quality lesson plans are built. Whichever standards you use, it is essential that you have a clear idea of how the lesson fits into the yearlong scope and sequence for your students.

In a standards-based classroom, the first step is to make sure the lesson plan aligns well enough with standards to merit the time and effort it will take to revise and implement it. EQuIP (Educators Evaluating the Quality of Instructional Products) rubrics² can be applied to all states' CCRS.

The EQuIP rubrics focus on four quality indicators:

- 1 Does the lesson align to the depth of CCRS?
- 2 Does the lesson address the key shifts in CCRS?
- 3 Does the lesson provide adequate instructional supports for varied student learning needs?
- 4 Does the lesson regularly assess how students are progressing towards the standards?

The EQuIP rubrics identify strengths and weaknesses of lesson plans and are a useful place to start if there is a question about whether a lesson plan aligns to CCRS. Once alignment has been established, you can decide whether you want to customize it for implementation in your classroom.

² Achieve.org, the organization that developed the EQuIP rubrics, maintains an online database of exemplary lesson plans that have been evaluated with the rubrics.

In the Tools & Templates section, we list the dimensions of the EQuIP rubrics for English language arts and mathematics and how the dimensions correspond to the formative assessment process. These tables show where in the formative assessment process we might expect to see evidence of each dimension found in the EQuIP rubrics. A similar rubric is available for science on the EQuIP website.

LEARNING GOALS

Learning Goals derive from standards, but are “lesson-sized” expectations for student learning that over time will take students from where they are to success on a standard. For example, “write a narrative” is not something that can generally be mastered in one lesson but rather encompasses a variety of knowledge and skills that need to be developed across a range of lessons. Effective Learning Goals come from understanding how year-long standards can be presented as teachable units.

Learning Goals describe what students will learn in a lesson. They state clearly what the student will understand or be able to do by the end of the lesson. The learning can include knowledge, skills, conceptual understanding, analytical principles, and/or procedural fluency. Learning Goals are shared with students so that they can understand and monitor, assess, and reflect on their own learning.

Because a lesson can last anywhere from a 10-minute mini-lesson to a week-long investigation, the “size” of a Learning Goal will vary greatly depending on the lesson. Learning Goals must be written so that students can achieve them by the end of the lesson. Additionally, they must be written in student-friendly language so that students can use them effectively.

Learning Goals do not always have to be on the board at the start of class. While it is most common for Learning Goals to be discussed at the beginning of a lesson, there are instances (particularly in science, mathematics, and history) when they can be shared at the middle or end so as not to ruin the “discovery” element that is crucial to certain lessons. Teachers can also address the “discovery” element by writing Learning Goals in conceptual, rather than concrete, language. For example, rather than tell students the goal is to learn that slope is a rate, the goal can be to have students investigate and understand the connection between slope and rate. This small change in the language of the Learning Goal can alter the nature of the activity and discussion, prompting students and teachers to focus on discovering the relationship between two concepts, rather than simply illustrating and memorizing the concepts.

How to Revise Learning Goals

- 1** Look at the lesson's goals or objectives, if the lesson plan includes them. Are they clearly stated? Lesson-sized? Aligned to standards? If not, you will need to create or revise them to become your Learning Goals.
- 2** Often, the lesson plan's intended standard(s) will give you a start in writing corresponding Learning Goals, but you will probably need to make them more specific. Identify or choose the lesson's primary, or focus, standards to help pinpoint the lesson's main learning objectives.
- 3** Sometimes the learning objectives may be hidden in the introductory text, which often explains why the lesson is important.
- 4** If no Learning Goals or objectives are stated, examine the most important and interesting activities in the lesson. Ask yourself: what makes these activities meaningful and worthwhile? What understanding and/or skill will your students develop by engaging in them?
- 5** Write or re-write the Learning Goals so that they are accessible to students. Students should be able to understand them, and you should provide ample opportunity in the lesson to discuss them.
- 6** In the first column of the Formative Assessment Lesson Framework, write down your primary Learning Goal. Choose just one to start. Each Learning Goal will have multiple Success Criteria.

TABLE 2 › Formative Assessment Elements

	Standards	Learning Goals	Success Criteria	Evidence-Gathering Opportunities	Planned Pedagogical Actions
Definition	End-of-year expectations for what students should know and be able to do	Lesson-size expectations derived from standards	Observable behaviors that demonstrate progress toward Learning Goals	Planned and unplanned checks during instruction to collect information about progress toward Learning Goals	Actions and materials prepared in anticipation of the range of student responses
ELA example	RL.3.6 Distinguish their own point of view from that of the narrator or those of the characters.	Understand that readers and characters have backgrounds that affect how they react to problems in stories.	Identify how characters' reaction to the problem compared to the reader's.	In your reader's notebook, make T chart – one side with characters' thoughts about the problem and the other side with how you would feel in the same situation.	If students identify feelings using single words, then ask for and model elaboration and description.
			Explain how characters' backgrounds might affect their feelings.	Discuss in small groups how your response to the problem differs from one of the characters, using evidence from the character's background.	Students may go too far afield from text while telling personal stories; model gentle reminders for peers to use if this should happen.
Math example (adapted from Eureka Math, EngageNY)	3.OA.1 Interpret products of whole numbers.	Understand the relationship between repeated addition, counting groups, and multiplication.	Given a number of counters, make equal groups.	Use counters to make equal groups.	If necessary, make sure students understand that multiplication only works with equal groups.
			Write an addition sentence to show groups.	Write addition sentence on white board.	Repeat process with different number groups to get students comfortable.
			Explain how a number sentence using "x" relates to an addition sentence with equal groups.	Explain to partner how multiplication sentence relates to addition sentence.	Explicitly connect "x" symbol with the concept of "times"; have students read sentences aloud.

2 » Articulate Instructional Steps

Plan and communicate the observable behaviors that will show achievement of the learning objectives during the lesson.

While Learning Goals generally describe conceptual or procedural understandings that students are expected to acquire, Success Criteria describe specifically what students do, say, make, or write to show they are making progress toward and have achieved the goals.

SUCCESS CRITERIA

Success Criteria are concrete, observable indicators that students are progressing toward or have accomplished the lesson's Learning Goals. Usually, each Learning Goal comprises multiple Success Criteria, and end of lesson criterion and checks along the way. Success Criteria help students understand what successful learning looks like and how it can be monitored and assessed, and they clearly lay out a pathway toward achievement of the Learning Goal. They should focus teachers and students on the most important features of what is to be learned. For example, in Table 2, the Success Criteria describe not only how students will demonstrate their success at the end of the lesson, but on the steps along the way as well.

In existing lesson plans, Success Criteria are often (but not always) found in well-written rubrics. The caveat is that rubrics often include procedural requirements such as "the drawing includes captions" or "the paragraph has at least three sentences." These do not provide information about progress toward Learning Goals and should not be considered Success Criteria. Some examples of rubric statements that would also serve as good Success Criteria are "I used the vocabulary of experts and explained the most important terms" and "Student will be able to recognize patterns in data that suggest relationships and molecular meaning, and analyze sources of error with potential consequences." Of course, students should always be provided with clear directions and checklists, but procedural requirements and checklists are not Success Criteria. Recognizing the different functions of procedural requirements and Success Criteria is one of the most difficult aspects of lesson writing and revising, but it is also one of the most useful.

How explicit the Success Criteria need to be varies with the purpose of the lesson, students' experience with the lesson tasks, the time of year, and so forth. For example, many mathematics instructors find it essential to include the qualifier "correctly" or "accurately" when writing their Success Criteria. Other teachers believe that those kinds of quality indicators should be assumed globally as part of the classroom culture and do not need to be stated every time, especially later in the year when such expectations have been learned and practiced multiple times. It is up to the teacher to decide

how to ensure that their students understand clearly and are able to achieve the level of quality that is expected.

As with Learning Goals, write Success Criteria with students in mind. Success Criteria must be written in a way that students can understand, and they must be shared with students. This can be done with all grade levels; indeed, considering instructional plans from your students' perspective is incredibly helpful in distilling what to focus on for the lesson.

How to Revise Success Criteria

- 1** In the lesson plan, look for language intended to help students achieve the learning objectives (e.g., "Students will <success criteria> in order to <learning goal>.") These may be found in the purpose statement, the learning objectives, the directions, suggestions for what to say to students, and the rubric.
- 2** Look at core activities in the lesson and consider the type and quality of student responses you would expect to see in order to indicate progress toward learning objectives.
- 3** Use the culminating task to plan backwards. List the essential learning steps for students to be successful on the culminating task. The steps that directly address the Learning Goals are your Success Criteria; purely procedural or logistical requirements are not.
- 4** Write or re-write the Success Criteria so that they are accessible to students. Students should be able to use them to guide their progress during the lesson, and you should provide ample opportunity in the lesson to discuss them.
- 5** In the second column of the Formative Assessment Lesson Framework, write down Success Criteria that, taken together, will lead to students' successful achievement of the Learning Goal you selected earlier. Read through for logical progression, and evaluate whether this list describes all the critical steps in a way that will flow naturally in a lesson.

3 » Integrate Assessment

Ensure that each important lesson activity has a check-in or assessment built in so that student progress is continuously monitored.

A lesson's Learning Goals direct the activities students and teachers will do during the lesson. Success Criteria give students specific guidance about how to achieve the Learning Goals. Often, well-designed activities that students engage in to achieve the Success Criteria will result in student responses that provide evidence of their success. These student responses to Evidence-Gathering Opportunities provide the teacher with information about how students are progressing toward the Learning Goals.

EVIDENCE-GATHERING OPPORTUNITIES

In the formative assessment process, Evidence-Gathering Opportunities are planned to evaluate how students are doing in the moment. Anything that students do, say, make, or write can be considered evidence.

Evidence-Gathering Opportunities are core activities of lesson instruction that both help students to attain Success Criteria and also provide information about student progress toward Success Criteria. Evidence-Gathering Opportunities can encompass a large range of task size and complexity. Evidence can be a student's answer to a short question during instruction ("How did you figure that out?"), an intricate piece of writing that results after a lengthy unit ("Produce a final version of your persuasive essay that reflects your research, the feedback you have received, and the revisions you have chosen to make."), or any number of other task types. Whatever their "size," Evidence-Gathering Opportunities provide information about student progress toward Learning Goals, progress that you care enough about to track with the goal of providing feedback to students and adjusting instruction as needed.

Most classroom activities allow you to gather evidence. Evidence-Gathering Opportunities can include examining any kind of student work; listening to and participating in whole class, small group, and/or peer discussions or other interactions; observing peer and self-assessment; and questioning students. While, in theory, everything you do in class can be considered an Evidence-Gathering Opportunity, we encourage you to focus first on only those activities that will give you information about students' progress toward the intended Learning Goals. Be selective about the evidence you take the time to collect and analyze. A student sharing a story about how she went swimming that weekend is excellent evidence of her ability to narrate a personal story verbally, but it is poor evidence of the intended learning if the Success Criterion is to identify multiple

methods of determining the perimeter of a swimming pool with her small group. This example is an obvious one, but there are more subtle examples, such as when students make personal connections during a lesson that are genuinely interesting and valuable but may not align with the Success Criteria. In that case, the teacher must in the moment decide to redirect the activity or adjust the Learning Goal and Success Criteria to accommodate the students' responses. It is not that the students' contributions are not worthy of consideration and discussion; rather, the teacher must make informed and purposeful decisions when these instances occur. We believe it is possible for teachers to prepare in advance for these encounters.

Evidence-Gathering Opportunities can be both planned or spontaneous. For the purpose of this resource, which focuses on lesson planning, we focus on planned opportunities, specifically those that are aligned with Success Criteria and supported by Planned Pedagogical Actions, understanding that a classroom is a complex and continuously operating ecosystem that encompasses much more than any single lesson or activity.

At times, it may seem that there is little difference between Success Criteria and Evidence-Gathering Opportunities. For instance, in the Grade 9-12 Modern World History example in Table 3, both are essentially the same: to create a table comparing different types of government. In fact, the teacher could probably have worded them identically without loss of meaning or function. One key difference between the two is that Success Criteria must be written in a way that can be shared meaningfully with students, while Evidence-Gathering Opportunities are not necessarily always shared with students, as in the Grade K Library/Media example, in which the teacher has elected to write "directions" to herself: "as students browse, librarian checks with each..." Read through the examples in Table 3 to get a sense of the variety of ways that Evidence-Gathering Opportunities can be written. The essential question you must answer when planning an Evidence-Gathering Opportunity is: How will you know where the students are in relation to the intended learning? An expert teacher who has experience with a particular lesson may not need to explicitly write down all the steps needed to elicit and analyze evidence; in this case, it may be sufficient to write clear directions for students and leave it at that, as the teacher's expertise for that lesson may be internalized sufficiently to not warrant the time it would take to write an actual lesson plan. A novice teacher implementing an activity for the first time may need to think about and write down many more instructions, reminders, background information, and logistical notes.

To maximize the chances that all students will be able to show evidence or learning, vary participant structures. Participant structures are the ways in which students are grouped during lesson tasks. In short, will students work individually, in pairs, in small groups, or as a whole class? Planning a variety of participant structures also provides the teacher with multiple entry points into student progress. An Evidence-Gathering Analysis Tool is provided on page 27 to help you keep track.

PEER AND SELF-ASSESSMENT

Peer and self-assessment is a type of Evidence-Gathering Opportunity that is especially important in formative assessment. Students are the ones who are doing the learning, so they share a responsibility for monitoring their progress toward the lesson's Learning Goals. Students understand and use Learning Goals and Success Criteria to evaluate their own learning and achievement. Teachers support and guide students in peer and self-assessment by writing clear and comprehensible Learning Goals and Success Criteria. For peer assessment, students need to be taught to evaluate the work of others and offer constructive advice to their peers. Teachers plan opportunities for peer and self-assessment to regularly occur during lessons. Peer and self-assessment foster students' responsibility for their own progress and increase motivation. Teachers can help by providing opportunities, structure, support, and modeling.

How to Revise Evidence-Gathering Opportunities

- 1** In the lesson plan, decide whether the current instructional tasks provide explicit information about students' progress toward Success Criteria. If not, add or revise opportunities to gather evidence, so that each Success Criterion has at least one Evidence-Gathering Opportunity.
- 2** Vary the types of Evidence-Gathering Opportunities (e.g., classroom talk, student work, peer and self-assessment).
- 3** Vary participant structures (whole class, small group, pairs, individual) to generate different types of evidence and to provide multiple pathways to achieving Success Criteria.
- 4** The final Evidence-Gathering Opportunity for a lesson may be the culminating task that addresses the entire Learning Goal or set of Learning Goals.
- 5** In the third column of the Formative Assessment Lesson Framework, match each Success Criterion with a description of how a teacher, a peer, or the learner would know whether or not the criterion has been met.

TABLE 3 › Examples of Lesson Frameworks

These lesson frameworks were written by teachers and represent a variety of approaches.

Grade & Subject	Learning Goals	Success Criteria	Evidence-Gathering Opportunities
Grade K Library/Media	Identify the main character and setting of a wordless picture book.	Define character and setting in simplest terms. Identify main character of a group of illustrations. Identify setting of a group of illustrations.	Answer as a group the definition of the terms. As students browse, librarian checks with each to make sure they understand what they are looking for in the illustrations.
Grades 3–5 Science	Understand the purpose and use of models in science.	Differentiate between a model of the object, process, and/or events. Recognize limitations of models. Identify models that are used to represent phenomena.	Write down what object, process, or event a card stack represents (individual). Choose two of 10 models given in a card sort and identify minimum of 5 limitations. Card sort – which are models; if models, what do they represent?
Grade 4 Mathematics	Recognize a digit represents 10x the value of what it represents to its right.	Label a place value chart through 1 million. Model 10x using word form. Build a place value chart to model 10x.	Show and discuss a solution to a 10x problem to 1 million. How much larger? How do you know? Which place value does that represent? What does that tell you about the number?
Grade 6 English Language Arts	Create sentences with unknown words that can be defined using context clues.	Show what context clues are. Write sentences with context clues that help others figure out unfamiliar words.	Model and discuss context clue types. In partners, write two examples of each type of context clue. For fun, the students could make up words and turn this into some kind of class game—guess the definition.
Grade 8 English Language Arts	Cite textual evidence to support an analysis of the text.	Identify the signpost of the “Aha Moment” in a text. Explain why examples show an Aha Moment.	Highlight examples of an Aha Moment. Discuss in small groups their choices and reasoning.
Grade 8 Mathematics	Understand that slope of a linear function as a rate of change within a real-life context.	Find slope within an equation. Explain the difference between a positive and negative slope given a constant.	Write a linear function to model the relationship between the number of songs downloaded and the monthly cost.
Grades 9–12 Modern World History	Understand the key components of a constitutional republic, absolute monarchy, and constitutional monarchy.	Create a table comparing a constitutional republic, absolute monarchy, and constitutional monarchy.	Collaboratively create a comparison chart.

4 » Plan to Adjust Instruction

Be prepared to address a range of student responses to the lesson.
Use evidence to implement changes during or immediately after the lesson.

A great lesson plan starts with clearly articulated and well-aligned Learning Goals, Success Criteria, and Evidence-Gathering Opportunities. It is augmented by advanced planning of pedagogical actions that may be needed during the lesson based on anticipated student responses. Simply put, the key idea for this aspect of planning and revising lessons is to think ahead about where students may struggle and, if they do, to consider specifically how the teacher will provide needed support. Or If students exceed expectations, how will the teacher promote further learning? Among many other possible actions, teachers often provide support during a lesson by providing feedback, modeling, explaining, prompting, questioning, and telling.

ANTICIPATED RESPONSES

If a teacher has not yet taught a lesson it can be challenging to anticipate what specific difficulties students likely will encounter. Nonetheless, it is important for teachers to try to anticipate what kinds of learning challenges may be revealed in each Evidence Gathering Opportunity. Content knowledge, experience, and knowledge of students will help teachers predict in what ways students may need additional support.

In anticipating how some students may respond, teachers can consider:

- What misconceptions or conceptual misunderstandings might arise?
- What procedural errors may be common?
- Where might gaps in student knowledge or understanding might occur?
- What common problems might student experience in applying or expressing their knowledge?
- What language and/or communication challenges are likely?

PLANNED PEDAGOGICAL ACTIONS

Planning for in-process pedagogical responses in advance of the lesson will allow teachers to address student needs in a timely and thoughtful manner. When revising a lesson plan, the teacher can begin by identifying one difficulty that may be revealed by an Evidence-Gathering opportunity and then plan a response to that difficulty. For example, imagine a primary grade mathematics lesson where the Learning Goal is that students can add any two numbers between 1-20. A teacher might anticipate that the most common problem students will evidence will be related to regrouping and will plan to conduct an additional mini-lesson for students who show that difficulty. Or in another example, in a lesson aimed at character analysis in a piece of literature, a teacher might foresee that some students will misunderstand the character's use of irony, and will prepare in advance a clear definition of the term and additional examples.

A lesson plan outlines a predetermined sequence of likely actions. However, teachers must also plan to adjust instruction based on the feedback they collect during lesson implementation. By intentionally collecting and interpreting evidence of student progress during a lesson, teachers can anticipate making changes to those plans while they are being implemented, or they may choose to apply the information to the next lesson. With knowledge and experience of the classroom and the lesson, teachers can anticipate student responses and plan for likely scenarios that may unfold in the moment. Of course, it is not possible to anticipate all students' responses to a lesson, particularly if it is the first time a lesson has been taught.

Table 4 gives some examples of how a teacher might respond to students in a mathematics lesson about area and perimeter. This group of teachers framed their anticipated pedagogical actions around common mathematical misconceptions as well as a possible need for extension. Note how the suggested questions and prompts apply specifically to the lesson itself so that the teacher will have an idea of how precisely to address student issues using the materials that students already have in front of them. This is one way in which teachers can collaborate by pooling their knowledge of students, content knowledge, and pedagogical content knowledge and apply that knowledge to a usable tool that can be shared across classrooms.

TABLE 4 › Examples of Planned Pedagogical Actions for a Mathematics Lesson*

Common issues	Suggested questions and prompts
Does not understand the concept of area and/or perimeter or does not know how to find the area and perimeter of a rectangle	What does the length of rope given to a prospector measure? How could you measure the amount of land enclosed by the rope? How do you find the area of a rectangle? How do you find the perimeter of a rectangle?
Only investigates two prospectors sharing land	Suppose 3/4/5 prospectors share land. What area of land would each prospector get?
Correctly answers all the questions; student needs an extension task	If the prospectors were able to use all the stakes available to them (i.e., 2 prospectors have a combined total of 8 stakes, 3 prospectors have a combined total of 12 stakes, etc.) what other shapes could be investigated? What effect would this have on the area of land available to each prospector?

* Mathematics Assessment Resource Service (MARS), map.mathshell.org

How to Revise Planned Pedagogical Actions

- 1 Look through the lesson plan to see if there are suggestions for how to customize instruction for a range of learners. These may be helpful in thinking through how to support or expand the lesson.
- 2 Think about the prerequisites you need to see before you move ahead in the lesson. These should be noted for each Evidence-Gathering Opportunity. "If students do not demonstrate understanding of ..., then review/tell/discuss..."
- 3 Use your knowledge of the content, context, students, and instructional process in order to anticipate the most likely reactions to the Evidence-Gathering Opportunities.
- 4 Closely read and analyze texts and other materials for the lesson to identify potential stopping points. Decide how you might address them.
- 5 If the lesson requires an element of discovery, think of ways to protect the content through careful attention to materials and presentation.
- 6 In the fourth column of the Formative Assessment Lesson Framework, predict the most likely student responses to the Evidence-Gathering Opportunities and prepare alternate strategies or additional content in order to address those responses. One way to think about this is to fill in the blanks: "If students ..., then the teacher will..."

ELA Grade 6 Example » ORIGINAL

STANDARDS 1

6.3.R.6 Students will analyze the structures of texts (e.g., description, compare/contrast, sequential, problem/solution, cause/effect) and content by making inferences about texts and use textual evidence to support understanding.

- Analyze text structures
- Analyze text content
- Make inferences
- Use textual evidence as support

6.3.W.2 Students will compose essays and reports about topics, incorporating evidence (e.g., specific facts, examples, details) and maintaining an organized structure.

- Write an essay/report
- Incorporate evidence to support claims
- Maintain an organized structure

6 SEQUENCE

List the steps students will take to reach the objectives for this bundle. Teachers will facilitate each step.

- 3 1. Students will need a copy of Bill Wine’s “Rudeness at the Movies” for annotated reading.
2. Have students set up the article for annotated reading. (+6.6.W.3)
3. Set a timer and allow students to read the essay and use an annotation strategy of their choice.
4. At the end of the time, students write a GIST summary on a 3x5 notecard (download video).
5. Introduce students to the Text Structures Blueprint (download). Review each.
6. Using the Text Structures Blueprint, pairs of students will analyze for shifts in text structure of “Rudeness at the Movies” at the beginning, middle, and conclusion of the article.
7. In pairs, students use textual evidence to support their text structures analysis.
8. Post all the students’ results on a grid and discuss answers as a class. (+6.1.R.3, +6.1.W.2)
9. Students write individual analysis report.

7 EVIDENCE

Teachers and students will collect the following information to exhibit proficiency.

- Students’ discussions
- Student’s annotations
- Student’s citations (APA or MLA)
- Student’s GIST summary
- 5 Individual Analysis Report: Individually, students write a concise written report (250-400 words) providing a summary of the (1) text structures analysis with (2) textual evidence to support each identified text structure, and (3) a proper citation of the Bill Wine essay (APA or MLA).

2 Learning Goal is not explicitly stated.

4 Success Criteria are not listed.

8 Planned Pedagogical Actions are not specified.

ELA Grade 6 Example » COMMENTARY

- 1 No changes were made to the standards that the teacher intends to address.
 - 2 The Learning Goal was written to focus the instruction and generate Success Criteria. This Learning Goal is a reflection of the standards, the text of interest, and the instructional purpose for teaching multiple text structures. In some lessons, as in this one, the last Success Criterion can be an elaboration of the Learning Goal to allow students to demonstrate achievement of the entire lesson's goal.
 - 3 Why are you teaching this lesson? Is it the natural next step from a prior lesson? What is its importance in relation to disciplinary practices, content standards, or general relevance to students? The instructional rationale of this lesson was best expressed in one of the instructional materials, a worksheet created by the teacher: "Text Structures Blueprint" referenced an article from an educational journal that explained why understanding the use of multiple text structures within an extended essay was important. Including it in the lesson helps focus the teacher on the important aspects of the content to consider when designing tasks, questions, and prompts. Another way to think about this is: What is the purpose of this lesson in the bigger picture of learning? Why is this important for us to study, and how does it relate to learning that came before or will follow after?
 - 4 Success Criteria were generated by thinking about the steps necessary to accomplish the Learning Goal. Prior analysis of the specific essay was necessary in order to determine what the text would allow students to do. For example, how many text structures were used, what were they, and how were they used together? Another important consideration was the Culminating Task: What steps are necessary for students to accomplish in order to successfully complete the Culminating Task?
 - 5 The final writing task helped determine Success Criteria. What would students need to do in order to successfully accomplish the final writing task? The prompt was edited to reflect a writing assignment type (analytical critique of a text) that would be helpful for students to practice, not only to show understanding of this lesson but as a useful writing genre in general.
 - 6 Evidence-Gathering Opportunities describe the primary learning experiences of the lesson. Embedded within these tasks are the nitty gritty of the lesson: teaching points, instructional materials, discussion questions, video watching, and so forth, all designed with the purpose of collecting evidence about progress toward Success Criteria. In the revision, notice that although it reads like a sequence of steps, the intent of collecting evidence about Success Criteria guides the lesson's progression. In the original lesson, each step describes a discrete activity in which the instructional purpose is implied by the activity but not stated clearly.
 - 7 Aligning Evidence-Gathering Opportunities to specific Success Criteria provides teachers and students with the instructional purpose for that task. This not only guides instructional planning, it also provides participants the language and information to incorporate meaningful feedback during the lesson. This specific and intentional alignment helps students and teachers know what they should look for during discussions, when writing and reviewing annotations, and when writing the final assignment.
 - 8 During the lesson, what will the teacher do in response to the evidence that is being collected? What main points of instruction must be achieved before moving on? What are some alternate strategies that might work better if the first plan fails?
-

ELA Grade 6 Example » REVISION

STANDARDS

6.3.R.6 Students will analyze the structures of texts (e.g., description, compare/contrast, sequential, problem/solution, cause/effect) and content by making inferences about texts and use textual evidence to support understanding.

- Analyze text structures
- Analyze text content
- Make inferences
- Use textual evidence as support

6.3.W.2 Students will compose essays and reports about topics, incorporating evidence (e.g., specific facts, examples, details) and maintaining an organized structure.

- Write an essay/report
- Incorporate evidence to support claims
- Maintain an organized structure

LEARNING GOAL Identify and analyze the use of multiple text structures in an essay.

RATIONALE “Long expository texts have structures layered within structures, and each layer represents a unique comprehension task. For example, a section of text might start with a general statement and then provide specific examples of that generalization. But the discussion might also include a description of a person, place, or thing or a definition of a specific term. Knowing that texts have many layers of structures is crucial to unlocking the meaning of extended expository discourse. Without this awareness, students might assume that one structure should organize the content; the presence of multiple structures may confuse them.” (Marzano)

SUCCESS CRITERIA	EVIDENCE-GATHERING OPPORTUNITIES	PLANNED PEDAGOGICAL ACTIONS
<p>Understand the characteristics and purposes of text structures: <u>description</u>, <u>generalization</u>, <u>argument</u>, <u>definition</u>, <u>comparison</u>, <u>problem/solution</u>. (Underlined items are found in the lesson’s text.)</p>	<p>Review “Text Structures Blueprint” to make sure students can identify or generate examples.</p>	<p>Teacher checks to make sure students are clear before proceeding. If not, reteach and provide more examples, or be prepared to provide support during the second reading of text.</p>
	<p>Discuss the primary rhetorical purposes of each type of text structure. Generate a classroom chart.</p>	<p>Guide the discussion so that students’ responses align with and complement the purposes you have already planned. In this essay, most of the purposes will be related to persuasion.</p>
<p>Identify text structures in the essay and support with textual evidence.</p>	<p>1st reading: Read for comprehension. Write summary statement. Share with table groups, then as a whole class.</p>	<p>Check for general comprehension of the article. Clarify any misconceptions.</p>
	<p>2nd reading: In small groups, annotate essay to identify text structures and supporting textual evidence.</p>	<p>Be prepared to help students with identifying the text structures in this complex text. If annotations do not seem to be sufficient, use graphic organizers (bubble map for description, T chart for comparison, etc.)</p>

SUCCESS CRITERIA

EVIDENCE- GATHERING OPPORTUNITIES

PLANNED PEDAGOGICAL ACTIONS

Identify the purpose of each type of text structure as used in the essay.

Referring to the classroom chart, apply each general principle to the specific examples found in the essay. Discuss in small groups, then as a whole class. Students further annotate the text, or fill out a prepared graphic organizer.

Model an example, then see if students can articulate how the author uses the different text structures to advance his argument. Collect evidence by listening, by checking annotations, or by reading graphic organizers.

Analyze how the author uses multiple text structures to persuade readers.

Culminating Task Write an analysis of how this essay uses multiple text structures. What is the main purpose of each? Did you find the essay persuasive? Why or why not? What effect did the author's use of text structure have on the essay's effectiveness?

As much as possible, this written assignment should reflect already existing writing norms and structures (e.g., Reader's Response Journal, Writer's Notebook) so that feedback can be focused on understanding the purposes of multiple text structures in an extended essay.

REFERENCES

- Achieve. (2013). EQulP rubrics for lessons and units: ELA/Literacy (Grades 3-5) and ELA (Grades 6-12). Retrieved from <http://www.achieve.org/files/EQulP-ELArubric-06-24-13-FINAL.pdf>
- Achieve. (2013). EQulP rubrics for lessons and units: Mathematics. Retrieved from http://www.achieve.org/files/EQulPmathrubric-06-17-13_1.pdf
- Heritage, M. (2010). Formative assessment and next-generation assessment systems: Are we losing an opportunity? Retrieved from http://www.ccsso.org/Documents/2010/Formative_Assessment_Next_Generation_2010.pdf
- Heritage, M. (2011). Formative assessment: An enabler of learning. *Better: Evidence-based Education*, 3(3), 18-19. Retrieved from <http://education.jhu.edu/PD/newhorizons/Better/articles/Spring2011.html>
- National Governors Association Center for Best Practices, Council of Chief State School Officers. (2010). *Common Core State Standards*. Washington, D.C.: National Governors Association Center for Best Practices, Council of Chief State School Officers.
- Shepard, L. (2000). *The role of classroom assessment in teaching and learning* (CSE Technical Report No. 517). University of California, Los Angeles, CA: National Center for Research on Evaluation, Standards, and Student Testing.

Resources in this series

- Fundamentals of Learning (<http://csai-online.org/resource/24>)
- Getting a Handle on the Standards (<http://csai-online.org/resource/253>)
- What's Learned First, What's Learned Together? Developing a Yearlong Plan from the K-8 College and Career Ready Standards for Mathematical Content (<http://csai-online.org/resource/448>)
- What's Learned First, What's Learned Together? Developing a Yearlong Plan from the K-12 College and Career Ready Standards for English Language Arts and Literacy (<http://csai-online.org/resource/703>)
- Building Blocks, Learning Goals, and Success Criteria: Planning Instruction and Formative Assessment for K-8 Math Standards (<http://csai-online.org/resource/581>)
- Building Blocks, Learning Goals, and Success Criteria: Planning Instruction and Formative Assessment for K-12 English Language Arts and Literacy Standards (<http://csai-online.org/resource/579>)
- Developing and Refining Lessons: Planning Learning and Formative Assessment for Math College and Career Ready Standards (<http://csai-online.org/resource/578>)
- Supporting Students in Close Reading (<http://csai-online.org/resource/335>)

TOOLS & TEMPLATES

EQuIP Rubric for English Language Arts	25
EQuIP Rubric for Mathematics	26
Evidence-Gathering Analysis Tool	27
Formative Assessment Lesson Framework	28

EQuIP Rubric for English Language Arts

EQuIP RUBRIC FOR ENGLISH LANGUAGE ARTS

What criteria are we looking for?

FORMATIVE ASSESSMENT PROCESS

Where are these criteria addressed?

I. Alignment to the Depth of the CCSS

Targets a set of grade-level CCSS ELA/Literacy standards.

Learning Goals

Includes a clear and explicit purpose for instruction.

Learning Goals

Selects text(s) that measure within the grade-level text complexity band and are of sufficient quality and scope for the stated purpose (e.g., presents vocabulary, syntax, text structures, levels of meaning/purpose, and other qualitative characteristics similar to CCSS grade-level exemplars in Appendices A & B).

Success Criteria,
Evidence-Gathering Opportunities

II. Key Shifts in the CCSS

Reading Text Closely: Makes reading text(s) closely, examining textual evidence, and discerning deep meaning a central focus of instruction.

Learning Goals

Text-Based Evidence: Facilitates rich and rigorous evidence-based discussions and writing about common texts through a sequence of specific, thought-provoking, and text-dependent questions (including, when applicable, questions about illustrations, charts, diagrams, audio/video, and media).

Evidence-Gathering Opportunities

Writing from Sources: Routinely expects that students draw evidence from texts to produce clear and coherent writing that informs, explains, or makes an argument in various written forms (e.g., notes, summaries, short responses, or formal essays).

Success Criteria,
Evidence-Gathering Opportunities

Academic Vocabulary: Focuses on building students' academic vocabulary in context throughout instruction.

Anticipated Responses, Success Criteria

III. Instructional Supports

Cultivates student interest and engagement in reading, writing and speaking about texts.

Learning Goals, Success Criteria

Addresses instructional expectations and is easy to understand and use.

Success Criteria

Provides all students with multiple opportunities to engage with text of appropriate complexity for the grade level; includes appropriate scaffolding so that students directly experience the complexity of the text.

Anticipated Responses, Pedagogical Actions

Focuses on challenging sections of text(s) and engages students in a productive struggle through discussion questions and other supports that build toward independence.

Evidence-Gathering Opportunities

Integrates appropriate supports in reading, writing, listening and speaking for students who are ELL, have disabilities, or read well below the grade level text band.

Anticipated Responses, Pedagogical Actions

Provides extensions and/or more advanced text for students who read well above the grade level text band

Anticipated Responses, Pedagogical Actions

IV. Assessment

Elicits direct, observable evidence of the degree to which a student can independently demonstrate the major targeted grade-level CCSS standards with appropriately complex text(s).

Evidence-Gathering Opportunities

Assesses student proficiency using methods that are unbiased and accessible to all students.

Evidence-Gathering Opportunities

Includes aligned rubrics or assessment guidelines that provide sufficient guidance for interpreting student performance.

Success Criteria

EQuIP Rubric for Mathematics

EQuIP RUBRIC FOR MATHEMATICS <i>What criteria are we looking for?</i>	FORMATIVE ASSESSMENT PROCESS <i>Where are these criteria addressed?</i>
I. Alignment to the Depth of the CCSS	
Targets a set of grade level CCSS mathematics standard(s) to the full depth of the standards for teaching and learning.	Learning Goals
Standards for Mathematical Practice that are central to the lesson are identified, handled in a grade appropriate way, and well connected to the content being addressed.	Learning Goals
Presents a balance of mathematical procedures and deeper conceptual understanding inherent in the CCSS.	Learning Goals
II. Key Shifts in the CCSS	
Focus: Lessons and units targeting the major work of the grade provide an especially in-depth treatment, with especially high expectations. Lessons and units targeting supporting work of the grade have visible connection to the major work of the grade and are sufficiently brief. Lessons and units do not hold students responsible for material from later grades.	Learning Goals, Success Criteria
Coherence: The content develops through reasoning about the new concepts on the basis of previous understandings. Where appropriate, provides opportunities for students to connect knowledge and skills within or across clusters, domains and learning progressions.	Learning Goals, Success Criteria, Evidence-Gathering Opportunities
Rigor – Application: Provides opportunities to independently apply mathematical concepts in real-world situations and solve challenging problems with persistence, applying an appropriate model or strategy to new situations.	Learning Goals, Success Criteria, Evidence-Gathering Opportunities
Rigor – Conceptual Understanding: Develops conceptual understanding through tasks, brief problems, questions, multiple representations and opportunities for students to write and speak about their understanding.	Learning Goals, Success Criteria, Evidence-Gathering Opportunities
Rigor – Procedural Skill and Fluency: Expects, supports and provides guidelines for procedural skill and fluency with core calculations and mathematical procedures to be performed quickly and accurately.	Learning Goals, Success Criteria, Evidence-Gathering Opportunities
III. Instructional Supports	
Includes clear and sufficient guidance to support teaching and learning of the targeted standards, including, when appropriate, the use of technology and media.	Success Criteria, Evidence-Gathering Opportunities
Uses and encourages precise and accurate mathematics, academic language, terminology and concrete or abstract representations (e.g., pictures, symbols, expressions, equations, graphics, models) in the discipline.	Success Criteria, Evidence-Gathering Opportunities
Engages students in productive struggle through relevant, thought-provoking questions, problems and tasks that stimulate interest and elicit mathematical thinking.	Success Criteria, Evidence-Gathering Opportunities
Addresses instructional expectations and is easy to understand and use.	Success Criteria
Supports diverse cultural and linguistic backgrounds, interests and styles.	Anticipated Responses, Pedagogical Actions
Provides extra supports for students working below grade level.	Anticipated Responses, Pedagogical Actions
Provides extensions for students with high interest or working above grade level.	Anticipated Responses, Pedagogical Actions
IV. Assessment	
Is designed to elicit direct, observable evidence of the degree to which a student can independently demonstrate the targeted CCSS.	Evidence-Gathering Opportunities
Assesses student proficiency using methods that are accessible and unbiased, including the use of grade-level language in student prompts.	Evidence-Gathering Opportunities
Includes aligned rubrics, answer keys and scoring guidelines that provide sufficient guidance for interpreting student performance.	Success Criteria, Evidence-Gathering Opportunities

Evidence-Gathering Analysis Tool

Use this chart to keep track of the types of Evidence-Gathering Opportunities in the lesson. Use tally marks to count task types and participant structures, or fill it in with specific lesson tasks. The intention is to help you plan a good distribution of task types. Some examples have been provided below.

		Task Types		
		Classroom Talk	Student Work	Peer and Self-Assessment
Participant Structure	Independent			
	Pair			
	Small Group			
	Whole Class			

Examples are not intended to be exhaustive. It is likely that many of the classroom routines and instructional strategies you already use will fit somewhere on this chart. Many tasks can fall into multiple categories. The tool is intended only to encourage you to use a variety of tasks, not to force lesson tasks into tidy little boxes.

		Task Types		
		Classroom Talk	Student Work	Peer and Self-Assessment
Participant Structure	Independent	Conference with teacher	Written response, essay, jigsaw	Thumbs up/thumbs down, exit ticket, reflection journal
	Pair	Turn and talk, peer conference, teacher and peer questioning, pair share, elbow partners	Presentation, work plan, graphic organizer, reading guide	Peer conference using rubric, peer editing
	Small Group	Teacher and peer questioning, discussion, share work	Presentation, work plan, graphic organizer, reading guide, jigsaw	Carousel, group presentation feedback
	Whole Class	Teacher and peer questioning, classroom discussion	Class play, 4 corners, class debate	Gallery walk, parking lot

FORMATIVE ASSESSMENT LESSON FRAMEWORK



LEARNING GOALS	SUCCESS CRITERIA	EVIDENCE-GATHERING OPPORTUNITIES	PLANNED PEDAGOGICAL RESPONSES
What is the learning intended by the end of this lesson?	What will students do to show they are progressing toward the Learning Goal?	How will teachers and students collect information about students' progress toward the Learning Goal?	What will teachers do in response to evidence about students' progress toward the Learning Goal? What struggles can be anticipated, and how will they be addressed?
			IF STUDENTS...
			THEN TEACHER WILL ...