

**PROVIDING AND COMMUNICATING
CLEAR LEARNING GOALS**

Tracking Student Progress

THE **MARZANO COMPENDIUM** OF
INSTRUCTIONAL STRATEGIES



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INTRODUCTION

In 2007, Dr. Robert J. Marzano published *The Art and Science of Teaching: A Comprehensive Framework for Effective Instruction*. The framework, composed of three lesson segments, ten design questions, and forty-one elements, was based on research showing that teacher quality is one of the strongest influences on student achievement—that is, an effective teacher can positively and significantly impact student learning. As such, *The Art and Science of Teaching* sought to identify specific action steps teachers could take to improve their effectiveness.

In 2015, Dr. Marzano updated *The Art and Science of Teaching* framework to reflect new insights and feedback. The Marzano Compendium of Instructional Strategies is based on this updated model, presenting forty-three elements of effective teaching in ten categories. Each folio in the series addresses one element and includes strategies, examples, and reproducible resources. The Compendium and its folios are designed to help teachers increase their effectiveness by focusing on professional growth. To that end, each folio includes a scoring scale teachers can use to determine their proficiency with the element, as well as numerous strategies that teachers can use to enact the element in their classrooms. Indeed, the bulk of each folio consists of these strategies and reproducibles for implementing and monitoring them, making the Compendium a practical, actionable resource for teachers, instructional coaches, teacher mentors, and administrators.

TRACKING STUDENT PROGRESS

The teacher facilitates tracking of student progress on one or more learning goals using a formative approach to assessment. Research has shown that feedback—making students aware of their progress toward learning goals—increases student achievement. Feedback is particularly effective when accompanied by clear goals and when given frequently. Frequent accumulation of formative scores has been shown to be very effective at increasing student achievement.

Monitoring This Element

There are specific student responses that indicate this element is being effectively implemented. Before trying strategies for the element in the classroom, it is important that the teacher knows how to identify the types of student behaviors that indicate the strategy is producing the desired effects. General behaviors a teacher might look for include the following.

- When asked, students can describe their status relative to the learning goal using the scale or rubric.
- Students systematically update their status on the learning goal.
- Students can explain what they need to do to reach the next level of performance on the scale.

Desired behaviors such as these are listed for each strategy in this element.

Teachers often wonder how their mastery of specific strategies relates to their mastery of the element as a whole. Successful execution of an element does not depend on the use of every strategy within that element. Rather, multiple strategies are presented within each element to provide teachers with diverse options. Each strategy can be an effective means of implementing the goals of the element. If teachers attain success using a particular strategy, it is not always necessary to master the rest of the strategies within the same element. If a particular strategy proves difficult or ineffective, however, teachers are encouraged to experiment with various strategies to find the method that works best for them.

Scoring Scale

The following scoring scale can help teachers assess and monitor their progress with this element. The scale has five levels, from Not Using (0) to Innovating (4). A teacher at the Not Using (0) level is unaware of the strategies and behaviors associated with the element or is simply not using any of the strategies. At the Beginning (1) level, a teacher attempts to address the element by trying specific strategies, but does so in an incomplete or incorrect way. When a teacher reaches the Developing (2) level, he or she implements strategies for the element correctly and completely, but does not monitor their effects. At the Applying (3) level, a teacher implements strategies for the element and monitors their effectiveness with his or her students. Finally, a teacher at the Innovating (4) level is fluent with strategies for the element and can adapt them to unique student needs and situations, creating new strategies for the element as necessary.

Scale for Tracking Student Progress

4	3	2	1	0
Innovating	Applying	Developing	Beginning	Not Using
I adapt behaviors and create new strategies for unique student needs and situations.	I track student progress, and I monitor the extent to which my actions affect student learning.	I track student progress, but I do not monitor the effect on student learning.	I use the strategies and behaviors associated with this element incorrectly or with parts missing.	I am unaware of strategies and behaviors associated with this element.

The following examples describe what each level of the scale might look like in the classroom.

Not Using (0): A teacher does not track student progress or encourage students to track their own progress. Each unit's final grade is based on a single assessment or the average of a number of assessments.

Beginning (1): A teacher hands out a chart to her students and tells them that they can track their progress towards a goal using the scores from different assignments. However, the students are uncertain about what they need to do to improve their status. Students resist completing the activity regularly because they don't see a good reason to write down their scores when the teacher already does so in her gradebook.

Developing (2): A teacher uses a formative approach to assessment to measure how well his students understand the content. He designs a proficiency scale for the unit or set of lessons, and creates assessments for 2.0, 3.0, and 4.0 content. The teacher shares the proficiency scale with the class and explains how assessments will correlate to the levels of the scale. However, he makes little or no attempt to determine the extent to which students are aware of their status and growth on the scale.

Applying (3): A teacher uses various types of assessments to track student progress on the scale throughout the unit. She systematically meets with students to discuss their growth and what they can do to move to the next level of the scale.

Innovating (4): A teacher uses different types of assessments to measure student progress on the scale. While most students seem to understand how the scale is meant to be used and how they are progressing, a few seem confused or uninterested in tracking their progress. The teacher periodically meets with these students to help them understand how they are doing and what they can do to increase their relative position on the scale.

STRATEGIES

Each of the following strategies describes specific actions that teachers can take to enact this element in their classrooms. Strategies can be used individually or in combination with each other. Each strategy includes a description, a list of teacher actions, a list of desired student responses, and suggestions for adapting the strategy to provide extra support or extensions. Extra support and extensions relate directly to the Innovating (4) level of the scale. Extra support involves steps teachers can take to ensure they are implementing the strategy effectively for all students, including English learners, special education students, students from low socioeconomic backgrounds, and reluctant learners. Extensions are ways that teachers can adapt the strategy for advanced students. In addition, some strategies include technology tips that detail ways teachers can use classroom technology to implement or enhance the strategy. Finally, each strategy includes further information, practical examples, or a reproducible designed to aid teachers' implementation of the strategy.

Formative Scores

Formative scores are used throughout a unit of instruction to help teachers and students monitor progress and adjust if necessary. This is different from summative scores, which represent a student's status at the end of a particular point in time. While it is popular to use the terms *formative assessments* and *summative assessments*, it is more accurate to use the terms *formative scores* and *summative scores*. It is not the structure of an assessment that renders it formative or summative; rather it is how the scores are used. Formative scores are designed to track progress over time.

The 0.0–4.0 proficiency scale is designed to produce scores; each score on the scale describes progress towards specific learning goals. A 4.0 indicates that students have progressed beyond what has been directly taught in class. A 3.0 indicates that students are proficient with the target knowledge or skills that have been taught in class. Score 2.0 denotes that students know the simpler content, but still need further instruction or practice to achieve the target. Score 1.0 indicates that students cannot yet demonstrate their knowledge independently, but they can do it to some degree with help. A 0.0 indicates that students do not know the content or cannot execute the skill, even with help. Assessments are given periodically throughout a unit or term, which allows students to progress up the scale.

To create assessments that generate formative scores, the teacher designs assessment tasks that correspond to 2.0, 3.0, and 4.0 content (as specified on the scale for each learning goal). For 2.0 content, forced-choice or selected-response tasks (multiple-choice, matching, true/false, or fill-in-the-blank items) are commonly used. For 3.0 and 4.0 content, short or extended constructed-response tasks (short written or oral responses, essays, oral reports, demonstrations, or performances) are commonly used.

The teacher can grade these assessments using a simplified scale (without half-point scores) or a complete scale. For a more detailed discussion of proficiency scales, see the folio entitled “Providing Scales and Rubrics.” Following is the generic form of the complete scale.

Score 4.0	More complex learning goal or In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught.	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	Target learning goal	
	Score 2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
Score 2.0	Simpler learning goal	
	Score 1.5	Partial success at score 2.0 content, but major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content, but not at score 3.0 content
Score 0.0	Even with help, no success	

Tracking Student Progress

The following example scale has specific content filled in for score values 2.0, 3.0, and 4.0.

Score 4.0	Students will be able to explain why Europeans explored and established settlements on other continents including Africa, Asia, and Australia.	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	Students will be able to explain why Europeans explored and established settlements in the Americas.	
	Score 2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
Score 2.0	Students will be able to recognize facts about European exploration and settlement in the Americas.	
	Score 1.5	Partial success at score 2.0 content, but major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content, but not at score 3.0 content
Score 0.0	Even with help, no success	

Teacher Actions

- Creating assessment tasks for different levels of content using proficiency scales
- Administering assessments for a specific proficiency scale over time and keeping track of student formative scores across that interval

Desired Student Responses

- Knowing what kinds of test items normally correspond to different levels of content
- Knowing which types of items are easier and more difficult for them to answer

Extra Support

- Using pictures or diagrams to make assessment task instructions or questions clearer

Extension

- Asking students to write assessment tasks for each level of a scale or rubric

Technology Tips

- Use clickers with text input or polling software on student mobile devices to track and archive formative score data during instruction. For instance, you might ask students to use clickers or their own mobile devices to respond to assessment questions at the 2.0, 3.0, and 4.0 proficiency levels. You might also ask students to rate their effort on each question, as well as what they think they need to do to achieve success at the target level.

Designing Assessments That Generate Formative Scores

To design assessments that generate formative scores for a particular proficiency scale, a teacher should ensure that the assessment contains items or tasks that correspond directly to levels 2.0, 3.0, and 4.0. Level 2.0 items and tasks address basic details and processes that are relatively easy for students. These often include terminology, simple facts, and time sequences that were covered in class. They can also address simple procedures that have straightforward steps and result in a single correct answer (for example, rules for capitalization or multi-column addition). The information is fairly straightforward from a learning perspective. It is not generative in nature, in that knowledge of details does not imply the production of new information. Level 2.0 items are often forced-choice recognition and recall questions or fill-in-the-blank items.

Level 3.0 items and tasks address ideas and processes that are more complex but were still taught directly in class. This information typically involves generalizations and principles, which go beyond recognition or recall because the student must be able to produce examples or predictions. Level 3.0 informational items and tasks are often open-ended and ask students to write a few sentences. Level 3.0 items can also cover *macroprocedures*—processes that combine several smaller procedures such as those addressed at level 2.0. Examples of macroprocedures include problem solving and experimental inquiry.

Level 4.0 items and tasks require students to make inferences or applications that go beyond what was taught in class. These items ask students to generate original ideas and often take the form of comparing, classifying, creating analogies, or analyzing errors. Procedural tasks at the 4.0 level are presented in a format or context that students have not experienced before (for example, a word problem whose solution requires multi-column subtraction when only simple numeric problems were directly taught in class). For 3.0 and 4.0 content, short or extended constructed-response tasks (short written or oral responses, essays, oral reports, demonstrations, or performances) are most appropriate. Level 4.0 items are often essay questions of various lengths.

To illustrate how an assessment might be designed, consider the following proficiency scale.

Proficiency Scale on Heritable and Nonheritable Traits

Score 4.0	Students will be able to discuss how heritable traits and nonheritable traits affect one another.
Score 3.0	Students will be able to differentiate heritable traits from nonheritable traits in real-world scenarios.
Score 2.0	Students will be able to recognize accurate statements about and isolated examples of heritable and nonheritable traits.
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content
Score 0.0	Even with help, no success

Tracking Student Progress

An assessment designed to include score 2.0, 3.0, and 4.0 content might be structured like the following.

Example Assessment

Section A
<p>1. True or False: All diseases are inherited.</p> <p>2. True or False: If your mom is afraid of roller coasters, you will inherit that fear from her.</p> <p>3. Examples of inherited traits are _____ and _____.</p> <p>4. Put a check in front of the traits you can develop over time.</p> <p style="padding-left: 40px;">Shoe size</p> <p style="padding-left: 40px;">Gender</p> <p style="padding-left: 40px;">Knowledge of history</p> <p style="padding-left: 40px;">Fear of snakes</p>
Section B
<p>5. Name three traits you like about yourself. Are those heritable traits or not? Explain your answer.</p> <p>6. Joey signed up for the summer spelling bee just after Christmas. He did not practice very much because he was playing baseball, and he went to Florida with his parents over spring break. When the bee came, he lost in the first round. Later that night, he told his mother he lost because he is not very smart about words. Do you think this is correct? Why or why not?</p> <p>7. Simon's mother always asks him to go to the grocery store with her so that he can reach the items on the top shelf. He can reach almost everything she points out. Is this because Simon was born tall, or is it because he has so much practice reaching for items in high places? Has he inherited his ability to reach items on the top shelf? Explain your answer.</p>
Section C
<p>8. Hemophilia is an inherited disease that prevents your blood from clotting. This means that if you ever get a cut or a scrape, you might lose so much blood that it could be life threatening. If you were born with this disease, what kinds of things would you have to avoid? What kinds of things might you be good at instead? What kinds of personality traits might you have that other people might not have? Explain your answer.</p>

Section A of the assessment addresses score 2.0 content, section B addresses score 3.0 content, and section C addresses score 4.0 content.

It is important to note that each proficiency scale covered by an assessment should be assessed and scored individually. That is, if an assessment covers three proficiency scales, each item or task on the assessment will pertain to only one of those scales and each student will receive three scores for that assessment.

Tracking Student Progress

On the whole, planning an assessment system to generate formative scores involves identifying which topics will be assessed, when they will be assessed, and whether a specific assessment will address more than one topic. Although a teacher does not have to identify every assessment that will be used for each topic for a grading period, it is useful to rough out a general plan. For example, the following table from *Classroom Assessment and Grading That Work* by Robert J. Marzano (2006) depicts a general plan for assessing six topics (each with its own proficiency scale) over a nine-week period. Xs denote when a topic will be assessed. As more than one topic will be assessed most weeks, the teacher might choose to give multiple separate assessments or one that covers numerous topics.

General Plan for Assessing Six Measurement Topics Over Nine Weeks

Week	Topic					
	1	2	3	4	5	6
1	X	X				
2		X	X			
3	X		X			
4				X		X
5					X	
6				X	X	X
7	X	X	X			
8				X	X	X
9	X	X	X	X	X	X

Individual Score-Level Assessments

The teacher uses assessments that evaluate only one level of a scale (for example, only 2.0 content) to measure students' knowledge (especially that which builds on itself and requires competency at one level before progressing to the next) or to allow students to progress at their own pace through the levels of a scale.

Teacher Actions

- Creating assessments that measure one level of a scale
- Helping students use individual score-level assessments to demonstrate their proficiency

Desired Student Responses

- Explaining the purpose of individual score-level assessments
- Using individual score-level assessments to progress at their own pace through the levels of a scale

Extra Support

- Creating a study guide that describes in detail, with visuals and practice activities, what students need to know or be able to do to pass an individual score-level assessment.

Extension

- Asking students to create their own individual score-level assessments, accompanied by an explanation of how the assessment demonstrates a specific level of performance

Using Individual Score-Level Assessments

Since this strategy requires the teacher to use assessments that evaluate only one level of a scale, the teacher should design several assessments during an instructional unit. For example, the teacher could design three assessments to be given over the course of a unit. The first assessment comes near the beginning of the unit and covers only score 2.0 content. For this assessment, the highest score students could receive would be a 2.0 because the assessment only addresses this level of the scale. The second assessment comes later in the unit, after the teacher has covered the target content, and is focused on level 3.0 knowledge. At the end of the unit, the teacher provides an assessment that covers score 4.0 content.

A key aspect of using individual score-level assessments is that the teacher should only administer the next assessment once students have demonstrated competence with the previous level. That is, the teacher would not administer the level 3.0 assessment until students are comfortable and competent with the level 2.0 content. Once the students demonstrate proficiency with the level 3.0 content, the teacher can assess at level 4.0. With this approach, the whole class progresses together. The teacher continues teaching and assessing a level of content until the whole class (or close to it) has mastered that level.

Individual score-level assessments for different levels of knowledge may look quite different. Assessments for level 2.0 might employ selected-response items (such as multiple-choice and true/false) exclusively, as these types of items are typically used with score 2.0 content. These items ask students to recognize correct information. Assessments for levels 3.0 and 4.0 will likely use constructed-response formats, with items for score 4.0 requiring more extended responses. These items require students to recall information and construct responses independently.

Different Types of Assessments

To collect formative scores over time that pertain to a specific proficiency scale, the teacher uses obtrusive assessments (which interrupt the flow of classroom activity), unobtrusive assessments (which do not interrupt classroom activities), or student-generated assessments. Obtrusive assessments might be paper-and-pencil tests, demonstrations and performances, oral reports, or probing discussions (one-on-one conversations between the teacher and a student). Unobtrusive assessments are usually observations: the teacher sees the student demonstrating a particular type of knowledge and records a score for that student. Student-generated assessments involve students proposing tasks that will demonstrate their level of knowledge for a specific learning goal.

Teacher Actions

- Administering and scoring pencil-and-paper tests
- Conducting and scoring demonstrations, performances, or oral reports
- Conducting and scoring unobtrusive assessments
- Encouraging students to create student-generated assessments

Desired Student Responses

- Describing different types of assessments used by the teacher
- Creating student-generated assessments to demonstrate their knowledge levels for specific learning goals

Extra Support

- Providing students with clear examples of how different types of assessments can be used to demonstrate competence on specific types of content

Extension

- Asking students to compare different kinds of assessment activities (paper-and-pencil, demonstration or performance, oral report) and to explain why a specific assessment activity is best for their student-generated assessment

Technology Tips

- Have students use screen capture software on laptops or computers (such as Jing) or apps on tablets (such as ScreenChomp, Educreations, or TouchCast) to capture student-generated assessment tasks. For example, students could use screen capture software to record and narrate the process used to solve a math problem.
- Technology allows students to save various iterations of a file and monitor their progress on digital projects (such as essays, multimedia presentations, and so on). For example, students can give different file names—such as V1 (version 1), V2, V3, and so on—to the same project when saving. This convention makes it easy for students to compare several different drafts of the same project and see their progress throughout a lesson or unit.

Types of Assessments

All assessments can be categorized as obtrusive, unobtrusive, or student-generated.

Obtrusive Assessments

Obtrusive assessments interrupt the normal flow of activity in the classroom. Instruction does not occur during obtrusive assessments. Obtrusive assessments can take many forms. The most common is the traditional paper-and-pencil tests involving true-false, multiple-choice, fill-in-the-blank, and constructed-response items.

This category also includes probing discussions, in which the teacher talks with a student one-on-one and asks the student to explain something or demonstrate something. The advantage to this approach is that the teacher can obtain very specific information about a particular student's knowledge. The teacher can begin with a simpler or more general question and determine the depth of the student's knowledge by asking more specific clarifying questions.

This category can also include demonstrations and performances. As their names imply, demonstrations and performances require students to "do something." In technical terms, they require students to execute a procedure. They are commonly used to assess *psychomotor* (physical) procedures, such as those found in a physical education curriculum. For example, in a physical education course, an instructor could ask his students to demonstrate how they serve the ball in tennis. The teacher could then ask students to explain the techniques and goals of a good serve, and how they might improve their own serves in the future. Even if students do not always execute a good serve, the instructor could use these clarifying questions to gauge how well each student has learned the techniques and rules for properly serving the ball.

Unobtrusive Assessments

When using unobtrusive assessments, the teacher observes a student demonstrating a particular type of knowledge without necessarily interacting with the student. These assessments do not interrupt the flow of instruction and a student might not even be aware they are being assessed. Unobtrusive assessments are most easily applied to content that is procedural or involves a skill, strategy, or process.

Examples of unobtrusive assessments could include observing students in person or via recording. In an art class, for instance, a teacher who observes a student innovating a shading technique in a sketch, could give the student a score of 4.0 for that unobtrusive assessment.

Student-Generated Tasks

A powerful assessment alternative is to have students generate their own tasks to demonstrate competence for specific levels of the scale. Student-generated assessments are probably the most underutilized form of classroom assessment. This approach is often used when a student receives a score on a teacher-designed assessment and wants to move up to the next score value on a proficiency scale. For example, a student receives a score 2.0 on an obtrusive assessment and approaches his teacher with an idea for how he can show that he has now mastered the level 3.0 content. The point here is that students take responsibility for providing evidence that they should move to the next level of the scale. For example, to show that she understands the solar system, an eighth-grade student proposes that she draw a diagram of the solar system and write a paper describing major features of each planet and its relationship to the other planets in the system. This is an appropriate student-generated task because it requires the student to demonstrate her understanding of the topic and clearly relates to the learning goal for the unit.

Generating Summative Scores

The teacher uses one or more of several different approaches to generating summative scores for a specific proficiency scale. Where formative scores track students' progress over time, a summative score indicates an individual student's status at the end of a specific interval of time such as a grading period. There are four different approaches to assigning summative scores.

Approach 1—Each assessment over a specific interval of time allows students to score at the 2.0, 3.0, or 4.0 level. The students graph their scores throughout the unit, and the teacher uses that group of scores to assign a summative score at the end of the unit.

Approach 2—The first assessment within a specific interval of time allows students to score at the 2.0, 3.0, or 4.0 level. After the first assessment, students move at their own pace, taking individual score-level assessments to move up to the next level.

Approach 3—The teacher administers individual score-level assessments to the entire class, only moving up to the next level once the majority of students in the class has mastered the content at the current level.

Approach 4—The teacher assigns scores at the end of each unit, but students are allowed to improve those scores at any time during the year by demonstrating their competence at higher score levels, usually using student-generated assessments.

Teacher Actions

- Using multiple approaches to assigning summative scores to students
- Explaining the various approaches for assigning summative scores to students and parents

Desired Student Responses

- Knowing their current status for each learning goal
- Explaining why they were assigned a specific summative score for each learning goal

Extra Support

- Using a storyboard or flowchart (with pictures) to explain to students how summative scores are being assigned

Extension

- In addition to teacher communications, asking students to summarize the teacher's approach to assigning summative scores for their parents or guardians

Implementing Approaches to Assigning Summative Scores

Here we provide more detail about the four approaches to assigning summative scores. In all approaches, students should be aware of their current status at all times; teachers can use a combination of obtrusive, unobtrusive, and student-generated assessments. A more detailed discussion of these four approaches can be found in the book *Formative Assessment and Standards-Based Grading* by Robert J. Marzano (2010).

Approach 1: Summative Score Assigned at the End of the Grading Period

Within this approach, every assessment includes items and tasks for content at score 2.0, 3.0, and 4.0. Right from the first assessment, students can obtain scores that represent the full range on the scale—from as low as 0.0 to as high as 4.0. Of course, at the beginning of the unit, many students will probably not be able to answer items at score 3.0 and 4.0 values because the content has not yet been taught. Throughout the unit, students should graph their progress. In this approach, the average of the formative scores should not be used as the summative score, nor should the final score in the set be automatically assigned as the summative score. Teachers should use the assessment data in combination with other knowledge of the student's ability to generate a summative score.

Approach 2: Gradual Accumulation of a Summative Score

A defining characteristic of the second approach is that a *current* summative score is recorded throughout a grading period as opposed to constructing a summative score at the end. In this approach, the teacher typically begins by administering an assessment that addresses all score values of the scale (2.0, 3.0, and 4.0) to the entire class. Each student's score on this assessment is recorded as his or her initial score. From that point on, the teacher takes an individual approach to assessment, making heavy use of student-generated assessments. To increase a student's score on the scale, the teacher must be convinced that the student has demonstrated a commensurate increase in knowledge. Students present evidence for moving to a higher score value on the scale, and the teacher and students interact about that evidence to clarify the student's status. A bar graph is an appropriate tool for keeping track of students' scores in this approach, as it can be progressively filled in as a student's score increases.

Approach 3: The Whole Class Progresses as One

In the first two approaches, the focus is on individual students. In the third approach, the focus is on the entire class as a unit. That is, the whole class moves up the scale at approximately the same pace. Additionally, the teacher assesses the content for score values 2.0, 3.0, and 4.0 separately—he or she administers individual score-level assessments. The teacher continues teaching and assessing score 2.0 content until the entire class (or close to it) has demonstrated mastery of the content. The teacher moves on to score 3.0 content when he or she is reasonably sure all students have reached or will eventually reach 2.0 status. When the class as a whole has demonstrated mastery of the 3.0 content, the teacher moves on to score 4.0 content. Teachers can use a bar graph to keep track of the percentage of students who have mastered each level of content.

Approach 4: Continual Improvement Throughout the Year

As its name implies, this approach allows students to increase their scores on any topic throughout the entire year. For example, during the first instructional unit, the teacher addresses two proficiency scales and assigns summative scores (using approach 1 or 2). During the next unit, the teacher addresses different proficiency scales, but students still have the opportunity to raise their scores on the scales from the first unit. Of course, this requires setting aside time in class for students to work individually or in groups to improve their scores on previously addressed goals. Throughout the year, the teacher continues to present new scales in new units; however, at any point in time, students can raise their scores on earlier scales. This is most commonly done using student-generated assessments.

Charting Student Progress

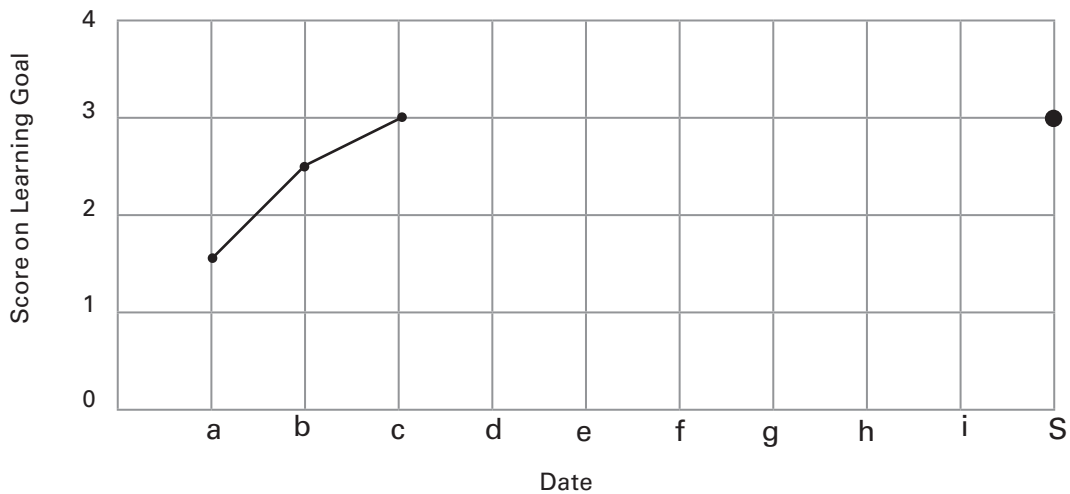
The teacher provides students with charts on which they can record their progress on a learning goal over time, as in the following example.

Name: Courtney

Learning Goal: Make and defend inferences about the Civil War.

My score at the beginning: 1.5 . My goal is to be at 3.0 by November 17 .

Specific things I am going to do to improve: Work 15 minutes three times a week.



- a. September 12
 b. October 18
 c. November 9
 d. _____
 e. _____

- f. _____
 g. _____
 h. _____
 i. _____
 Summative Score: 3.0

The student sets a goal relative to a specific scale at the beginning of a unit or grading period and then tracks her scores on that scale. At the end of the unit or grading period, the teacher assigns a final or summative score to the student for the scale (see column S in the figure).

Because formative scores are designed to provide a view of students' learning over time, it is useful to have students chart their own progress on the scale for each learning goal. To do so, the teacher provides a blank chart for each learning goal. Having each student keep track of his or her scores in this fashion provides a visual representation of his or her progress. It also allows for powerful discussions between teacher and students. The teacher can discuss progress with each student regarding each learning goal. Also, in a tracking system such as this one, the students and the teacher are better able to communicate with parents regarding the students' progress in specific areas of information and skill. Finally, note that the chart has places for students to identify the progress they wish to make and the things they are willing to do to make that progress.

Teacher Actions

- Determining students' initial and final status on a scale for a learning goal
- Reminding students to update their progress charts

Desired Student Responses

- Keeping their progress charts updated
- Using data from progress charts to set short-term goals (for the next assessment or assignment)

Extra Support

- Having students set a series of goals for particular scores (for example, attain a score of 1.5 by October 5, a score of 2.0 by October 19, a score of 2.5 by November 2, and a score of 3.0 by November 16)

Extension

- Having students compare their growth on different learning goals to identify behaviors on their part that led to faster growth

Technology Tips

- Establish a classroom procedure for students to reflect on their learning and track their progress digitally. For instance, students can keep a digital journal using Google Drive or Evernote. These journals can be shared with teachers to help monitor progress and provide feedback.
- Ask students to self-assess their understanding of the learning content before and during instruction using clickers with text input or mobile devices with polling software. Pose preassessment questions prior to the start of the lesson, and capture students' responses. Then, ask the same questions again at strategic points during the lesson, and compare new responses with previous responses to ascertain knowledge gains.

Student Progress Chart

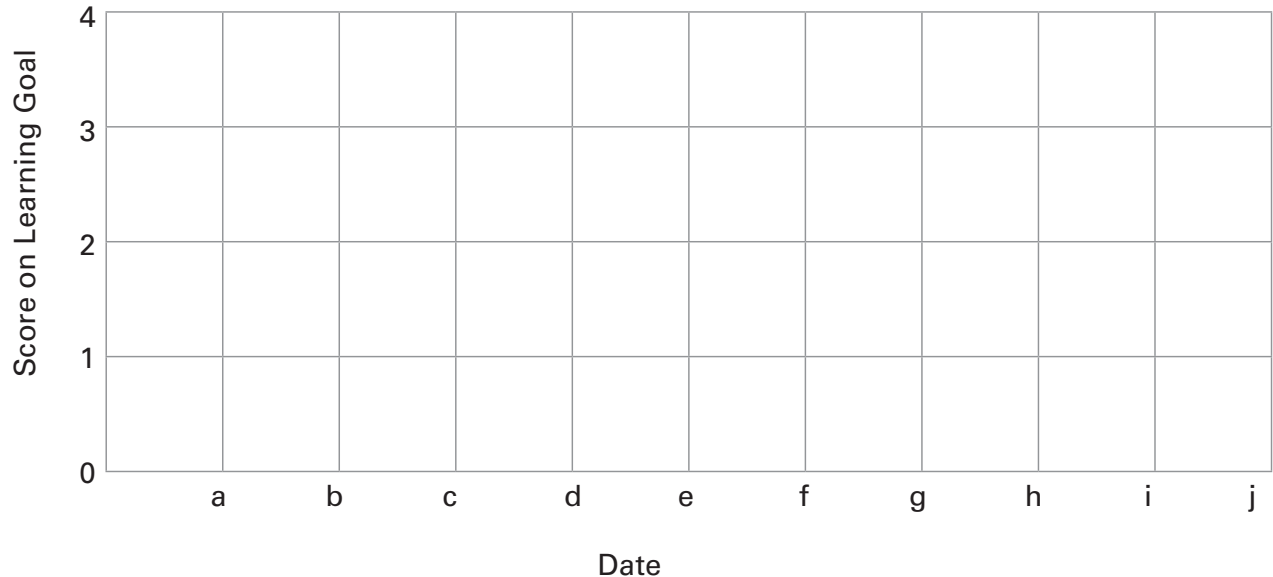
Name: _____

Learning Goal: _____

Initial Score: _____

Goal Score: _____ by _____ (date)

Specific things I am going to do to improve: _____



a. _____

f. _____

b. _____

g. _____

c. _____

h. _____

d. _____

i. _____

e. _____

j. _____

Charting Class Progress

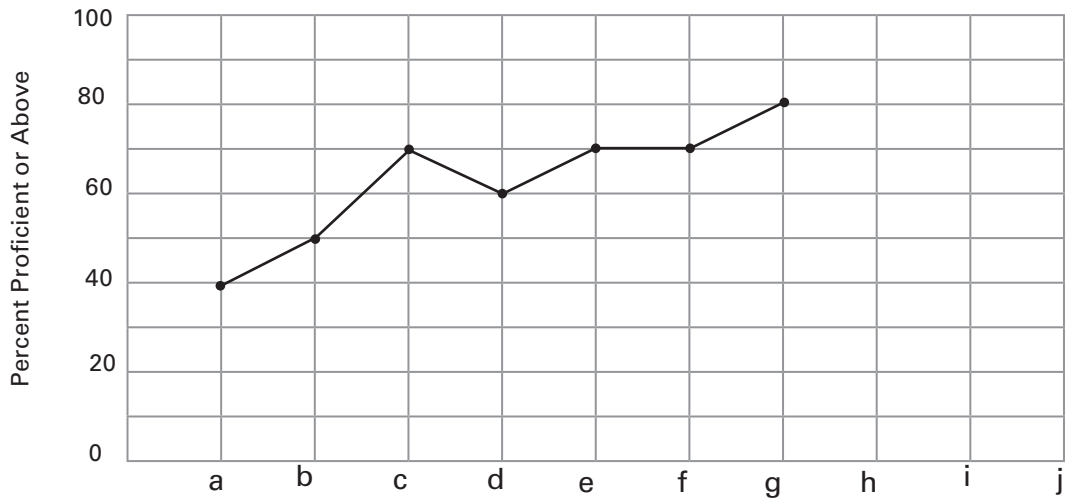
The teacher uses a whole-class tracking chart to create a snapshot of the progress of a group of students, such as the following.

Teacher Name: Mrs. Josey

Measurement Topic: Persuasive Essays

Class name/Subject: Language Arts Grading period: 3rd Quarter

Total number of students represented in graph: 95



Date

- a. Holiday Essay (Jan 12)
- b. Pollution Essay (Jan 23)
- c. Presidential Essay (Feb 3)
- d. Valentine Essay (Feb 14)
- e. Scientific Theory Essay (Feb 29)

- f. Seasonal Essay (Mar 9)
- g. Environmental Essay (Mar 21)
- h. _____
- i. _____
- j. _____

Tracking the progress of an entire class is different from charting the progress of a single student, primarily in that the chart typically shows what percentage of students scored at a proficient (3.0) level or above for a particular assessment. This type of aggregated data can provide teachers and administrators with a snapshot of the progress of entire grade levels or an entire school. Individual teachers or teams of teachers can use such aggregated data to identify future instructional emphases. If the aggregated data indicate that an insufficient percentage of students in a particular grade level are at or above the designated performance standard, then teachers at that grade level might mount a joint effort to enhance student progress for the measurement topic.

Teacher Actions

- Selecting data points for whole-class tracking
- Adjusting instruction based on whole-class progress

Desired Student Responses

- Explaining the class's progress on specific learning goals

Extra Support

- Describing specific elements of a proficiency scale on which the whole class is doing well and specific elements on which the whole class needs more work

Extension

- Asking students who perform specific elements of a proficiency scale well to give feedback and advice to students who need help with the same measurement topic

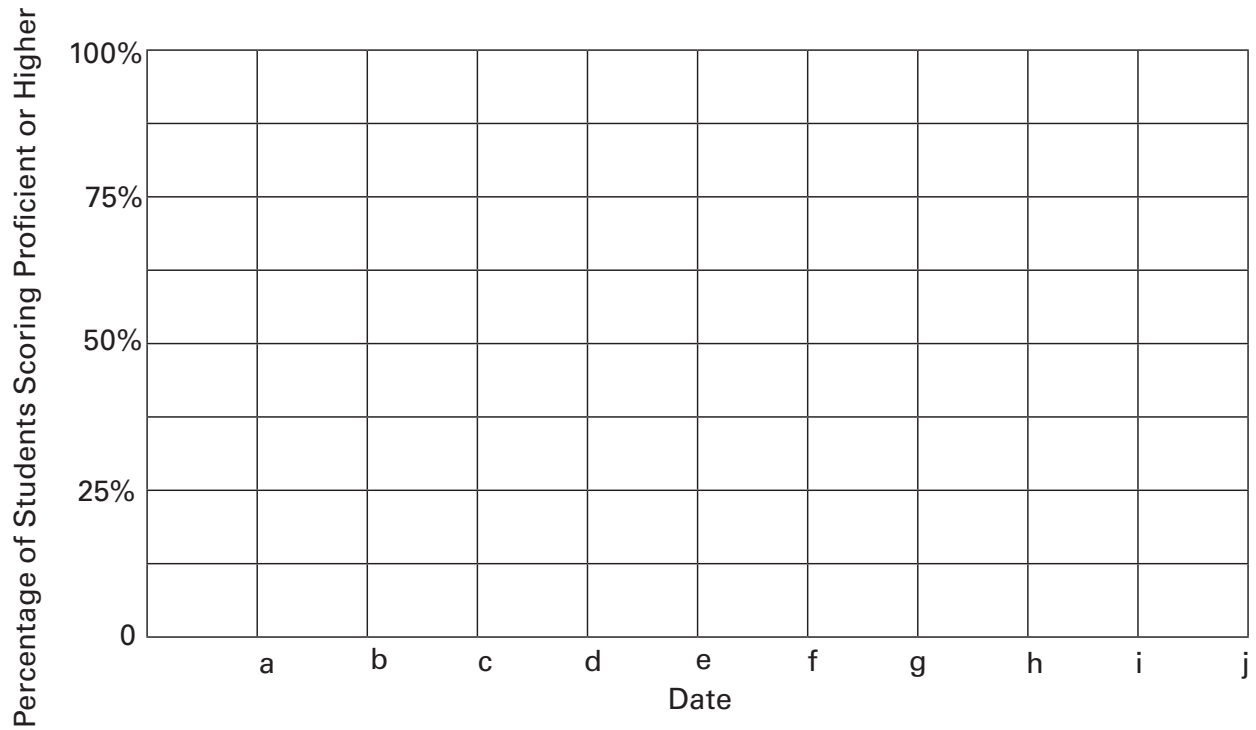
Class Progress Chart

Teacher name: _____

Learning Goal (3.0): _____

Class name/subject: _____ Grading period: _____

Total number of students represented in graph: _____



a. _____

f. _____

b. _____

g. _____

c. _____

h. _____

d. _____

i. _____

e. _____

j. _____

REPRODUCIBLES

Teachers can use the following reproducibles to monitor their implementation of this element. The reproducible titled Tracking Progress Over Time helps teachers set goals related to their proficiency with this element and track their progress toward these goals over the course of a unit, semester, or year. Tracking Teacher Actions and Tracking Student Responses allow observers in classrooms to monitor specific teacher and student behavior related to this element. Teachers themselves can also use the Tracking Student Responses reproducible to document instances of student behaviors during class. The Strategy Reflection Log provides teachers a space to write down their thoughts and reflect on the implementation process for specific strategies related to this element. Finally, this section provides both a student survey and a teacher survey, the results of which provide feedback about teachers' proficiency with this element.

Tracking Progress Over Time

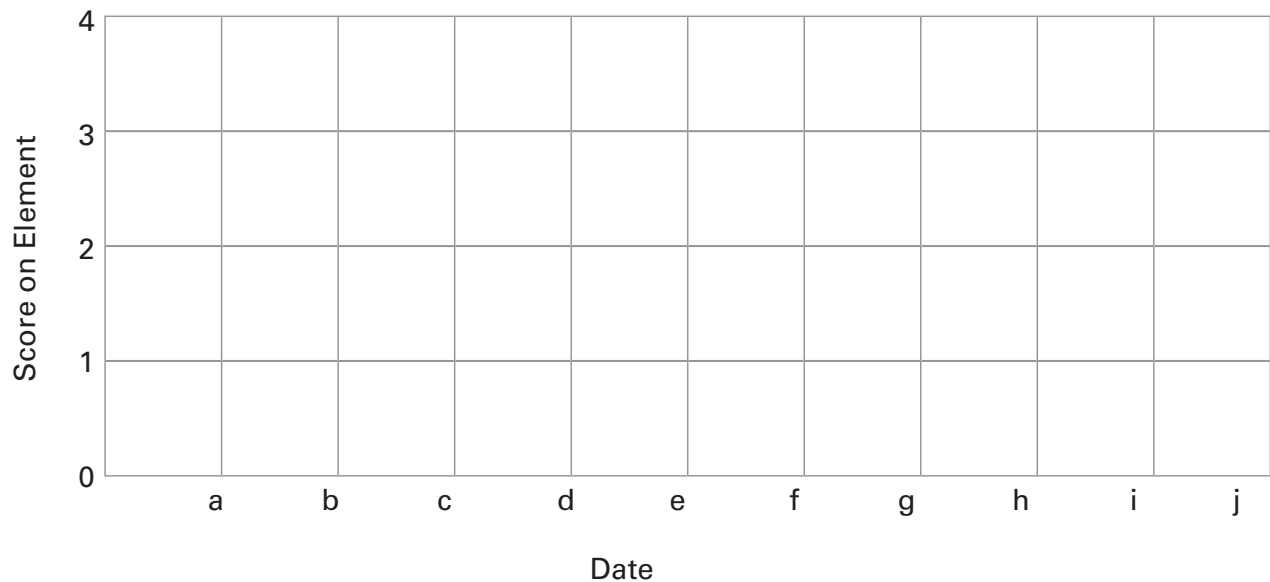
Use this worksheet to set a goal for your use of this element, make a plan for increasing your mastery, and chart your progress toward your goal.

Element: _____

Initial Score: _____

Goal Score: _____ by _____ (date)

Specific things I am going to do to improve: _____



a. _____

f. _____

b. _____

g. _____

c. _____

h. _____

d. _____

i. _____

e. _____

j. _____

Tracking Teacher Actions

During an observation, the observer can use this form to record the teacher's usage of strategies related to the element of tracking student progress.

Observation Date and Time: _____ Length of Observation: _____

Check Strategies You Intend to Use	Strategies	Description of What Was Observed
	Formative Scores	
	Designing Assessments That Generate Formative Scores	
	Individual Score-Level Assessments	
	Different Types of Assessments	
	Generating Summative Scores	
	Charting Student Progress	
	Charting Class Progress	
	Other:	
	Other:	

Tracking Student Responses

A teacher or observer can use this worksheet to record instances of student behavior to inform planning and implementation of strategies associated with tracking student progress. Any item followed by an asterisk is an example of undesirable behavior related to the element; the teacher should look for a decrease in the number of instances of these items.

Observation Date and Time: _____ Length of Observation: _____

Behavior	Number of Instances
Describing their or the class's progress relative to a scale or rubric	
Using a chart or other method to track their progress over a unit	
Describing what performance at the 2.0, 3.0, and 4.0 level looks like	
Explaining why they were assigned a particular score on an assessment	
Designing an assessment to bring up their score on a unit	
Explaining the purpose behind tracking their own or class progress	
Suggesting activities that could indicate proficiency on a particular learning target	
Other:	
Other:	

Strategy Reflection Log

Use this worksheet to select a strategy, set a goal, and reflect on your use of that strategy.

Element: _____

Strategy: _____

Goal: _____

Date	How did it go?

Student Survey for Tracking Student Progress

1. My teacher helps me see how well I am doing during each unit.

Strongly Disagree Disagree Neither Agree
Nor Disagree Agree Strongly Agree

2. My teacher talks to me about what I need to do to move up to the next score level on each of our learning goals.

Strongly Disagree Disagree Neither Agree
Nor Disagree Agree Strongly Agree

3. I know exactly how I am doing on our current learning goals and can explain my progress to someone else.

Strongly Disagree Disagree Neither Agree
Nor Disagree Agree Strongly Agree

4. I know how my class as a whole is progressing toward the learning goal.

Strongly Disagree Disagree Neither Agree
Nor Disagree Agree Strongly Agree

5. My teacher scores my work fairly and my grades reflect my current levels of performance.

Strongly Disagree Disagree Neither Agree
Nor Disagree Agree Strongly Agree

6. My teacher uses lots of different kinds of tests, activities, and assignments to assign scores.

Strongly Disagree Disagree Neither Agree
Nor Disagree Agree Strongly Agree

Teacher Survey for Tracking Student Progress

1. I help students track their progress towards a learning goal.

Often Sometimes Rarely Never I don't know

2. I track the whole class's progress towards a learning goal.

Often Sometimes Rarely Never I don't know

3. I create assessment items that test students' mastery of 2.0 content.

Often Sometimes Rarely Never I don't know

4. I create assessment items that test students' mastery of 3.0 content.

Often Sometimes Rarely Never I don't know

5. I create assessment items that test students' mastery at the 4.0 level.

Often Sometimes Rarely Never I don't know

6. I assign scores using a scale or rubric that shows students' progress in relation to the learning goal.

Often Sometimes Rarely Never I don't know

7. I use informal and formal assessment methods to measure students' understanding.

Often Sometimes Rarely Never I don't know