MARZANO CENTER
TEACHER OBSERVATION PROTOCOL
FOR THE 2014 MARZANO TEACHER EVALUATION MODEL

By Robert J. Marzano, Beverly Carbaugh, Amber Rutherford, Michael D. Toth
Learning Sciences Marzano Center, located in Palm Beach Gardens, Florida, promotes excellence in public education by developing next-generation teacher and leader evaluation tools and training linked to College and Career Readiness or Common Core State Standards. Built on a foundation of expert research into best practices under the direction of national researcher and author Dr. Robert Marzano, CEO Michael Toth, and Vice President and Senior Fellow Dr. Beverly Carbaugh, Marzano Center specializes in deep implementation of continuous teacher and leader growth systems, focusing on best practices to support educators in improving their daily practice. Marzano Center partners with states, districts, and schools to build educator expertise so that every student will become a better learner.
MARZANO CENTER TEACHER OBSERVATIONAL PROTOCOL FOR THE 2014 MARZANO TEACHER EVALUATION MODEL

Updated observation protocol is designed to meet rigorous standards, including CCSS, for deep implementation across subjects and grade levels.


As part of our continuing commitment to ensure that schools are on track to meet the more rigorous college and career readiness standards, Learning Sciences Marzano Center has updated Domain 1 of the Marzano Teacher Evaluation Model for 2014. To supplement this effort, we have additionally updated the teacher observation protocol for deep implementation of Common Core State Standards and other next-generation standards.

The updated teacher observation protocol, developed by Dr. Marzano, Learning Sciences Marzano Center Vice President and Senior Fellow Dr. Beverly Carbaugh; manager of PDS product development Amber Rutherford; and CEO Michael Toth contains explicit references to cognitive rigor and conative skills in the evidences for each element and clarifies expectations around instructional shifts required of teachers to meet the new standards. The 2014 protocol addresses the need for consistent and deep implementation of rigorous standards across subject areas and grade levels.

It is important to note that the foundations of the Marzano Teacher Evaluation Model, including the desired effects for elements, remain unchanged. The updated protocol does not affect measurements from previous observations; it does not affect master-scored videos; it does not affect previous assessments. We recommend that schools choosing to implement the updated protocol adopt it at the start of the school year of 2014. Two calibration trainings, Observing for College and Career Readiness Standards and College and Career Readiness Evidences, will be available from Learning Sciences Marzano Center during the summer of 2014. See p. 20 for further information about our support services.

The updated Learning Map for Domain 1 and the updated protocol may be found in Appendices A and B of this monograph.
COMMON CORE STATE STANDARDS: BACKGROUND

The Common Core State Standards (CCSS) (NGA Center & CCSSO, 2010a, 2010b) have created a veritable paradigm shift in the way we view K–12 curriculum and instruction. Fundamentally, CCSS provide detailed expectations of student outcomes in English language arts (ELA) and mathematics that go well beyond previous expectations. These new ELA and mathematics standards are more rigorous and more focused, and require more of students than any standards that preceded them. Implicit in CCSS is a set of expectations for teachers. Specifically, classroom instruction must be more rigorous and more focused, and will necessarily require more of teachers. What are the changes in instruction implicit in CCSS? This monograph answers that question in the context of a research-based model of effective instruction, the Art and Science of Teaching (Marzano, 2007). We begin by considering the general discussion regarding shifts in instruction required to implement CCSS.

GENERAL DISCUSSION OF INSTRUCTIONAL SHIFTS

While there has been much informal discussion among K–12 practitioners about the instructional shifts implied by Common Core State Standards, one of the best-known formal efforts is that of the New York State Education Department’s EngageNY project. EngageNY (2012) articulated a set of instructional shifts required by the ELA and mathematics CCSS.

Shifts for English Language Arts

EngageNY (2012) described six shifts for ELA/literacy instruction: (1) balancing informational and literary text; (2) incorporating text-based knowledge in all disciplines; (3) a “staircase” of increasing text complexity within and across grade levels; (4) emphasizing text-based questions and answers; (5) writing from legitimate sources; and (6) acquiring transferable academic vocabulary. From the perspective of the classroom teacher, some of these shifts are focused more on planning and some are focused more on pedagogy. This is depicted in Table 1.

<table>
<thead>
<tr>
<th>Shifts in Planning and Pedagogy</th>
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<tbody>
<tr>
<td>1. <strong>Balancing Informational and Literary Text:</strong> Students read and analyze both types of texts. Planning</td>
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<tr>
<td>2. <strong>Knowledge in the Disciplines:</strong> Students acquire content knowledge by reading subject-matter texts; teachers emphasize literacy in science, math, social studies, and other content areas. Planning</td>
</tr>
<tr>
<td>3. <strong>Staircase of Complexity:</strong> Students read increasingly complex texts at each grade level. Planning &amp; Pedagogy</td>
</tr>
<tr>
<td>4. <strong>Text-Based Answers:</strong> Students use textual evidence to answer questions. Pedagogy</td>
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<tr>
<td>5. <strong>Writing From Sources:</strong> In their writing, students use evidence (from legitimate sources) to inform about a topic or make an argument. Pedagogy</td>
</tr>
<tr>
<td>6. <strong>Academic Vocabulary:</strong> Students acquire the vocabulary they need to understand complex texts. Planning &amp; Pedagogy</td>
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</tbody>
</table>

Table 1: ELA Shifts in Planning and Pedagogy
The first instructional shift pertains to balancing informational and literary text. This shift will most profoundly affect how teachers plan. Before Common Core, students in kindergarten through fifth grade were primarily exposed to narrative-based texts, such as stories and other forms of literature (Coleman, 2012a). CCSS suggest an equal ratio of informational and literary text in the classroom. This increased emphasis on informational text allows students to expand their vocabularies and build background knowledge to inform future reading.

The second shift requires that teachers incorporate literacy instruction not only in language arts classes, but also in history, social studies, science, and technical courses. This shift is particularly relevant for secondary teachers, since they focus on specific subject areas. This shift is also a function of planning in that teachers from virtually every subject area will be thinking about how literacy skills will be taught and reinforced. Secondary teachers will accomplish this by asking students to consider primary sources within their subject areas and use them to generate conclusions.

The third literacy shift employs a staircase metaphor to illustrate a gradual increase in grade level text complexity. Planning for this shift requires thinking across grade levels. Common Core researchers noticed a wide disparity in complexity between texts seen in high school and those seen in the first year of college, meaning high schools are not adequately preparing students for the next step (Coleman, 2012a). This shift also directly affects classroom pedagogy. In the staircase model, teachers make time to teach, reteach, and practice close reading skills using complex, grade-appropriate texts. If a second-grade student can handle a second-grade text, as determined by the Common Core, he or she is ready for third grade. Upon learning to read third-grade texts, that student is ready for fourth grade. Staircases of textual complexity prepare fifth graders for middle school, eighth graders for high school, and high school students for success in college and careers.

The fourth shift deals more with classroom pedagogy in that it requires teachers to provide activities that require students to thoroughly analyze complex texts. Instructional strategies to this end move away from simply having students make connections between their personal experiences and the information found in texts. While text-to-self connection questions have their place, they rarely provoke rich, analytical discussions about the text itself.

The fifth instructional shift requires students to cultivate a body of verifiable sources and concrete evidence to inform their writing. Again this plays out primarily as a shift in pedagogical practice. New writing standards demand that students demonstrate a well-formed ability to articulate claims, support them with reasoned grounds, and convey complex ideas with clarity.

The term academic vocabulary used in the sixth shift does not refer to content-specific words like photosynthesis or simile but to that reservoir of advanced vocabulary that informs an understanding of all complex texts. A firm grasp of interdisciplinary words like prove, establish, convey, and hypothesize opens the door for all students—and particularly English language learners—to understand and utilize information in increasingly complex texts. As indicated in Table 1, this shift affects both planning and pedagogy. On the planning side, teachers must think of the specific academic vocabulary they wish to teach and how those terms will be taught. On the pedagogy side, the teacher must ensure that these terms are consistently used as part of regular classroom discourse.
Shifts for Mathematics

Learning mathematics is like learning a new language. If a student misunderstands fundamental tenets, he or she cannot progress efficiently. EngageNY (2012) identified six instructional shifts for mathematics: (1) focus, (2) coherence, (3) fluency, (4) deep understanding, (5) application, and (6) dual intensity of practice and comprehension. CCSS emphasize the need for students to examine and experiment with mathematics concepts and processes in ways that allow them to apply what they know in real world situations. The relationship between these shifts and planning and pedagogy are depicted in Table 2.

Table 2: Mathematics Shifts in Planning and Pedagogy

<table>
<thead>
<tr>
<th>Shift</th>
<th>Description</th>
<th>Planning &amp; Pedagogy</th>
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</thead>
<tbody>
<tr>
<td>1. <strong>Focus</strong>:</td>
<td>Teachers focus on specific key concepts to ensure that students have a deep understanding of them.</td>
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<tr>
<td>2. <strong>Coherence</strong>:</td>
<td>Mathematical learning is connected within and across grade levels to build students' understanding over multiple years.</td>
<td>Planning</td>
</tr>
<tr>
<td>3. <strong>Fluency</strong>:</td>
<td>Students can perform simple calculations and basic operations with speed and accuracy.</td>
<td>Pedagogy</td>
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<tr>
<td>4. <strong>Deep Understanding</strong>:</td>
<td>Students understand concepts deeply before moving on; they grasp underlying mathematical principles rather than using &quot;tricks&quot; to figure out answers.</td>
<td>Pedagogy</td>
</tr>
<tr>
<td>5. <strong>Application</strong>:</td>
<td>Students use math to solve real-life problems, even when not prompted to do so.</td>
<td>Planning &amp; Pedagogy</td>
</tr>
<tr>
<td>6. <strong>Dual Intensity</strong>:</td>
<td>Repeated practice and deep understanding are both strongly emphasized.</td>
<td>Pedagogy</td>
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</tbody>
</table>

The first shift for mathematics is focused on remedying the United States’ “mile-wide, inch-deep” approach to mathematics. At one level, this is a planning issue. Rather than articulating a wide range of mathematics topics that are impossible to address in adequate depth, the CCSS mathematics standards include a much narrower focus than previous state standards. Still, when planning lessons and units, classroom teachers must be sure to focus on the critical aspects of content for their grade level. However, there are also pedagogical implications for this shift, primarily on what teachers choose to emphasize within the context of specific lessons. Each lesson must have a well-articulated and focused target for instruction that is communicated to students.

The second shift for mathematics, coherence, is primarily a planning issue. One purpose of the mathematics CCSS is to eliminate the daunting task of relearning math every school year.

Consequently, mathematics CCSS connect central mathematical concepts within and across grade levels. When planning instruction, mathematics teachers must keep in mind what students will be learning at higher grade levels and what they have learned at a lower grade levels.

According to shift three, teachers should strive to develop their students’ automaticity, speed, and accuracy with basic operations. This is primarily a pedagogical consideration—ensuring that adequate
practice is set up to develop students’ fluency in a manner that is not algorithmic in nature. This shift should always be considered in conjunction with the fourth, fifth, and sixth shifts.

The fourth shift addresses the pedagogical issue that classroom activities are not focused on simply “getting the right answer.” Rather, the instructional focus should be on developing deep understanding. David Coleman (2012b), contributing author to Common Core, defines deep understanding as “an ability to see an unfamiliar problem and still use the math because you actually understand it.” For example, upon reading a word problem, students can determine that its solution requires subtraction without seeing the word subtraction in the problem.

The fifth shift, application, requires that students are not only able to determine what mathematics concepts and skills are important to a particular problem or issue but to effectively apply those concepts and skills effectively. This is both a planning and pedagogical issue. At the pedagogical level, teachers must link the concepts and strategies articulated in the mathematics CCSS to real-life problems and decisions. This requires planning to construct and employ authentic tasks.

Finally, the sixth instructional shift for mathematics is a pedagogical issue. It calls for a dual intensity of practice and understanding. Rather than prioritize one over the other, teachers should give equal weight to the development of fluency through repetition as they do to the development of deep understanding through analysis.

The twelve shifts described here make good sense and might be considered from the perspective of many instructional frameworks. Here we utilize the Art and Science of Teaching (Marzano, 2007) model as the frame of reference.
THE MARZANO TEACHER EVALUATION MODEL

The Marzano Teacher Evaluation Model is a research-based model designed both to effectively measure teacher performance and to enhance teacher development (Marzano & Toth, 2013; Marzano, 2012b) by supporting and improving the pedagogical skills of teachers through self-reflection (Marzano, 2012a) and coaching (Marzano & Simms, 2013a). The 2014 Marzano Teacher Evaluation Model, along with the updated teacher observer protocol, may be used to implement the pedagogical shifts implicit in Common Core State Standards (CCSS) and other state college and career readiness standards. Explicit connections between instructional strategies in The Art and Science of Teaching, which is the basis for the teacher evaluation model, and college and career readiness standards are described in a number of works (see Marzano & Heflebower, 2012; Marzano, Yanoski, Hoegh, & Simms, 2013; Marzano & Simms, 2013b).

This paper briefly outlines four adaptations that have been made to the 2014 Marzano Teacher Evaluation Model to reflect the specific instructional shifts required by college and career readiness standards. Included as an appendix is the standards-focused protocol 2014, designed by Dr. Robert Marzano, Dr. Beverly Carbaugh, Amber Rutherford, and Michael D. Toth to specifically address the requirements of the new standards. The protocol includes all 41 elements of Domain 1 of the Marzano Teacher Evaluation Model, along with specific teacher and student evidences for each element in the protocol.

Adaptation 1: Use Seven Elements More Frequently

The 2014 Marzano Teacher Evaluation Model includes 41 revised elements (i.e., categories of instructional strategies) that are organized into nine broader categories (A through I in Table 3) which themselves are organized into three lesson segments (I. Routine Strategies, II. Content Strategies, and III. Strategies Enacted on the Spot). In teaching CCSS, seven of the 41 elements in the model should become staples of classroom instruction. These elements are highlighted in Table 3.
Table 3: Elements of the 2014 Marzano Teacher Evaluation Model

I. Routine Strategies
   A. DQ1: Communicating Learning Goals and Feedback
      1. Providing rigorous learning goals and performance scales (rubrics)
      2. Tracking student progress
      3. Celebrating success

   B. DQ6: Establishing and Maintaining Rules and Procedures
      4. Establishing classroom routines
      5. Organizing the physical layout of the classroom

II. Content Strategies
   C. DQ2: Helping Students Interact with New Knowledge
      6. Identifying critical content
      7. Organizing students to interact with new content
      8. Previewing new content
      9. Chunking content into “digestible bites”
     10. Helping students process new information
     11. Helping students elaborate on new information
     12. Helping students record and represent knowledge
     13. Helping students reflect on learning
   D. DQ3: Helping Students Practice and Deepen New Knowledge
      14. Reviewing content
      15. Organizing students to practice and deepen knowledge
      16. Using homework
      17. Helping students examine similarities and differences
      18. Helping students examine their reasoning
      19. Helping students practice skills, strategies, and processes
      20. Helping students revise knowledge

   E. DQ4: Helping Students Generate and Test Hypotheses
      21. Organizing students for cognitively complex tasks
      22. Engaging students in cognitively complex tasks involving hypothesis generation and testing
      23. Providing resources and guidance for cognitively complex tasks

III. Strategies Enacted on the Spot
   F. DQ5: Engaging Students
      24. Noticing when students are not engaged
      25. Using academic games
      26. Managing response rates
      27. Using physical movement
      28. Maintaining a lively pace
      29. Demonstrating intensity and enthusiasm
      30. Using friendly controversy
      31. Providing opportunities for students to talk about themselves
      32. Presenting unusual or intriguing information

   G. DQ7: Recognizing Adherence to Rules and Procedures
      33. Demonstrating “withitness”
      34. Applying consequences for lack of adherence to rules and procedures
      35. Acknowledging adherence to rules and procedures

   H. DQ8: Establishing and Maintaining Effective Relationships with Students
      36. Understanding students’ interests and backgrounds
      37. Using verbal and nonverbal behaviors that indicate affection for students
      38. Displaying objectivity and control

   I. DQ9: Communicating High Expectations for All Students
      39. Demonstrating value and respect for low expectancy students
      40. Asking questions of low expectancy students
      41. Probing incorrect answers with low expectancy students
CCSS and other college and career readiness standards require more clarity in the progressions of knowledge being addressed in class, more application of knowledge by students along with more and deeper inferential thinking, and the creation of sound evidence for conclusions and claims. Finally, the standards require students to constantly evaluate the validity and accuracy of their thinking and beliefs. The seven elements highlighted in Table 1 are instruments to these ends. Note the supporting evidences for each element listed in Appendix A.

These efforts on the part of the teacher should disclose a clear sequence or progression of facts, details, and lower-order skills up the ladder of complexity to more robust generalizations, principles, and processes. At the end of a lesson, students should be able to describe how the details of the lesson build to support bigger ideas and processes.

The Seven Focus Elements for Classroom Instruction

- **Element 6**, *Identifying Critical Content*, articulates the responsibility of the teacher to continually highlight the important content that is being addressed in class.
- **Element 11**, *Helping Students Elaborate on New Information*, describes the requirement that students are continually asked to make inferences about the information addressed in class. Equally important, students are asked to provide evidence and support for their inferences.
- **Element 12**, *Helping Students Record and Represent Knowledge*, points to the need for students to create representations of the information and processes with which they are interacting. CCSS highlight the need to expand the types of representations elicited from students to include mental models, mathematical models, and other more abstract representations of content.
- **Element 17**, *Helping Students Examine Similarities and Differences*, is a strategy that can be applied to all types of information and processes to help students create distinctions regarding their defining characteristics.
- **Element 18**, *Helping Students Examine Their Reasoning*, is at the core of instructional changes explicit in the more rigorous standards. Students must continually be provided the opportunity and guidance to examine their own reasoning as well as that of others.
- **Element 20**, *Helping Students Revise Knowledge*, refers to the need for students to constantly update their understanding of information and effectiveness at executing processes.
- **Element 22**, *Engaging Students in Cognitively Complex Tasks Involving Hypothesis Generation and Testing*, might be considered the “centerpiece” strategy of a standards-focused classroom. Students are constantly asked to make predictions and provide support for the logic of their predictions. Additionally, they are provided opportunities (some brief and some extended) to test out the efficacy of their predictions.

In summary, in a traditional classroom, Elements 6, 11, 12, 17, 18, 20, and 22 are commonly associated with specific types of lessons. However, in the context of the rigorous college and career readiness standards, these elements are more frequently deployed in every lesson.
Adaptation 2: Provide More Rigor and Depth

In addition to using the seven elements listed above on a more frequent basis, each of the 41 elements can be modified to produce more rigor and depth of processing on the part of students. These modifications are listed in the third column of Table 4 for each of the 41 elements in the model.

Table 4: Modifications for Rigor and Depth of Processing

<table>
<thead>
<tr>
<th>I. ROUTINE SEGMENTS</th>
<th>A. Communicating Learning Goals and Feedback</th>
</tr>
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<tbody>
<tr>
<td>Element</td>
<td>Traditional Classroom</td>
</tr>
<tr>
<td>1. Providing Rigorous Learning Goals and Performance Scales (Rubrics)</td>
<td>The teacher provides or reminds students about a specific learning goal and the scale that accompanies that goal.</td>
</tr>
<tr>
<td>2. Tracking Student Progress</td>
<td>Using formative assessment, the teacher helps students chart their individual and group progress on a learning goal.</td>
</tr>
<tr>
<td>3. Celebrating Success</td>
<td>The teacher helps students acknowledge and celebrate their current status on learning goals as well as knowledge gain.</td>
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| B. Establishing and Maintaining Classroom Rules and Procedures |
| Element                         | Traditional Classroom | Modifications for More Rigor and Depth |
| 4. Establishing Classroom Routine | The teacher reminds students of a rule or procedure or establishes a new rule or procedure. | Routines focus more on students working individually or in small groups as opposed to whole-class instruction. |
| 5. Organizing the Physical Layout of the Classroom | The teacher organizes materials, traffic patterns, and displays to enhance learning. | The physical layout of the classroom is designed to support long-term projects by individual students and groups of students. |
### II. Content Strategies

#### C. Helping Students Effectively Interact With New Knowledge

<table>
<thead>
<tr>
<th>Element</th>
<th>Traditional Classroom</th>
<th>Modifications for More Rigor and Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Identifying Critical Content</td>
<td>The teacher provides cues as to which information is important.</td>
<td>The teacher continuously identifies and highlights the content that is critical for students and, by the end of the lesson, these efforts portray a clear progression of information that leads to deeper understanding of the content.</td>
</tr>
<tr>
<td>7. Organizing Students to Interact with New Content</td>
<td>The teacher organizes students into dyads or triads to discuss small chunks of information.</td>
<td>Students are provided help regarding how to interact in a manner that will help them process new content. Additionally, students are provided guidance regarding how they might focus on one or more of the cognitive or conative skills (see Table 5).</td>
</tr>
<tr>
<td>8. Previewing New Content</td>
<td>The teacher uses strategies such as K-W-L (Know, Want to Know, Learned), advance organizers, and preview questions.</td>
<td>The previewing activities allow for students to access and analyze information (e.g., the previewing activities allow for “flipped classroom” activities) as opposed to simply being presented with information.</td>
</tr>
<tr>
<td>9. Chunking Content into “Digestible Bites”</td>
<td>The teacher presents content in small portions that are tailored to students’ levels of understanding.</td>
<td>The content is chunked in such a way as to progress to a clear conclusion or “learning progression” about the new information.</td>
</tr>
<tr>
<td>10. Helping Students Process New Information</td>
<td>After each chunk of information, the teacher asks students to summarize and clarify what they have experienced.</td>
<td>Group processing of information is focused on students generating conclusions about the new information.</td>
</tr>
<tr>
<td>11. Helping Students Elaborate on New Information</td>
<td>The teacher asks questions that require students to make and defend inferences.</td>
<td>The teacher asks questions that not only require students to make inferences about the content but also require them to provide evidence for their inferences.</td>
</tr>
<tr>
<td>12. Helping Students Record and Represent Knowledge</td>
<td>The teacher asks students to summarize, take notes, or use nonlinguistic representations.</td>
<td>Activities that require students to record and represent knowledge emphasize student creation of a variety of types of models (e.g., mental, mathematical, visual, and linguistic) that organize and summarize the important content.</td>
</tr>
<tr>
<td>13. Helping Students Reflect on Learning</td>
<td>The teacher asks students to reflect on what they understand or what they are still confused about.</td>
<td>Reflection activities include consideration of selected cognitive and conative skills (see Table 5).</td>
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</table>
### D. Helping Students Practice and Deepen Their Understanding of New Knowledge

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<th>Element</th>
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<tbody>
<tr>
<td>14. Reviewing Content</td>
<td>The teacher briefly reviews related content addressed previously.</td>
<td>The teacher reviews activities to ensure that students are aware of the “big picture” regarding the content.</td>
</tr>
<tr>
<td>15. Organizing Students to Practice and Deepen Knowledge</td>
<td>The teacher organizes students into groups designed to deepen their understanding of information or practice skills.</td>
<td>Students are provided guidance as to how to interact in a manner that will help them practice and deepen their knowledge and are also provided guidance as to how they might focus on one or more cognitive or conative skills (see Table 5).</td>
</tr>
<tr>
<td>16. Using Homework</td>
<td>The teacher uses homework for independent practice or to elaborate on information.</td>
<td>Homework activities allow students to access and analyze information as opposed to simply being presented with information (i.e., homework activities allow for aspects of a “flipped classroom”).</td>
</tr>
<tr>
<td>17. Helping Students Examine Similarities and Differences</td>
<td>The teacher engages students in comparing, classifying, and creating analogies and metaphors.</td>
<td>Activities involving comparing, classifying, and creating analogies and metaphors address the “big ideas” and “conclusions” as well as specific details.</td>
</tr>
<tr>
<td>18. Helping Students Examine Their Reasoning</td>
<td>The teacher asks students to examine informal fallacies, propaganda, and bias.</td>
<td>Analysis of errors includes more efficient ways to execute processes as well as examining and critiquing the overall logic of arguments.</td>
</tr>
<tr>
<td>19. Helping Students Practice Skills, Strategies, and Processes</td>
<td>The teacher engages students in massed and distributed practice.</td>
<td>Practice activities are designed to develop fluency and alternative ways of executing procedures.</td>
</tr>
<tr>
<td>20. Helping Students Revise Knowledge</td>
<td>The teacher asks students to revise entries in notebooks to clarify and add to previous information.</td>
<td>Revision of knowledge involves correcting errors and misconceptions as well as adding new information. Additionally, it involves viewing knowledge from different perspectives and identifying alternative ways of executing procedures.</td>
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</table>
### E. Helping Students Generate and Test Hypotheses About New Knowledge

<table>
<thead>
<tr>
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<th>Modifications for More Rigor and Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>21. Organizing Students for Cognitively Complex Tasks</td>
<td>The teacher organizes students into small groups to facilitate cognitively complex tasks.</td>
<td>Students are not only provided with guidance as to how to interact in a manner that will help them generate and test hypotheses but are also provided guidance as to how they might focus on one or more cognitive or conative skills (see Table 5).</td>
</tr>
<tr>
<td>22. Engaging Students in Cognitively Complex Tasks Involving Hypothesis Generation and Testing</td>
<td>The teacher engages students in decision-making tasks, problem-solving tasks, experimental-inquiry tasks, and investigative tasks.</td>
<td>In addition to analyzing the accuracy of original hypotheses, students examine their own thinking and execution of the cognitively complex tasks.</td>
</tr>
<tr>
<td>23. Providing Resources and Guidance for Cognitively Complex Tasks</td>
<td>The teacher makes resources available that are specific to cognitively complex tasks and helps students execute such tasks.</td>
<td>Resources include and emphasize the effective use of technology in the context of cognitively complex tasks.</td>
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### III. STRATEGIES ENACTED ON THE SPOT

#### F. Engaging Students

<table>
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</thead>
<tbody>
<tr>
<td>24. Noticing When Students are Not Engaged</td>
<td>The teacher scans the classroom to monitor students' levels of engagement.</td>
<td>In addition to monitoring for student attention, the teacher monitors for cognitive engagement (i.e., students’ interest in the content).</td>
</tr>
<tr>
<td>25. Using Academic Games</td>
<td>When students are not engaged, the teacher uses adaptations of popular games to re-engage them and focus their attention on academic content.</td>
<td>Academic games focus on important concepts, generalizations, and principles as opposed to lower-level information.</td>
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<tr>
<td>26. Managing Response Rates</td>
<td>The teacher uses strategies such as response cards, response chaining, and voting technologies to ensure that multiple students respond to questions.</td>
<td>In addition to ensuring that all students respond, the teacher ensures that student responses are backed up by evidence.</td>
</tr>
<tr>
<td>27. Using Physical Movement</td>
<td>The teacher uses strategies that require students to move physically, such as vote with your feet and physical reenactments of content.</td>
<td>Frequent movement is facilitated by students leaving their desks to gather information, confer with others, use specific types of technology, etc.</td>
</tr>
<tr>
<td>28. Maintaining a Lively Pace</td>
<td>The teacher slows and quickens the pace of instruction in such a way as to enhance engagement.</td>
<td>Students are provided with adequate time to gather information, confer with others, use specific types of technology, etc.</td>
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<tr>
<td>29. Demonstrating Intensity and Enthusiasm</td>
<td>The teacher uses verbal and nonverbal signals to show that demonstrate enthusiasm about the content.</td>
<td>The teacher demonstrates enthusiasm by sharing a deep level of content knowledge.</td>
</tr>
<tr>
<td>Element</td>
<td>Traditional Classroom</td>
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<tr>
<td>30. Using Friendly Controversy</td>
<td>The teacher uses techniques that require students to take and defend a position about content.</td>
<td>Friendly controversy activities require students to provide evidence for their positions and address the sources of their evidence.</td>
</tr>
<tr>
<td>31. Providing Opportunities for Students to Talk about Themselves</td>
<td>The teacher uses techniques that allow students to relate content to their personal lives and interests.</td>
<td>Students are asked to relate the content and the use of specific cognitive and conative skills (see Table 5) to their daily lives.</td>
</tr>
<tr>
<td>32. Presenting Unusual or Intriguing Information</td>
<td>The teacher provides or encourages the identification of intriguing information about the content.</td>
<td>The unusual information demonstrates in-depth knowledge of the content.</td>
</tr>
</tbody>
</table>

**G. Recognizing Adherence to Rules and Procedures**

<table>
<thead>
<tr>
<th>Element</th>
<th>Traditional Classroom</th>
<th>Modifications for More Rigor and Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>33. Demonstrating “Withitness”</td>
<td>The teacher is aware of variations in student behavior that might indicate potential disruptions and attends to them immediately.</td>
<td>In addition to awareness of behavioral issues, the teacher senses confusion about or lack of interest in the content and intervenes appropriately.</td>
</tr>
<tr>
<td>34. Applying Consequences for Lack of Adherence to Rules and Procedures</td>
<td>The teacher applies consequences for lack of adherence to rules and procedures consistently and fairly.</td>
<td>The teacher links lack of adherence to rules and procedures to self-regulation strategies students might use.</td>
</tr>
<tr>
<td>35. Acknowledging Adherence to Rules and Procedures</td>
<td>The teacher acknowledges adherence to rules and procedures consistently and fairly.</td>
<td>The teacher acknowledges adherence to rules and procedures and links such adherence to specific self-regulation strategies students have used.</td>
</tr>
</tbody>
</table>

**H. Establishing and Maintaining Effective Relationships with Students**

<table>
<thead>
<tr>
<th>Element</th>
<th>Traditional Classroom</th>
<th>Modifications for More Rigor and Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>36. Understanding Students’ Interests and Backgrounds</td>
<td>The teacher seeks out knowledge about students and uses that knowledge to engage in informal, friendly discussions with students.</td>
<td>The teacher relates content-specific knowledge to personal aspects of students’ lives.</td>
</tr>
<tr>
<td>37. Using Verbal and Nonverbal Behaviors that Indicate Affection for Students</td>
<td>The teacher uses humor and friendly banter appropriately with students.</td>
<td>The teacher demonstrates and fosters respect for students’ thinking.</td>
</tr>
<tr>
<td>38. Displaying Objectivity and Control</td>
<td>The teacher behaves in ways that indicate he or she does not take infractions personally.</td>
<td>The teacher demonstrates a commitment to academic rigor.</td>
</tr>
</tbody>
</table>
### I. Communicating High Expectations for All Students

<table>
<thead>
<tr>
<th>Element</th>
<th>Traditional Classroom</th>
<th>Modifications for More Rigor and Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>39. Demonstrating Value and Respect for Low Expectancy Students</td>
<td>The teacher demonstrates the same positive, affective tone with low expectancy students as with high-expectancy students.</td>
<td>The teacher exhibits respect for and understanding of low expectancy students' thinking regarding the content.</td>
</tr>
<tr>
<td>40. Asking Questions of Low Expectancy Students</td>
<td>The teacher asks questions of low expectancy students with the same frequency and level of difficulty as with high expectancy students.</td>
<td>The teacher asks questions that require conclusions from low expectancy students.</td>
</tr>
<tr>
<td>41. Probing Incorrect Answers with Low Expectancy Students</td>
<td>The teacher inquires into incorrect answers with low expectancy students with the same depth and rigor as with high expectancy students.</td>
<td>The teacher asks low expectancy students to provide evidence for their conclusions and examine the sources of their evidence.</td>
</tr>
</tbody>
</table>

As described above, some of the shifts described for ELA and mathematics instruction are more logically tied to classroom pedagogy. Others are more logically tied to planning. The pedagogically based shifts are embedded in specific elements of the model. For example, the fourth ELA shift regarding an emphasis on text-based questions is embedded in element 11, elaborating on new information. Within this element, teachers ask students to produce elaborative inferences and support those inferences. To accommodate the fourth ELA pedagogical shift, teachers can ask students to use specific passages from specific texts to generate and defend such inferences.

The fifth ELA shift regarding a push toward writing from legitimate sources is embedded in a number of the 41 elements, including element 16 (using homework), element 17 (helping students examining similarities and differences), element 18 (helping students examine their reasoning), element 22 (engaging students in cognitively complex tasks involving hypothesis generation and testing), and element 30 (using friendly controversy). Homework can be designed to require students' attention to specific sources and use of those sources to generate and defend conclusions. Tasks involving similarities and differences can easily include comparing and contrasting specific sources of information for a given topic. Examining errors in reasoning by definition includes the use of legitimate sources as does engaging students in cognitively complex tasks that require the generation and testing of hypotheses. Finally, friendly controversy involves students taking and defending positions on a specific topic. These defenses can and should be based on legitimate sources.

The sixth ELA shift regarding acquisition of transferable academic vocabulary is also embedded in a number of elements, including element 1 (providing rigorous learning goals and performance scales), element 6 (identifying critical content), element 8 (previewing new content), element 14 (reviewing content), element 17 (helping students examine similarities and differences), element 20 (helping students revise knowledge), and element 25 (using academic games). The proficiency scales used in the Art and Science of Teaching model require teachers to generate scales (that is, rubrics) that clearly identify a learning goal and prerequisite knowledge that will be directly taught and applications of the content in the learning goal that show students can use the content in the learning goal. Academic vocabulary is commonly identified as part of the prerequisite content that will be directly taught. Academic vocabulary is also commonly highlighted by the teacher as critical information (element 6) and is mentioned during previewing activities (element 8). Similarly, academic vocabulary is
commonly highlighted during reviews of what has been previously taught (element 14) and is the focus of students revising what they believe to be true about specific content (element 20). Finally, academic vocabulary can be the subject of activities involving examining similarities and differences (element 17) and the subject of academic games (element 25).

The pedagogically based mathematics shifts also are embedded in a number of elements. For example, the third mathematics shift regarding developing fluency is implicit in element 19 (helping students practice skills, strategies, and processes). This element is specifically focused on the development of fluency regarding critical skills, strategies, and processes. However, fluency is not to be developed in a rote, algorithmic way. Rather, students are to take part in the active construction of the procedures in the skill, strategy, or process and shape those procedures through practice to something that can be executed effectively and fluently.

The fourth mathematics shift regarding deep understanding can be tied to element 19 in conjunction with element 18 (helping students examine errors in reasoning) and element 20 (helping students revise knowledge). While practicing a skill, strategy, or process, students should be continually asked to identify errors they might be making or better ways of executing a skill, strategy, or process.

This awareness is integrated when students take time to make revisions in their tentative procedure for a skill, strategy, or process.

The fifth mathematics shift regarding application is embedded in element 22 (engaging students in cognitively complex tasks involving hypothesis generation and testing). Here, students are asked to apply content in new ways, analyze the accuracy of their original hypotheses, and examine their thinking and execution of a cognitively complex task.

Adaptation 3: Directly Teach and Foster Specific Mental Skills and Processes

A third adaptation implied by the CCSS is that specific mental skills and processes are directly taught to students and fostered in the context of regular classroom instruction. These skills are implicit in the Mathematics Practice Standards and in the College and Career Readiness Anchor Standards. They can be categorized into two broad categories referred to as cognitive and conative skills (Marzano & Hefflebower, 2012; Marzano, Yanoski, Hoegh, & Simms, 2013). They are listed in Table 5.

Cognitive skills are those that people use to analyze and process information effectively. Conative skills are those people use to combine what they know with how they feel to better function in society. Those skills that are explicit to the Art and Science of Teaching model have an asterisk next to them in Table 5. Those that are not already explicit in the Art and Science of Teaching model are shaded in Table 5. Where the Art and Science of Teaching model explicitly includes all but two of the cognitive skills, it does not explicitly include the conative skills.

One adaptation to the Art and Science of Teaching model is to explicitly teach students the procedures necessary to execute the cognitive skills and processes that are already explicit in the model as opposed to having students simply use these skills and processes. That is, instead of simply providing activities that require students to present and support claims (a cognitive skill explicit in the Art and Science of Teaching model), the teacher would also instruct students on a procedure for presenting and supporting claims. For those cognitive and conative skills and processes not explicit in the model, the teacher would have to explicitly teach the skills and processes as well as find places where they naturally fit. The third column in Table 4 identifies where those non-explicit cognitive and conative skills might be placed.
Table 5: Cognitive and Conative Skills Implicit in the Standards for Mathematics Practice and the College and Career Readiness Anchor Standards

<table>
<thead>
<tr>
<th>COGNITIVE SKILLS</th>
<th>CONATIVE SKILLS</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Generating conclusions</em> involves combining known information to form new ideas.</td>
<td>Becoming aware of the power of interpretation involves becoming aware that one's thoughts, feelings, beliefs, and actions are influenced by how one interprets situations.</td>
</tr>
<tr>
<td><em>Identifying common logical errors</em> involves analyzing information to determine how true it is.</td>
<td>Cultivating a growth mindset involves building the belief that each person can increase his or her intelligence and abilities.</td>
</tr>
<tr>
<td><em>Presenting and supporting claims</em> involves providing evidence to support a new idea.</td>
<td>Cultivating resiliency involves developing the ability to overcome failure, challenge, or adversity.</td>
</tr>
<tr>
<td>Navigating digital sources involves using electronic resources to find credible and relevant information.</td>
<td>Avoiding negative thinking involves preventing one's emotions from dictating one's thoughts and actions.</td>
</tr>
<tr>
<td><em>Problem solving</em> involves accomplishing a goal in spite of obstacles or limiting conditions.</td>
<td>Taking various perspectives involves identifying the reasoning behind multiple (and often conflicting) perspectives on an issue.</td>
</tr>
<tr>
<td><em>Decision-making</em> involves using criteria to select among alternatives that initially appear to be equal.</td>
<td>Interacting responsibly involves being accountable for the outcome of an interaction.</td>
</tr>
<tr>
<td><em>Experimenting</em> is the process of generating and testing explanations of observed phenomena.</td>
<td>Handling controversy and conflict resolution involves reacting positively to controversy or conflict.</td>
</tr>
<tr>
<td><em>Investigating</em> involves identifying confusions or contradictions about ideas or events and suggesting ways to resolve those confusions or contradictions.</td>
<td></td>
</tr>
<tr>
<td><em>Identifying basic relationships between ideas</em> involves consciously analyzing how one idea relates to others.</td>
<td></td>
</tr>
<tr>
<td>Generating and manipulating mental images involves creating a picture of information in one's mind in order to process it more deeply.</td>
<td></td>
</tr>
</tbody>
</table>
Adaptation 4: Plan More Thoughtfully

As described above, some of the shifts articulated by EngageNY (2012) manifest more commonly as planning activities than as specific instructional strategies. There are two levels of planning that are affected by the ELA and mathematics shifts: (1) planning by school and district curriculum specialists and (2) planning by classroom teachers.

Planning by School and District Curriculum Experts
Shifts 1, 2, 3, and 6 described for the ELA all have implications for planning by school and district curriculum experts. Based on the first ELA shift, literary canons for K–12 curricula must be revised to include an equal share of informational and literary text. Presumably, the new canons would include informational texts in a variety of forms that include print and web-based entries. The second ELA shift requires curriculum specialists in the various subject areas to consider the primary texts that will be used in subject matter classrooms and how those texts might be used to enhance students’ literary skills. The third ELA shift requires that ELA curriculum specialists identify the sequence of informational and literary texts that will be read by students. These texts must represent a gradual and concrete progression of text complexity. Finally, the sixth ELA shift requires curriculum specialists to identify those academic terms that cut across multiple-subject areas and yet convey specific information about how subject-matter information is to be addressed.

Shifts 1, 2, and 5 described for mathematics also have implications for school and district curriculum specialists. The first mathematics shift requires mathematics curriculum specialists to ensure that the mathematics curriculum is focused enough that teachers can adequately address the content in the time available to them. Although CCSS documents have done this at a general level, mathematics specialists within schools and districts must ensure that CCSS standards, as written, are translated into a parsimonious but powerful set of activities and assignments for classroom teachers. The second mathematics shift requires curriculum specialists to ensure a gradual progression of knowledge from grade level to grade level so that teachers within a K–12 system can be confident about what students have learned at lower grade levels. Again, the mathematics CCSS does this, but curriculum specialists must ensure that the sequence of knowledge is preserved in the activities and assignments that are part of the curriculum. The fifth mathematics shift requires curriculum specialists to embed specific assignments and activities into the curriculum that require students to apply mathematics concepts and skills in a variety of real-world situations.

Planning by Classroom Teachers
The various CCSS planning-based shifts also require more thoughtful construction of units and lessons by individual classroom teachers. For example, ELA teachers must plan their units and lesson within them with an eye toward the specific informational and/or literary text that will be used (the second ELA shift). Ideally, both types of texts will appear in units so that the common information contained in the two forms might be compared and contrasted. ELA teachers must also keep in mind the bigger picture of the sequence of texts (the third ELA shift) that students have already encountered in previous grade levels and will encounter in subsequent grade levels. In so doing, teachers can refer back to text features to which students have previously been exposed and provide foreshadowing of features they will encounter in the future. Finally, ELA classroom teachers must plan for the specific academic vocabulary that will be explicitly taught (the sixth ELA shift) and plan to systematically use these terms in classroom discourse. Mathematics teachers must plan units and lessons with a firm awareness of the importance of focus (the first mathematics shift). Taking their lead from the school or district mathematics specialists, teachers must ensure that activities and assignments are understood by students as related to clear learning goals. In addition to units and lessons within them that have a clear focus, the mathematics teacher must plan for how units
will fit together across the span of a year so that they gradually build to more sophisticated and integrated concepts (the second mathematics shift). Finally, the mathematics teacher must always plan with an eye toward real-world applications of mathematics concepts and processing and take advantage of serendipitous events that provide opportunities for students to use what they are learning in real-world, authentic contexts.

Learning Sciences Marzano Center Support Services and Training for the 2014 Protocol

Our team has been diligent, in designing the updated protocol, to ensure that previous observer training conducted by Learning Sciences International on the Marzano Teacher Evaluation Model is still relevant, valid, and reliable with the 2014 protocol. The foundations of the Marzano Teacher Evaluation Model, including the desired effects for elements, remain unchanged. The updated protocol does not affect measurements from previous observations; it does not affect master-scored videos; and it does not affect previous assessments.

However, senior staff at the center have developed calibration trainings to ensure that observers are highly successful in observing for college and career readiness standards. These two-day sessions will help observers make the many natural connections between next-generation standards and the Marzano Teacher Evaluation Model, and learn how to best utilize the framework to meet the cognitive complexity of rigorous standards.

These trainings additionally help observers to use iObservation to identify the updated student and teacher evidences from the 2014 protocol in a simulated classroom environment.

Calibration Trainings Recommended for Summer 2014

1) Observing for College and Career Readiness Standards for Observers
2) College and Career Readiness Evidences for Teacher Mentors

Onsite Professional Development Training for Rigorous Standards

Learning Sciences Marzano Center conducts on-site professional development training to help prepare for implementation of college and career readiness standards, including how to understand what students need to know, how to create learning goals and scales in a progression for rigorous standards, and how to plan and execute lessons for cognitive complexity and powerful engagement. Contact us for full details. And visit MarzanoCommonCore.com for articles, videos, blogs, and other resources for next-generation standards.

For more information about the Marzano Center Teacher Observation Protocol for the 2014 Marzano Teacher Evaluation Model, please contact Learning Sciences Marzano Center at 1.877.411.7114 or go to MarzanoCenter.com.
REFERENCES


APPENDIX A

Updated Domain 1 Learning Map for the 2014 Marzano Teacher Evaluation Model
Domain 1: Classroom Strategies and Behaviors

Domain 1 is based on the Art and Science of Teaching Framework and identifies the 41 elements or instructional categories that happen in the classroom. The 41 instructional categories are organized into 9 Design Questions (DQs) and further grouped into 3 Lesson Segments to define the Observation and Feedback Protocol.

Note: DQ refers to Design Question in the Marzano Art and Science of Teaching Framework. The 9 DQs organize the 41 elements in Domain 1.

The final Design Question, DQ10: Developing Effective Lessons Organized into a Cohesive Unit is contained in Domain 2: Planning and Preparing.
APPENDIX B

Updated Teacher Observation Protocol for the 2014 Marzano Teacher Evaluation Model
### Marzano Protocol: Lesson Segment Involving Routine Events

**Design Question #1: What will I do to establish and communicate learning goals, track student progress, and celebrate success?**

#### 1. Providing Rigorous Learning Goals and Performance Scales (Rubrics)

The teacher provides rigorous learning goals and/or targets, both of which are embedded in a performance scale that includes application of knowledge.

<table>
<thead>
<tr>
<th>Example Teacher Evidence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher has a learning goal and/or target posted for student reference</td>
<td></td>
</tr>
<tr>
<td>The learning goal or target clearly identifies knowledge or processes aligned to the rigor of required standards</td>
<td></td>
</tr>
<tr>
<td>Teacher makes reference to the learning goal or target throughout the lesson</td>
<td></td>
</tr>
<tr>
<td>Teacher has a scale that builds a progression of knowledge from simple to complex</td>
<td></td>
</tr>
<tr>
<td>Teacher relates classroom activities to the scale throughout the lesson</td>
<td></td>
</tr>
<tr>
<td>Teacher has goals or targets at the appropriate level of rigor</td>
<td></td>
</tr>
<tr>
<td>Performance scales include application of knowledge</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example Student Evidence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students can explain the learning goal or target for the lesson</td>
<td></td>
</tr>
<tr>
<td>Students can explain how their current activities relate to the learning goal or target</td>
<td></td>
</tr>
<tr>
<td>Students can explain the levels of performance, from simple to complex, in the scale</td>
<td></td>
</tr>
<tr>
<td>Student artifacts demonstrate students know the learning goal or target</td>
<td></td>
</tr>
<tr>
<td>Student artifacts demonstrate students can identify a progression of knowledge</td>
<td></td>
</tr>
</tbody>
</table>

#### Scale

<table>
<thead>
<tr>
<th>Providing rigorous learning goals and performance scales (rubrics)</th>
<th>Not Using</th>
<th>Beginning</th>
<th>Developing</th>
<th>Applying</th>
<th>Innovating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy was called for but not exhibited.</td>
<td>Uses strategy incorrectly or with parts missing.</td>
<td>Provides rigorous learning goals and performance scales or rubrics that describe levels of performance.</td>
<td>Provides rigorous learning goals and performance scales or rubrics and monitors students' understanding of the learning goal and levels of performance.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
<td></td>
</tr>
</tbody>
</table>

#### Reflection Questions

<table>
<thead>
<tr>
<th>Providing rigorous learning goals and performance scales (rubrics)</th>
<th>Not Using</th>
<th>Beginning</th>
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<th>Innovating</th>
</tr>
</thead>
<tbody>
<tr>
<td>How can you begin to incorporate some aspects of this strategy into your instruction?</td>
<td>How can you provide a rigorous learning goal accompanied by a performance scale or rubric that describes levels of performance?</td>
<td>In addition to providing a rigorous learning goal accompanied by a performance scale or rubric that describes levels of performance, how can you monitor student understanding of the learning goal and the levels of performance?</td>
<td>How might you adapt and create new strategies for providing rigorous learning goals and performance scales or rubrics that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
<td></td>
</tr>
</tbody>
</table>
2. Tracking Student Progress

The teacher facilitates tracking of student progress on one or more learning goals and/or targets using a formative approach to assessment.

### Example Teacher Evidence

- Teacher helps students track their individual progress on the learning goal or target
- Teacher uses formal and informal means to assign scores to students on the scale or rubric depicting student status on the learning goal
- Teacher uses formative data to chart progress of individual and entire class progress on the learning goal

### Example Student Evidence

- 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 take some responsibility for providing evidence in reference to their progress on the scale
- Artifacts and data support that students are making progress toward a learning goal

### Scale

<table>
<thead>
<tr>
<th>Tracking student progress</th>
<th>Not Using</th>
<th>Beginning</th>
<th>Developing</th>
<th>Applying</th>
<th>Innovating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strategy was called for but not exhibited.</td>
<td>Uses strategy incorrectly or with parts missing.</td>
<td>Facilitates tracking of student progress using a formative approach to assessment.</td>
<td>Facilitates tracking of student progress using a formative approach to assessment and monitors that students understand their level of performance.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
</tr>
</tbody>
</table>

### Reflection Questions

<table>
<thead>
<tr>
<th>Tracking student progress</th>
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<tr>
<td></td>
<td>How can you begin to incorporate some aspects of this strategy into your instruction?</td>
<td>How can you facilitate tracking of student progress using a formative approach to assessment?</td>
<td>In addition to facilitating tracking of student progress using a formative approach to assessment, how can you monitor the extent to which students understand their level of performance?</td>
<td>How might you adapt and create new strategies for facilitating tracking of student progress using a formative approach to assessment that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
</tr>
</tbody>
</table>
3. Celebrating Success

The teacher provides students with recognition of their current status and their knowledge gain relative to the learning goal or target.

Example Teacher Evidence
- Teacher acknowledges students who have achieved a certain score on the scale or rubric
- Teacher acknowledges students who have made gains in their knowledge and skill relative to the learning goal
- Teacher acknowledges and celebrates the final status and progress of the entire class
- Teacher uses a variety of ways to celebrate success
  - Show of hands
  - Certification of success
  - Parent notification
  - Round of applause
  - Academic praise

Example Student Evidence
- Students show signs of pride regarding their accomplishments in the class
- Students take some responsibility for celebrating their individual status and that of the whole class
- Student surveys indicate they want to continue making progress

Scale

<table>
<thead>
<tr>
<th>Celebrating success</th>
<th>Not Using</th>
<th>Beginning</th>
<th>Developing</th>
<th>Applying</th>
<th>Innovating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy was called for but not exhibited.</td>
<td>Uses strategy incorrectly or with parts missing.</td>
<td>Provides students with recognition of their current status and their knowledge gain relative to the learning goal.</td>
<td>Provides students with recognition of their current status and their knowledge gain relative to the learning goal and monitors the extent to which students are motivated to enhance their status.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
<td></td>
</tr>
</tbody>
</table>

Reflection Questions

<table>
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<th>Celebrating success</th>
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<td>How can you provide students with recognition of their current status and their knowledge gain relative to the learning goal?</td>
<td>In addition to providing students with recognition of their current status and their knowledge gain relative to the learning goal, how can you monitor the extent to which students are motivated to enhance their status?</td>
<td>How might you adapt and create new strategies for providing students with recognition of their current status and their knowledge gain relative to the learning goal that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
<td></td>
</tr>
</tbody>
</table>

Student Interviews

Student Questions:
- What learning goal did today’s lesson focus on?
- How well are you doing on that learning goal?
- Describe the different levels you can be at on the learning goal or target.
Design Question #6: What will I do to establish and maintain classroom rules and procedures?

4. Establishing Classroom Routines

The teacher establishes expectations regarding rules and procedures that facilitate students working individually, in groups, and as a whole class.

Example Teacher Evidence
- Teacher involves students in designing classroom routines and procedures
- Teacher actively teaches student self-regulation strategies
- Teacher uses classroom meetings to review and process rules and procedures
- Teacher reminds students of rules and procedures
- Teacher asks students to restate or explain rules and procedures
- Teacher provides cues or signals when a rule or procedure should be used
- Teacher focuses on procedures for students working individually or in small groups

Example Student Evidence
- Students follow clear routines during class
- Students describe established rules and procedures
- Students describe the classroom as an orderly place
- Students recognize cues and signals by the teacher
- Students regulate their behavior while working individually
- Students regulate their behavior while working in groups

Scale

<table>
<thead>
<tr>
<th>Establishing classroom routines</th>
<th>Not Using</th>
<th>Beginning</th>
<th>Developing</th>
<th>Applying</th>
<th>Innovating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategy was called for but not exhibited.</td>
<td>Uses strategy incorrectly or with parts missing.</td>
<td>Establishes expectations regarding rules and procedures.</td>
<td>Establishes expectations regarding rules and procedures and monitors the extent to which students understand rules and procedures.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
<td></td>
</tr>
</tbody>
</table>

Reflection Questions

<table>
<thead>
<tr>
<th>Establishing classroom routines</th>
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</tr>
</thead>
<tbody>
<tr>
<td>How can you begin to incorporate some aspects of this strategy into your instruction?</td>
<td>How can you establish and review expectations regarding rules and procedures?</td>
<td>In addition to establishing and reviewing expectations regarding rules and procedures, how can you monitor the extent to which students understand the rules and procedures?</td>
<td>How might you adapt and create strategies for establishing and reviewing expectations, rules, and procedures that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
<td></td>
</tr>
</tbody>
</table>
5. Organizing the Physical Layout of the Classroom

The teacher organizes the physical layout of the classroom to facilitate movement and support learning.

Example Teacher Evidence
- The physical layout of the classroom has clear traffic patterns
- The physical layout of the classroom is designed to support long-term projects by individual students or groups of students
- The physical layout of the classroom provides easy access to materials and centers
- The classroom is decorated in a way that enhances student learning
  - Bulletin boards relate to current content (e.g., word walls)
  - Student work is displayed

Example Student Evidence
- Students move easily about the classroom
- Individual students or groups of students have easy access to materials that make use of long-term projects
- Students make use of materials and learning centers
- Students can easily focus on instruction
- Students can easily access technology
- Transition time is minimized due to layout of classroom

Scale

<table>
<thead>
<tr>
<th>Organizing the physical layout of the classroom</th>
<th>Not Using</th>
<th>Beginning</th>
<th>Developing</th>
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<td>Strategy was called for but not exhibited.</td>
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<td>Organizes the physical layout of the classroom to facilitate movement and support learning.</td>
<td>Organizes the physical layout of the classroom to facilitate movement and support learning and monitors the extent to which students have easy access to materials in an environment that supports learning.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
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Reflection Questions

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<td>How can you begin to incorporate some aspects of this strategy into your instruction?</td>
<td>How can you organize the physical layout of the classroom to facilitate movement and support learning?</td>
<td>In addition to organizing the physical layout of the classroom to facilitate movement and support learning, how can you monitor the impact of the environment on student learning?</td>
<td>How might you adapt and create new strategies for organizing the physical layout of the classroom to facilitate movement and support learning that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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Student Interviews

Student Questions:
- What are the regular rules and procedures you are expected to follow in class?
- How well do you do at following the rules and procedures and why?
### Marzano Protocol: Lesson Segment Addressing Content

#### Design Question #2: What will I do to help students effectively interact with new knowledge?

#### 6. Identifying Critical Content

The teacher continuously identifies accurate critical content during a lesson or part of a lesson that portrays a clear progression of information that leads to deeper understanding of the content.

#### Example Teacher Evidence
- Teacher highlights critical information that portrays a clear progression of information related to standards or goals
- Teacher identifies differences between the critical and non-critical content
- Teacher continuously calls students’ attention to accurate critical content
- Teacher integrates cross-curricular connections to critical content

#### Example Student Evidence
- Students can describe the level of importance of the critical information addressed in class
- Students can identify the critical information addressed in class
- Students can explain the difference between critical and non-critical content
- Formative data show students attend to the critical content (e.g., questioning, artifacts)
- Students can explain the progression of critical information

#### Scale

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<tr>
<th>Identifying Critical Content</th>
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<tr>
<td>Strategy was called for but not exhibited.</td>
<td>Uses strategy incorrectly or with parts missing.</td>
<td>Critical content is an accurate and clear progression of information. Signals to students critical versus non-critical content.</td>
<td>Critical content is an accurate and clear progression of information. Signals to students critical versus non-critical content and monitors the extent to which students are attending to critical information.</td>
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<td>How can you begin to incorporate some aspects of this strategy into your instruction?</td>
<td>How can you ensure that information is an accurate and clear progression of information and signal to students critical versus non-critical content?</td>
<td>In addition to ensuring an accurate and clear progression of information and signaling to students critical versus non-critical content, how might you monitor the extent to which students attend to critical information?</td>
<td>How might you adapt and create new strategies for identifying critical information that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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</table>
7. Organizing Students to Interact with New Content

The teacher organizes students into appropriate groups to facilitate the processing of new content.

**Example Teacher Evidence**
- Teacher has established routines for student grouping and student interaction for the expressed purpose of processing new content
- Teacher provides guidance on one or more conative skills
  - Becoming aware of the power of interpretations
  - Avoiding negative thinking
  - Taking various perspectives
  - Interacting responsibly
  - Handling controversy and conflict resolution
- Teacher organizes students into ad hoc groups for the lesson
- Teacher provides guidance on one or more cognitive skills appropriate for the lesson

**Example Student Evidence**
- Students move and work within groups with an organized purpose
- Students have an awareness of the power of interpretations
- Students avoid negative thinking
- Students take various perspectives
- Students interact responsibly
- Students appear to know how to handle controversy and conflict resolution
- Students actively ask and answer questions about the content
- Students add their perspectives to discussions
- Students attend to the cognitive skill(s)

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<td>small groups to facilitate the processing of new content.</td>
<td>small groups to facilitate the processing of new content and monitors group processing.</td>
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<td>content</td>
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**Reflection Questions**

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<td>new content?</td>
<td>the processing of new content, how can you monitor group processes?</td>
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8. **Previewing New Content**

The teacher engages students in previewing activities that allow students to access prior knowledge and analyze information.

### Example Teacher Evidence
- Teacher facilitates identification of the basic relationship between prior ideas and new content
- Teacher uses preview questions before reading
- Teacher uses K-W-L strategy or variation of it
- Teacher provides an advanced organizer
  - Outline
  - Graphic organizer
- Teacher has students brainstorm
- Teacher uses anticipation guide
- Teacher uses motivational hook/launching activity
  - Anecdote
  - Short multimedia selection
  - Simulation/demonstration
  - Manipulatives
- Teacher uses digital resources to help students make linkages
- Teacher uses strategies associated with a flipped classroom

### Example Student Evidence
- Students can identify basic relationships between prior content and upcoming content
- Students can explain linkages with prior knowledge
- Students make predictions about upcoming content
- Students can provide a purpose for what they are about to learn
- Students cognitively engage in previewing activities
- Students can explain how prior standards or goals link to the new content

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<td>Engages students in previewing activities that require students to access prior knowledge and analyze information.</td>
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<td>How might you adapt and create new strategies for previewing new content that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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9. Chunking Content into “Digestible Bites”

Based on student evidence, the teacher breaks the content into small chunks (i.e., digestible bites) of information that can be easily processed by students to generate a clear conclusion.

Example Teacher Evidence
- During a verbal presentation, the teacher stops at strategic points
- While utilizing multi-media, the teacher stops at strategic points
- While providing a demonstration, the teacher stops at strategic points
- While students are reading information or stories orally as a class, the teacher stops at strategic points
- Teacher uses appropriate questioning to determine if content chunks are appropriate
- Teacher uses formative data to break content into appropriate chunks

Example Student Evidence
- Students can explain why the teacher is stopping at various points
- Students appear to know what is expected of them when the teacher stops at strategic points
- Students can explain clear conclusions about chunks of content

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<td>Breaks input experiences into small chunks based on student needs.</td>
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10. Helping Students Process New Information

The teacher systematically engages student groups in processing new information to generate conclusions about new content.

**Example Teacher Evidence**
- Teacher employs formal group processing strategies
  - Jigsaw
  - Reciprocal teaching
  - Concept attainment
- Teacher uses informal strategies to engage group members in actively processing
  - Predictions
  - Associations
  - Paraphrasing
  - Verbal summarizing
  - Questioning
- Teacher facilitates group members in generating conclusions

**Example Student Evidence**
- Students can explain what they have just learned
- Students volunteer predictions
- Students voluntarily ask clarification questions
- Groups are actively discussing the content
  - Group members ask each other and answer questions about the information
  - Group members make predictions about what they expect next
- Students generate conclusions about the new content
- Students can verbally summarize or restate the new information

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11. Helping Students Elaborate on New Information

The teacher asks questions that require inferences about the new content but also requires students to provide evidence for their inferences.

**Example Teacher Evidence**
- Teacher asks questions that require students to make elaborative inferences about the content
- Teacher asks students to provide evidences for their inferences
- Teacher presents situations or problems that involve students analyzing how one idea relates to ideas that were not explicitly taught

**Example Student Evidence**
- Students volunteer answers to inferential questions
- Students provide evidence for their inferences
- Student artifacts demonstrate students can make elaborative inferences
- Students can identify basic relationships between ideas and how one idea relates to others

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### 12. Helping Students Record and Represent Knowledge

The teacher engages students in activities that require recording and representing knowledge emphasizing creation of a variety of types of models that organize and summarize the important content.

#### Example Teacher Evidence
- Teacher asks students to summarize the information they have learned
- Teacher asks students to generate notes that identify critical information in the content
- Teacher asks students to create nonlinguistic representations for new content
  - Graphic organizers
  - Pictures
  - Pictographs
  - Flow charts
- Teacher asks students to represent new knowledge through various types of models
  - Mathematical
  - Visual
  - Linguistic (e.g., mnemonics)
- Teacher facilitates generating and manipulating images of new content

#### Example Student Evidence
- Student summaries and notes include critical content
- Student nonlinguistic representations include critical content
- Student models and other artifacts represent critical content
- Students can explain main points of the lesson
- Student explanations of mental images represent critical content

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<td>Uses strategy incorrectly or with parts missing.</td>
<td>Engages students in activities that help them record and represent their knowledge in understanding of important content using a variety of models.</td>
<td>Engages students in activities that help them record and represent their knowledge in understanding of important content using a variety of models and monitors the extent to which they organize and summarize the important content.</td>
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<td>How might you adapt and create new strategies for recording and representing knowledge that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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### 13. Helping Students Reflect on Learning

The teacher engages students in activities that help them reflect on their learning and the learning process.

#### Example Teacher Evidence
- Teacher asks students to state or record what they are clear about and what they are confused about
- Teacher asks students to state or record how hard they tried
- Teacher asks students to state or record what they might have done to enhance their learning
- Teacher utilizes reflection activities to cultivate a growth mindset
- Teacher utilizes reflection activities to cultivate resiliency
- Teacher utilizes reflection activities to avoid negative thinking
- Teacher utilizes reflection activities to examine logic of learning and the learning process

#### Example Student Evidence
- Students can explain what they are clear about and what they are confused about
- Students can describe how hard they tried
- Students can explain what they could have done to enhance their learning
- Student actions and reflections display a growth mindset
- Student actions and reflections display resiliency
- Student actions and reflections avoid negative thinking
- Student reflections involve examining logic of learning and the learning process

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<td>Engages students in reflecting on their own learning and the learning process.</td>
<td>Engages students in reflecting on their own learning and the learning process and monitors the extent to which students self-assess their understanding and effort.</td>
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<td>What are you learning about your students as you adapt and create new strategies?</td>
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#### Student Interviews

**Student Questions:**
- Why is the information that you are learning today important?
- How do you know what things are most important to pay attention to?
- What are the main points of this lesson?
Design Question #3: What will I do to help students practice and deepen new knowledge?

14. Reviewing Content
The teacher engages students in a brief review of content that highlights the cumulative nature of the content.

Example Teacher Evidence
- Teacher begins the lesson with a brief review of content
- Teacher systematically emphasizes the cumulative nature of the content
- Teacher uses specific strategies to help students identify basic relationships between ideas and consciously analyze how one idea relates to another
  - Summary
  - Problem that must be solved using previous information
  - Questions that require a review of content
  - Demonstration
  - Brief practice test or exercise
  - Warm-up activity

Example Student Evidence
- Students identify basic relationships between current and prior ideas and consciously analyze how one idea relates to another
- Students can articulate the cumulative nature of the content
- Student responses to class activities indicate that they recall previous content
  - Artifacts
  - Pretests
  - Warm-up activities

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<td>Engages students in a brief review that highlights the cumulative nature of the content.</td>
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<td>How can you engage students in a brief review of content that highlights the cumulative nature of the content?</td>
<td>In addition to engaging students in a brief review of content, how can you monitor the extent to which students can recall and describe previous content?</td>
<td>How might you adapt and create new strategies for reviewing content that address unique student needs and situations?</td>
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15. Organizing Students to Practice and Deepen Knowledge

The teacher organizes and guides grouping in ways that appropriately facilitate practicing and deepening knowledge.

Example Teacher Evidence
- Teacher organizes students into groups with the expressed idea of deepening their knowledge of content
- Teacher organizes students into groups with the expressed idea of practicing a skill, strategy, or process
- Teacher provides guidance regarding group interactions
  - Becoming aware of the power of interpretations
  - Avoiding negative thinking
  - Taking various perspectives
  - Interacting responsibly
  - Handling controversy and conflict resolution
- Teacher provides guidance on one or more conative skills
- Teacher provides guidance on one or more cognitive skills appropriate for the lesson

Example Student Evidence
- Students explain how the group work supports their learning
- While in groups, students interact in explicit ways to deepen their knowledge of informational content or practice a skill, strategy, or process
  - Students actively ask and answer questions about the content
  - Students add their perspective to discussions
- Students move and work within groups with an organized purpose
- Students have an awareness of the power of interpretations
- Students avoid negative thinking
- Students take various perspectives
- Students interact responsibly
- Students appear to know how to handle controversy and conflict resolution
- Students attend to the cognitive skill(s)

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<td>Organizes students into groups that appropriately facilitate practicing and deepening knowledge.</td>
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<tr>
<td>How can you begin to incorporate some aspects of this strategy into your instruction?</td>
<td>How can you organize students into groups to practice and deepen their knowledge?</td>
<td>In addition to organizing students into groups to practice and deepen their knowledge, how can you also monitor the extent to which the group work extends their learning?</td>
<td>How might you adapt and create new strategies for organizing students to practice and deepen knowledge that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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</tbody>
</table>
## 16. Using Homework

The teacher designs homework activities that allow students to access and analyze information to deepen knowledge or practice a skill, strategy, or process.

### Example Teacher Evidence
- Teacher utilizes strategies associated with a flipped classroom
- Teacher communicates a clear purpose and gives directions for homework
- Teacher extends an activity that was begun in class to provide students with more time
- Teacher utilizes homework assignments that allow students to practice skills, strategies, and processes and/or deepen knowledge independently
- Teacher utilizes homework assignments that allow students to access and analyze information independently

### Example Student Evidence
- Students can describe how the homework assignment will deepen their understanding of informational content or help them practice a skill, strategy, or process
- Students ask clarifying questions about homework that help them understand its purpose

### Scale

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<thead>
<tr>
<th>Using homework</th>
<th>Not Using</th>
<th>Beginning</th>
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<th>Applying</th>
<th>Innovating</th>
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<tbody>
<tr>
<td>Strategy was called for but not exhibited.</td>
<td>Uses strategy incorrectly or with parts missing.</td>
<td>Designs homework that is designed to deepen knowledge of information or practice a skill, strategy, or process.</td>
<td>When appropriate (as opposed to routinely), assigns homework that is designed to deepen knowledge of information or practice a skill, strategy, or process and monitors the extent to which homework extends student learning.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
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### Reflection Questions

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<tr>
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<td>How can you begin to incorporate some aspects of this strategy into your instruction?</td>
<td>How can you assign homework that is designed to deepen knowledge of information or practice a skill, strategy, or process?</td>
<td>In addition to assigning homework that is designed to deepen knowledge of information or practice a skill, strategy, or process, how can you also monitor the extent to which the homework extends student learning?</td>
<td>How might you adapt and create new strategies for assigning homework that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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</tbody>
</table>
17. Helping Students Examine Similarities and Differences

When presenting content, the teacher helps students deepen their knowledge by examining similarities and differences.

**Example Teacher Evidence**
- Teacher engages students in activities that require students to examine similarities and differences
  - Comparison activities
  - Classifying activities
  - Analogy activities
  - Metaphor activities
  - Identifying basic relationships between ideas that deepen knowledge
  - Generating and manipulating mental images that deepen knowledge
- Teacher asks students to summarize what they have learned from the activity
- Teacher asks students to linguistically and non-linguistically represent similarities and differences
- Teacher asks students to explain how the activity has added to their understanding
- Teacher asks students to draw conclusions after the examination of similarities and differences
- Teacher facilitates the use of digital resources to find credible and relevant information to support examination of similarities and differences

**Example Student Evidence**
- Students can create analogies and/or metaphors that reflect their depth of understanding
- Student comparison and classification activities reflect their depth of understanding
- Student artifacts indicate that student knowledge has been extended as a result of the activity
- Student responses indicate that they have deepened their understanding
- Students can present evidence to support their explanation of similarities and differences
- Students navigate digital resources to find credible and relevant information to support similarities and differences

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<td>Helping students examine similarities and differences</td>
<td>Strategy was called for but not exhibited.</td>
<td>Uses strategy incorrectly or with parts missing.</td>
<td>Engages students in activities that require them to examine similarities and differences related to content.</td>
<td>Engages students in activities that require them to examine similarities and differences related to content and monitors the extent to which it deepens student understanding.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
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**Reflection Questions**

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<td>How might you adapt and create new strategies for examining similarities and differences that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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</table>
18. Helping Students Examine Their Reasoning

The teacher helps students produce and defend claims by examining their own reasoning or the logic of presented information, processes, and procedures.

Example Teacher Evidence

- Teacher asks students to examine and analyze information for errors or informal fallacies in content or in their own reasoning
  - Faulty logic
  - Attacks
  - Weak reference
  - Misinformation
- Teacher asks students to examine and analyze the strength of support presented for a claim in content or in their own reasoning
  - Statement of a clear claim
  - Evidence for the claim presented
  - Qualifiers presented showing exceptions to the claim
- Teacher asks students to examine logic of errors in procedural knowledge
- Teacher asks students to analyze errors to identify more efficient ways to execute processes
- Teacher facilitates the use of digital sources to find credible and relevant information to support examination of errors in reasoning
- Teacher involves students in taking various perspectives by identifying the reasoning behind multiple perspectives

Example Student Evidence

- Students can describe errors or informal fallacies in content
- Students can explain the overall structure of an argument presented to support a claim
- Student artifacts indicate students can identify errors in reasoning or make and support a claim
- Students navigate digital resources to find credible and relevant information to support examination of errors in reasoning
- Student artifacts indicate students take various perspectives by identifying the reasoning behind multiple perspectives

Scale

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<td>Engages students in activities that require them to examine and defend their own reasoning or the logic of information as presented to them.</td>
<td>Engages students in activities that require them to examine and defend their own reasoning or the logic of information as presented to them and monitors the extent to which it deepens student understanding.</td>
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19. Helping Students Practice Skills, Strategies, and Processes

When the content involves a skill, strategy, or process, the teacher engages students in practice activities that help them develop fluency and alternative ways of executing procedures.

### Example Teacher Evidence

- Teacher engages students in massed and distributed practice activities that are appropriate to their current ability to execute a skill, strategy, or process
  - Guided practice if students cannot perform the skill, strategy, or process independently
  - Independent practice if students can perform the skill, strategy, or process independently
- Teacher guides students to generate and manipulate mental models for skills, strategies, and processes
- Teacher employs "worked examples"
- Teacher provides opportunity for practice immediately prior to assessing skills, strategies, and processes
- Teacher models the skill, strategy, or process

### Example Student Evidence

- Students perform the skill, strategy, or process with increased confidence
- Students perform the skill, strategy, or process with increased competence
- Student artifacts or formative data show fluency and accuracy is increasing
- Students can explain mental models

### Scale

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<td>Uses strategy incorrectly or with parts missing.</td>
<td>When content involves a skill, strategy, or process, engages students in practice activities.</td>
<td>When content involves a skill, strategy, or process, engages students in practice activities and monitors the extent to which it increases fluency or deepens understanding.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
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<td>How can you begin to incorporate some aspects of this strategy into your instruction?</td>
<td>How can you engage students in practice activities when content involves a skill, strategy, or process?</td>
<td>In addition to engaging students in practice activities, how can you monitor the extent to which the practice is increasing student fluency or deepening understanding?</td>
<td>How might you adapt and create practice activities that increase fluency and address unique student needs and situations?</td>
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</tbody>
</table>
20. Helping Students Revise Knowledge

The teacher engages students in revision of previous knowledge by correcting errors and misconceptions as well as adding new information.

Example Teacher Evidence
- Teacher asks students to examine previous entries in their digital or traditional academic notebooks or notes to correct errors and misconceptions as well as add new information.
- Teacher engages the whole class in an examination of how the current lesson changed perceptions and understandings of previous content.
- Teacher has students explain how their understanding has changed.
- Teacher guides students to identify alternative ways to execute procedures.

Example Student Evidence
- Students make corrections and/or additions to information previously recorded about content.
- Students can explain previous errors or misconceptions they had about content.
- Students demonstrate a growth mindset by self-correcting errors as knowledge is revised.
- Student revisions demonstrate alternative ways to execute procedures.

Scale

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<td>Strategy was called for but not exhibited.</td>
<td>Uses strategy incorrectly or with parts missing.</td>
<td>Engages students in revising their knowledge of previous content by correcting errors and misconceptions.</td>
<td>Engages students in revising their knowledge of previous content by correcting errors and misconceptions and monitors the extent to which these revisions show deeper understanding.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
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Reflection Questions

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<td>How can you begin to incorporate some aspects of this strategy into your instruction?</td>
<td>How can you engage students in the revision of previous content?</td>
<td>In addition to engaging students in revising previous content, how can you monitor the extent to which these revisions deepen student understanding?</td>
<td>How might you adapt and create new strategies for revising knowledge of content that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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Student Interviews

Student Questions:
- How did this lesson add to your understanding of the content?
- What changes did you make in your understanding of the content as a result of the lesson?
- What do you still need to understand better?
### Design Question #4: What will I do to help students generate and test hypotheses about new knowledge?

#### 21. Organizing Students for Cognitively Complex Tasks

The teacher appropriately organizes and guides groups to work on short- and long-term complex tasks that require them to generate and test hypotheses.

**Example Teacher Evidence**
- Teacher establishes the need to generate and test hypotheses for short- or long-term tasks
- Teacher organizes students into groups for the expressed purpose of problem solving, decision making, experimenting, or investigating
- Teacher provides guidance on one or more conative skills
  - Becoming aware of the power of interpretations
  - Avoiding negative thinking
  - Taking various perspectives
  - Interacting responsibly
  - Handling controversy and conflict resolution
- Teacher provides guidance on one or more cognitive skills appropriate for the lesson

**Example Student Evidence**
- Students describe the importance of generating and testing hypotheses about content
- Students explain how groups support their learning
- Students use group activities to help them generate and test hypotheses
- While in groups, students interact in explicit ways to generate and test hypotheses
  - Students actively ask and answer questions about the content
  - Students add their perspectives to discussions
- Students move and work within groups with an organized purpose
- Students have an awareness of the power of interpretations
- Students avoid negative thinking
- Students take various perspectives
- Students interact responsibly
- Students appear to know how to handle controversy and conflict resolution
- Students attend to the cognitive skill(s)

**Scale**

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<td>Uses strategy incorrectly or with parts missing.</td>
<td>Organizes students into groups to facilitate working on cognitively complex tasks.</td>
<td>Organizes students into groups to facilitate working on cognitively complex tasks and monitors the extent to which group work results in students engaging in cognitively complex tasks.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
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**Reflection Questions**

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<td>How can you begin to incorporate some aspects of this strategy into your instruction?</td>
<td>How can you organize students in groups to facilitate working on cognitively complex tasks?</td>
<td>In addition to organizing students in groups for cognitively complex tasks, how can you monitor the extent to which group processes facilitate students engaging in cognitively complex tasks?</td>
<td>How might you adapt and create new strategies for organizing students to engage in cognitively complex tasks that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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</table>
## 22. Engaging Students in Cognitively Complex Tasks Involving Hypothesis Generation and Testing

The teacher engages students in short- and long-term complex tasks that require them to generate and test hypotheses and analyze their own thinking.

### Example Teacher Evidence
- Teacher engages students with an explicit decision making, problem solving, experimental inquiry, or investigation task that requires them to
  - Generate conclusions
  - Identify common logical errors
  - Present and support claims
  - Navigate digital resources
- Teacher facilitates students in generating their own individual or group tasks that require them to generate and test hypotheses
  - Generate conclusions
  - Identify common logical errors
  - Present and support claims
  - Navigate digital resources

### Example Student Evidence
- Students participate in tasks that require them to generate and test hypotheses
- Students can explain the hypothesis they are testing
- Students can explain whether their hypothesis was confirmed or disconfirmed and support their explanation
- Student artifacts indicate that while engaged in decision making, problem solving, experimental inquiry, or investigation, students can
  - Generate conclusions
  - Identify common logical errors
  - Present and support claims
  - Navigate digital resources
  - Identify how one idea relates to others

### Scale

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<tr>
<td>Strategy was called for but not exhibited.</td>
<td>Uses strategy incorrectly or with parts missing.</td>
<td>Engages students in cognitively complex tasks requiring hypothesis generation and testing (e.g., decision making, problem solving, experimental inquiry, investigation).</td>
<td>Engages students in cognitively complex tasks requiring hypothesis generation and testing (e.g., decision making, problem solving, experimental inquiry, investigation) and monitors the extent to which students are generating and testing hypotheses.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
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### Reflection Questions

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<td>How can you engage students in cognitively complex tasks involving hypothesis generation and testing?</td>
<td>In addition to engaging students in cognitively complex tasks involving hypothesis generation and testing, how can you monitor the extent to which students are generating and testing hypotheses?</td>
<td>How might you adapt and create new strategies for engaging students in cognitively complex tasks involving hypothesis generation and testing that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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23. Providing Resources and Guidance for Cognitively Complex Tasks

The teacher acts as resource provider and guide as students engage in short- and long-term complex tasks.

Example Teacher Evidence
- Teacher makes himself/herself available to students who need guidance or resources
  - Circulates around the room
  - Provides easy access to himself/herself
- Teacher interacts with students during the class to determine their needs for hypothesis generation and testing tasks
- Teacher volunteers resources and guidance as needed by the entire class, groups of students, or individual students
  - Digital
  - Technical
  - Human
  - Material

Example Student Evidence
- Students seek out the teacher for advice and guidance regarding hypothesis generation and testing tasks
- Students can explain how the teacher provides assistance and guidance in hypothesis generation and testing tasks
- Students can give specific examples of how their teacher provides assistance and resources that helped them in cognitively complex tasks

Scale

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<td>Uses strategy incorrectly or with parts missing.</td>
<td>Acts as a guide and resource provider as students engage in cognitively complex tasks.</td>
<td>Acts as a guide and resource provider as students engage in cognitively complex tasks and monitors the extent to which students request and use guidance and resources.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
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<td>What are you learning about your students as you adapt and create new strategies?</td>
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Student Interviews

Student Questions:
- How did this lesson help you apply or use what you have learned?
- What change has this lesson made in your understanding of the content?
Design Question #5: What will I do to engage students?

### 24. Noticing When Students are Not Engaged

The teacher scans the room and notices when students are not paying attention or not cognitively engaged and takes overt action.

**Example Teacher Evidence**
- Teacher notices when specific students or groups of students are not paying attention or not cognitively engaged
- Teacher notices when the energy level in the room is low or students are not participating
- Teacher takes action or uses specific strategies to re-engage students

**Example Student Evidence**
- Students appear aware of the fact that the teacher is noticing their level of engagement
- Students increase their level of engagement when the teacher uses engagement strategies
- Students explain that the teacher expects high levels of engagement
- Students report that the teacher notices when students are not engaged

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<td>Strategy was called for but not exhibited.</td>
<td>Uses strategy incorrectly or with parts missing.</td>
<td>Scans the room and notices when students are not engaged and takes action.</td>
<td>Scans the room and notices when students are not engaged and takes action and monitors the extent to which students re-engage.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
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**Reflection Questions**

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<td>How can you begin to incorporate some aspects of this strategy into your instruction?</td>
<td>How can you scan the room and notice when students are not engaged and then take action to engage students?</td>
<td>In addition to scanning the room, noticing when students are not engaged, and taking action, how can you monitor the extent to which students re-engage?</td>
<td>How might you adapt and create new strategies for noticing when students are not engaged that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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### 25. Using Academic Games

The teacher uses academic games to cognitively engage or re-engage students.

#### Example Teacher Evidence
- Teacher uses academic games that focus on or reinforce important concepts
- Teacher uses academic games that create generalizations or test principles
- Teacher uses structured, inconsequential competition games such as Jeopardy and Family Feud
- Teacher develops impromptu games such as making a game out of which answer might be correct for a given question
- Teacher uses friendly competition along with classroom games
- Teacher develops conative skills during academic games
  - Taking various perspectives
  - Interacting responsibly
  - Handling controversy and conflict

#### Example Student Evidence
- Students engage in the games with some enthusiasm
- Students can explain how the games keep their interest and help them learn or remember content
- Students appear to take various perspectives when engaged in academic games
- Students interact responsibly during academic games
- Students handle controversy and conflict during academic games

#### Scale

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<td>Uses academic games to maintain student engagement.</td>
<td>Uses academic games to maintain student engagement and monitors the extent to which students focus on the academic content of the game.</td>
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#### Reflection Questions

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<td>How can you use academic games to maintain student engagement?</td>
<td>In addition to using academic games to maintain student engagement, how can you monitor the extent to which students focus on the academic content of the game?</td>
<td>How might you adapt and create new strategies for using academic games to maintain student engagement that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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26. Managing Response Rates

The teacher uses response rate techniques to maintain student engagement through a questioning process.

Example Teacher Evidence
- Teacher uses appropriate wait time
- Teacher uses a variety of activities that require all students to respond
  - Response cards
  - Students use hand signals to respond to questions
  - Choral response
- Teacher uses technology to keep track of student responses
- Teacher uses response chaining
- Teacher increases response rates by requiring students to back up responses with evidence

Example Student Evidence
- Multiple students, or the entire class, respond to questions posed by the teacher
- Students can describe their thinking about specific questions posed by the teacher
- Students engage or re-engage in response to teacher’s use of questioning techniques

Scale

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Reflection Questions

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<td>What are you learning about your students as you adapt and create new strategies?</td>
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### 27. Using Physical Movement

The teacher uses physical movement to maintain student engagement in content.

#### Example Teacher Evidence
- Teacher facilitates movement to learning stations or to work with other students
- Teacher has students move after brief chunks of content engagement
- Teacher has students stand up and stretch or do related activities when their energy is low
- Teacher uses activities that require students to physically move to respond to questions
  - Vote with your feet
  - Go to the part of the room that represents the answer you agree with
- Teacher has students physically act out or model content to increase energy and engagement
- Teacher uses give-one-get-one activities that require students to move about the room

#### Example Student Evidence
- Student behavior shows physical movement strategies increase cognitive engagement
- Students engage in the physical activities designed by the teacher
- Students can explain how the physical movement keeps their interest and helps them learn

#### Scale

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28. Maintaining a Lively Pace

The teacher uses pacing techniques to maintain student engagement in content.

Example Teacher Evidence
- Teacher balances a lively pace with the need for adequate time to respond to specific activities and assignments
- Teacher employs crisp transitions from one activity to another
- Teacher alters pace appropriately (i.e., speeds up and slows down)

Example Student Evidence
- Students stay engaged when the pace of the class is not too fast or too slow
- Students quickly adapt to transitions and re-engage when a new activity is begun
- Students describe the pace of the class as not too fast or not too slow

Scale

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### 29. Demonstrating Intensity and Enthusiasm

The teacher demonstrates intensity and enthusiasm for content by sharing a deep level of content knowledge in a variety of ways.

#### Example Teacher Evidence
- Teacher enthusiastically demonstrates depth of content knowledge
- Teacher demonstrates importance of content by relating it to authentic, real-world situations
- Teacher describes personal experiences that relate to the content
- Teacher signals excitement for content by
  - Physical gestures
  - Voice tone
  - Dramatization of information
- Teacher strategically adjusts his/her energy level in response to student engagement

#### Example Student Evidence
- Students say that the teacher “likes the content” and “likes teaching”
- Student attention levels or cognitive engagement increase when the teacher demonstrates enthusiasm and intensity for the content

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### 30. Using Friendly Controversy

The teacher uses friendly controversy techniques to maintain student engagement in content.

#### Example Teacher Evidence
- Teacher structures mini-debates about the content
- Teacher structures activities that require students to provide evidence for their positions in a friendly controversy
- Teacher has students reveal sources of evidence to support their positions
- Teacher has students examine multiple perspectives and opinions about the content
- Teacher elicits different opinions on content from members of the class
- Teacher develops conative skills during friendly controversy
  - Taking various perspectives
  - Interacting responsibly
  - Handling controversy and conflict

#### Example Student Evidence
- Students engage or re-engage in friendly controversy activities with enhanced engagement
- Students describe friendly controversy activities as “stimulating,” “fun,” and “engaging”
- Students explain how a friendly controversy activity helped them better understand the content
- Students appear to take various perspectives while engaged in friendly controversy
- Students interact responsibly during friendly controversy
- Students appropriately handle controversy and conflict while engaged in friendly controversy

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### 31. Providing Opportunities for Students to Talk about Themselves

The teacher provides students with opportunities to relate content being presented in class to their personal interests.

#### Example Teacher Evidence
- Teacher is aware of student interests and makes connections between these interests and class content
- Teacher structures activities that ask students to make connections between the content and their personal interests
- Teacher appears encouraging and interested when students are explaining how content relates to their personal interests
- Teacher highlights student use of specific cognitive skills (e.g., identifying basic relationships, generating conclusions, and identifying common logical errors) and conative skills (e.g., becoming aware of the power of interpretations) when students are explaining how content relates to their personal interests

#### Example Student Evidence
- Students engage in activities that require them to make connections between their personal interests and the content
- Students explain how making connections between content and their personal interests engages them and helps them better understand the content

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32. Presenting Unusual or Intriguing Information

The teacher uses unusual or intriguing and relevant information about the content to enhance cognitive engagement.

Example Teacher Evidence
- Teacher systematically provides interesting facts and details about the content
- Teacher encourages students to identify interesting information about the content
- Teacher engages students in activities like "Believe it or not" about the content
- Teacher uses guest speakers and various digital resources (e.g., media clips) to provide unusual information about the content

Example Student Evidence
- Student attention increases when unusual information is presented about the content
- Students explain how the unusual information makes them more interested in the content
- Students explain how the unusual information deepens their understanding of the content

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Student Interviews

Student Questions:
- How engaged were you in this lesson?
- What are some things that keep your attention?
- What are some things that make you bored?
Design Question #7: What will I do to recognize and acknowledge adherence or lack of adherence to rules and procedures?

### 33. Demonstrating “Withitness”

The teacher uses behaviors associated with “withitness” to maintain adherence to rules and procedures.

#### Example Teacher Evidence
- Teacher physically occupies all quadrants of the room
- Teacher scans the entire room, making eye contact with all students
- Teacher recognizes potential sources of disruption and deals with them immediately
- Teacher proactively addresses inflammatory situations

#### Example Student Evidence
- Students recognize that the teacher is aware of their behavior
- Students interact responsibly
- Students describe the teacher as “aware of what is going on” or “has eyes on the back of his/her head”

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### 34. Applying Consequences for Lack of Adherence to Rules and Procedures

The teacher consistently and fairly applies consequences for not following rules and procedures.

**Example Teacher Evidence**
- Teacher reminds students of self-regulation strategies
  - Eye contact
  - Proximity
  - Tap on the desk
  - Shaking head “no”
- Teacher provides verbal signals when student behavior is not appropriate
  - Tells students to stop
  - Tells students that their behavior is in violation of a rule or procedure
- Teacher uses group contingency consequences when appropriate (i.e., whole group must demonstrate a specific behavior)
- Teacher involves the home when appropriate (i.e., makes a call home to parents to help extinguish inappropriate behavior)
- Teacher uses direct cost consequences when appropriate (e.g., student must fix something he/she has broken)

**Example Student Evidence**
- Students demonstrate use of self-regulation strategies
- Students cease inappropriate behavior when signaled by the teacher
- Students accept consequences as part of the way class is conducted
- Students describe the teacher as fair in application of rules

### Scale

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35. Acknowledging Adherence to Rules and Procedures

The teacher consistently and fairly acknowledges adherence to rules and procedures.

Example Teacher Evidence
- Teacher acknowledges when students use self-regulation strategies
  - Smile
  - Nod of head
  - “High five”
- Teacher provides nonverbal signals that a rule or procedure has been followed
  - Thanks students for following a rule or procedure
  - Describes student behaviors that adhere to a rule or procedure
- Teacher gives verbal cues that a rule or procedure has been followed
  - Thanks students for following a rule or procedure
  - Describes student behaviors that adhere to a rule or procedure
- Teacher notifies the home when a rule or procedure has been followed
- Teacher uses tangible recognition when a rule or procedure has been followed
  - Certificate of merit
  - Token economies

Example Student Evidence
- Students self-monitor and cease inappropriate behavior after receiving acknowledgement from the teacher
- Student verbal and nonverbal behaviors indicate appreciation of the teacher acknowledging their positive behavior
- Students describe the teacher as appreciative of their good behavior
- Students say that the teacher fairly and consistently acknowledges adherence to rules and procedures
- The number of students adhering to rules and procedures increases

Scale

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Student Interviews

Student Questions:
- How well did you follow classroom rules and procedures during this lesson?
- What are some things that helped you follow the rules and procedures?
- What are some things that didn’t help you follow the rules and procedures?
Design Question #8: What will I do to establish and maintain effective relationships with students?

36. Understanding Students’ Interests and Backgrounds

The teacher uses students’ interests and backgrounds to produce a climate of acceptance and community.

Example Teacher Evidence
- Teacher relates content-specific knowledge to personal aspects of students' lives
- Teacher has side discussions with students about events in their lives
- Teacher has discussions with students about topics in which they are interested
- Teacher builds student interests into lessons
- Teacher uses discussion of students' personal interests to highlight or reinforce conative skills (e.g., cultivating a growth mindset)

Example Student Evidence
- Students describe the teacher as someone who knows them and/or is interested in them
- Students respond when the teacher demonstrates understanding of their interests and backgrounds
- Student verbal and nonverbal behaviors indicate they feel accepted by their teacher
- Students can describe how their personal interests connect to specific conative skills (e.g., cultivating a growth mindset)

Scale

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37. Using Verbal and Nonverbal Behaviors that Indicate Affection for Students

The teacher uses verbal and nonverbal behaviors that demonstrate and foster respect for student thinking and initiative.

**Example Teacher Evidence**
- Teacher compliments students regarding academic and personal accomplishments
- Teacher compliments students regarding academic and personal accomplishments relative to their initiative
- Teacher engages in informal conversations with students that are not related to academics
- Teacher uses humor with students when appropriate
- Teacher smiles and nods to students when appropriate
- Teacher uses “high five”-type signals when appropriate
  - Pat on shoulder
  - Thumbs up
  - “High five”
  - Fist bump
  - Silent applause
- Teacher encourages students to share their thinking and perspectives

**Example Student Evidence**
- Students describe the teacher as someone who cares for them
- Students respond positively to verbal interactions with the teacher
- Students respond positively to nonverbal interactions with the teacher
- Students readily share their perspectives and thinking with the teacher

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<td>How might you adapt and create new strategies and techniques for using verbal and nonverbal behaviors that demonstrate and foster respect for student thinking and initiative that address unique student needs and situations?</td>
<td>What are you learning about your students as you adapt and create new strategies?</td>
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</table>
38. Displaying Objectivity and Control

The teacher behaves in an objective and controlled manner to demonstrate a commitment to students and academic rigor.

Example Teacher Evidence
- Teacher does not exhibit extremes in positive or negative emotions
- Teacher does not allow distractions to change the focus on academic rigor
- Teacher addresses inflammatory issues and events in a calm and controlled manner
- Teacher interacts with all students in the same calm and controlled fashion
- Teacher does not demonstrate personal offense at student misbehavior

Example Student Evidence
- Students describe the teacher as not becoming distracted by interruptions in the class
- Students are settled by the teacher’s calm demeanor
- Students describe the teacher as in control of himself/herself and in control of the class
- Students say that the teacher does not hold grudges or take things personally

Scale

<table>
<thead>
<tr>
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<td>Strategy was called for but not exhibited.</td>
<td>Uses strategy incorrectly or with parts missing.</td>
<td>Behaves in an objective and controlled manner.</td>
<td>Behaves in an objective and controlled manner and monitors the effect on the classroom climate.</td>
<td>Adapts and creates new strategies for unique student needs and situations.</td>
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Reflection Questions

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<td>What are you learning about your students as you adapt and create new strategies?</td>
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Student Interviews

Student Questions:
- How accepted and welcomed did you feel in class today?
- What are some things that made you feel accepted and welcomed?
- What are some things that did not make you feel accepted and welcomed?
Design Question #9: What will I do to communicate high expectations for all students?

39. Demonstrating Value and Respect for Low Expectancy Students

The teacher exhibits behaviors that demonstrate value and respect for low expectancy students’ thinking regarding the content.

Example Teacher Evidence
- The teacher provides low expectancy students with nonverbal indications that they are valued and respected
  - Makes eye contact
  - Smiles
  - Makes appropriate physical contact
- The teacher provides low expectancy students with verbal indications that they are valued and respected
  - Playful dialogue
  - Addressing students in a manner they view as respectful
- Teacher does not allow negative comments about low expectancy students
- When asked, the teacher can identify students for whom there have been low expectations and the various ways in which these students have been treated differently from high expectancy students
- The teacher provides students with strategies to avoid negative thinking about one’s thoughts and actions

Example Student Evidence
- Students say that the teacher cares for all students
- Students treat each other with respect
- Students avoid negative thinking about their thoughts and actions

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40. Asking Questions of Low Expectancy Students

The teacher asks questions of low expectancy students with the same frequency and depth as with high expectancy students.

Example Teacher Evidence

☐ Teacher makes sure low expectancy students are asked questions at the same rate as high expectancy students
☐ Teacher makes sure low expectancy students are asked complex questions that require conclusions at the same rate as high expectancy students

Example Student Evidence

☐ Students say that the teacher expects everyone to participate
☐ Students say that the teacher asks difficult questions of every student

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41. Probing Incorrect Answers with Low Expectancy Students

The teacher probes incorrect answers of low expectancy students by requiring them to provide evidence for their conclusions and examine the sources of their evidence.

Example Teacher Evidence
- Teacher rephrases questions for low expectancy students when they provide an incorrect answer
- Teacher probes low expectancy students to provide evidence of their conclusions
- Teacher asks low expectancy students to examine the sources of their evidence
- When low expectancy students demonstrate frustration, the teacher allows them to collect their thoughts but goes back to them at a later point in time
- Teacher asks low expectancy students to further explain their answers when they are incorrect

Example Student Evidence
- Students say that the teacher won’t “let you off the hook”
- Students say that the teacher “won’t give up on you”
- Students say that the teacher helps them think about and analyze their incorrect answers
- Student artifacts show the teacher holds all students to the same level of expectancy for drawing conclusions and providing sources of evidence

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Student Interviews

Student Questions:
- How does your teacher demonstrate that he/she cares about and respects you?
- How does your teacher communicate that everyone is expected to participate and answer difficult questions?
- What are some ways that your teacher helps you answer questions successfully?