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# The Marzano Compendium of Instructional Strategies



## Facilitator's Guide

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# Purpose of the Facilitator's Guide

The purpose of this guide is to help educators explore the instructional framework, strategies and related materials, and supplementary video content found in the Marzano Compendium of Instructional Strategies. The guide is designed to be used in conjunction with the Compendium; subscriptions to the Compendium can be purchased at [marzanoresources.com/compendium](http://marzanoresources.com/compendium).

This guide has ten sections which correspond to the 10 categories (also called *design areas*) of the New Art and Science of Teaching, the instructional framework which provides the organizing structure for the content in the Compendium.

1. Providing and Communicating Clear Learning Goals
2. Assessment
3. Direct Instruction Lessons
4. Practicing and Deepening Lessons
5. Knowledge Application Lessons
6. Strategies That Appear in All Types of Lessons
7. Engagement
8. Rules and Procedures
9. Relationships
10. Communicating High Expectations

Depending on background knowledge, learning goals, and time available, those using this guide may choose to explore each category at three levels of depth: (1) overview, (2) detailed understanding, and (3) knowledge application and extension. Therefore, each section of the guide provides activities and discussion questions for each of these three levels.

This provides flexibility and multiple opportunities for review and deepening of knowledge. For example, during an initial school year using the Compendium, a group of educators might aim to overview each of the ten categories. The next year, they might seek detailed understanding of each category, and the following year progress to knowledge application and extension. Alternatively, a group might choose 2–3 categories to focus on during a specific year, beginning their study of each area with an overview and then progressing to detailed understanding and knowledge application and extension. After fully exploring one category, the group could move on to the next category and repeat the process.

## Potential Users and Uses of the Facilitator's Guide

The activities in this facilitator's guide can be used by groups of educators working in teams, by the whole staff of a school together, or by an individual teacher seeking to enhance his or her expertise and professional practice. Additionally, a mentor teacher or instructional coach might use the facilitator's guide to structure their work with beginning teachers, or administrators might use it to help outline plans for teacher development. However you choose to use this resource, we hope that it benefits you in your professional growth and learning as an educator!

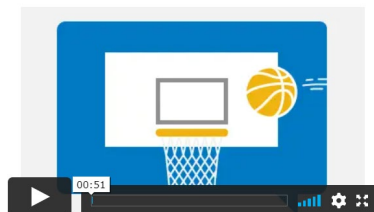
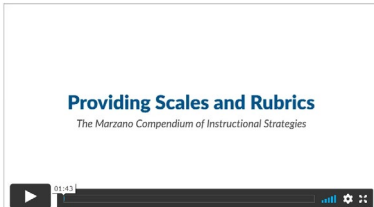
# Providing and Communicating Clear Learning Goals


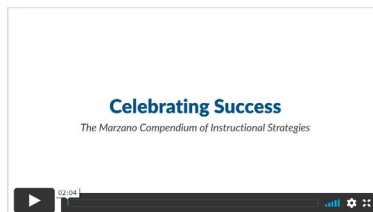
Effective teachers establish and communicate clear learning goals to their students. One essential way that teachers can delineate learning goals is by creating proficiency scales for units and sets of lessons. A proficiency scale explicitly states target learning goals for a unit, as well as corresponding simpler and more complex learning goals, in an accessible format that can be used to guide instruction and measure students' understanding of content. Proficiency scales with specific performance level expectations also help students better understand what is expected of them in the classroom and how teachers will be measuring their success.

## Overview Level – Providing and Communicating Clear Learning Goals

### *Learning Goals*

- Understand the focus of this category
- Be able to describe each of the elements in the Providing and Communicating Clear Learning Goals category
  - Providing Scales and Rubrics
  - Tracking Student Progress
  - Celebrating Success
- Be able explain the research supporting elements in the Providing and Communicating Clear Learning Goals category
- Try out some strategies associated with the elements in the Providing and Communicating Clear Learning Goals category

| Overview Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Providing and Communicating Clear Learning Goals category video | <a href="http://www.marzanoresources.com/online-compendium/intro">www.marzanoresources.com/online-compendium/intro</a>   |  |
| Watch the Providing Scales and Rubrics video                              | <a href="http://www.marzanoresources.com/online-compendium/providing-scales-and-rubrics">www.marzanoresources.com/online-compendium/providing-scales-and-rubrics</a> |  |

| Overview Activity                         | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Tracking Student Progress video | <a href="http://www.marzanoresources.com/online-compendium/tracking-student-progress">www.marzanoresources.com/online-compendium/tracking-student-progress</a> |  |
| Watch the Celebrating Success video       | <a href="http://www.marzanoresources.com/online-compendium/celebrating-success">www.marzanoresources.com/online-compendium/celebrating-success</a>             |  |

### *Discussion Questions*

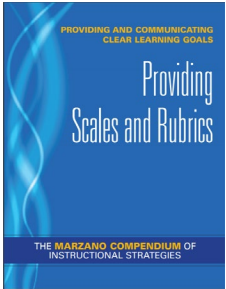
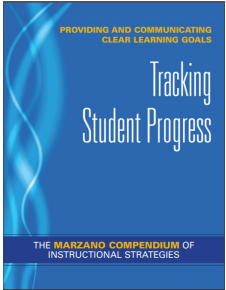
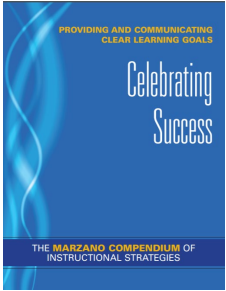
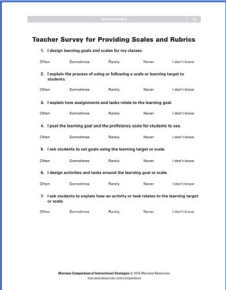
- How would you describe the focus of the Providing and Communicating Clear Learning Goals category?
- In your own words, explain each element in the Providing and Communicating Clear Learning Goals category.
  - Providing Scales and Rubrics
  - Tracking Student Progress
  - Celebrating Success
- Why are the elements in the Providing and Communicating Clear Learning Goals category an important part of the New Art and Science of Teaching instructional framework, and of effective teaching?
- Which strategies would you like to try from the Providing and Communicating Clear Learning Goals category?
- (After trying a strategy or strategies) Describe your experience with the strategy/ies you tried. What might you do differently in the future based on your experience?

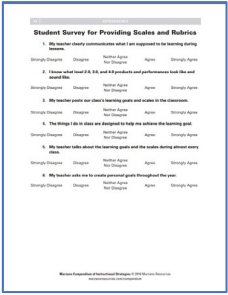
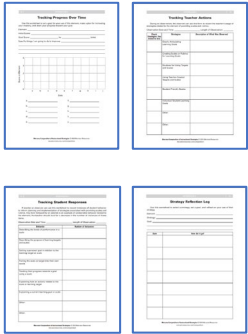
## **Detailed Understanding Level – Providing and Communicating Clear Learning Goals**

### *Learning Goals*

- Be able to describe what teacher performance looks like at all five levels of the developmental scale for each element in the Providing and Communicating Clear Learning Goals category
- Use teacher and student surveys to determine your current level of performance with the elements in the Providing and Communicating Clear Learning Goals category

- If appropriate, set a goal to improve on at least one of the elements in the Providing and Communicating Clear Learning Goals category
- Track your progress on at least one strategy associated with an element in the Providing and Communicating Clear Learning Goals category

| Detailed Understanding Activity  | Location of Activity   | Image(s)  |
|--|--|---|
| Review the Providing Scales and Rubrics folio                                | <a href="http://www.marzanoresources.com/online-compendium/providing-scales-and-rubrics">www.marzanoresources.com/online-compendium/providing-scales-and-rubrics</a> |    |
| Review the Tracking Student Progress folio                                   | <a href="http://www.marzanoresources.com/online-compendium/tracking-student-progress">www.marzanoresources.com/online-compendium/tracking-student-progress</a>       |   |
| Review the Celebrating Success folio   | <a href="http://www.marzanoresources.com/online-compendium/celebrating-success">www.marzanoresources.com/online-compendium/celebrating-success</a>                   |  |
| Fill out the teacher survey for one or more of the elements in this category | Last page of each folio  |  |

| Detailed Understanding Activity   | Location of Activity                                      | Image(s)   |
|---|---|--|
| Ask your students to fill out the student survey for one of more of the elements in this category               | Next-to-last page of each folio                           |   |
| (If setting a goal to work on an element in this category)<br><br>Track your progress towards your goal element | First four pages of “Reproducibles” section of each folio |  |

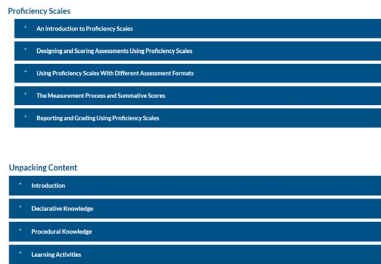
### Discussion Questions

- What does teacher performance at the Not Using (0), Beginning (1), Developing (2), Applying (3), and Innovating (4) level look like for each of the elements in the Providing and Communicating Clear Learning Goals category?
  - Providing Scales and Rubrics
  - Tracking Student Progress
  - Celebrating Success
- Share your teacher and student survey data.
  - What observations do you have?
  - What conclusions can you draw?
  - What action might you take?
- If appropriate, which element in this category might you set a goal to improve on?
- (After working towards an element goal) Share data about your progress toward your goal.

## Knowledge Application and Extension Level – Providing and Communicating Clear Learning Goals

### *Learning Goals*

- Understand how this category connects to other education topics
- Broaden your understanding of this category
- Revise your existing pedagogical knowledge and skill based on insights from this category
- Identify pedagogical practices that might warrant changes based on your learning relative to this category

| Knowledge Application and Extension Activity   | Location of Activity  | Image(s)  |
|--|---|---|
| <p>Watch one or more of the following video library units related to the Providing and Communicating Clear Learning Goals category:</p> <p>Proficiency Scales (5 videos)</p> <p>Unpacking Content (4 videos)</p> | <p><a href="http://www.marzanoresources.com/online-compendium/video-library">www.marzanoresources.com/online-compendium/video-library</a></p> |  <p>The image shows a screenshot of the Marzano Resources website. It features two main sections: 'Proficiency Scales' and 'Unpacking Content'. Each section has a list of video titles with play button icons. The 'Proficiency Scales' section includes: 'An Introduction to Proficiency Scales', 'Designing and Scoring Assessments Using Proficiency Scales', 'Using Proficiency Scales With Different Assessment Formats', 'The Measurement Process and Summative Scores', and 'Reporting and Grading Using Proficiency Scales'. The 'Unpacking Content' section includes: 'Introduction', 'Declarative Knowledge', 'Procedural Knowledge', and 'Learning Activities'.</p> |

### *Discussion Questions*

- How does the Providing and Communicating Clear Learning Goals category connect to other education topics?
- How did the video library unit(s) you watched broaden your understanding of the Providing and Communicating Clear Learning Goals category?
- What might you do differently in your teaching practice as a result of learning you gained from the video library unit(s) you watched?



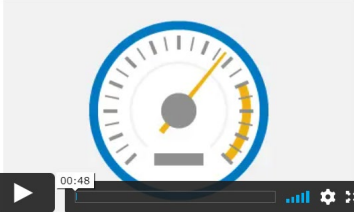
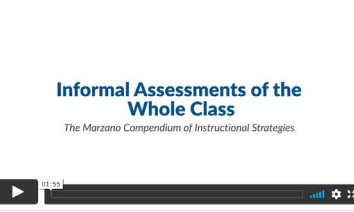
# Assessment

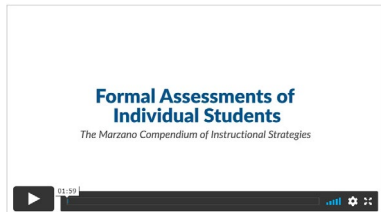
Assessment can be any activity that a teacher uses to gather information concerning a student's mastery or familiarity with content or processes. Assessments should be used not only to inform teachers' instructional strategies but also to show students how much they have progressed. Generally, there are two types of assessments: informal assessments of the whole class and formal assessments of individual students. Each assessment type has different purposes and both should be used over the course of a unit.

## Overview Level – Assessment

### *Learning Goals*

- Understand the focus of this category
- Be able to describe each of the elements in the Assessment category
  - Informal Assessments of the Whole Class
  - Formal Assessments of Individual Students
- Be able explain the research supporting elements in the Assessment category
- Try out some strategies associated with the elements in the Assessment category

| Overview Activity                                       | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Assessment category video                     | <a href="http://www.marzanoresources.com/online-compendium/intro">www.marzanoresources.com/online-compendium/intro</a>   |  |
| Watch the Informal Assessments of the Whole Class video | <a href="http://www.marzanoresources.com/online-compendium/informal-assessments-of-the-whole-class">www.marzanoresources.com/online-compendium/informal-assessments-of-the-whole-class</a> |  |

| Overview Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Formal Assessments of Individual Students video | <a href="http://www.marzanoresources.com/online-compendium/formal-assessments-of-the-whole-class">www.marzanoresources.com/online-compendium/formal-assessments-of-the-whole-class</a> |  |

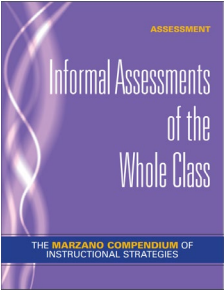
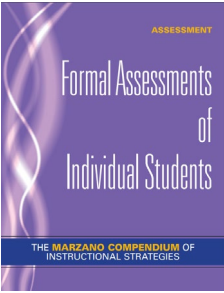
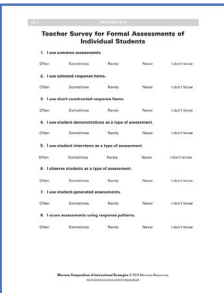
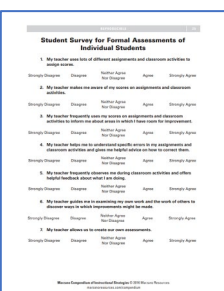
### *Discussion Questions*

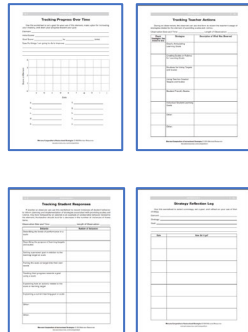
- How would you describe the focus of the Assessment category?
- In your own words, explain each element in the Assessment category.
  - Informal Assessments of the Whole Class
  - Formal Assessments of Individual Students
- Why are the elements in the Assessment category an important part of the New Art and Science of Teaching instructional framework, and of effective teaching?
- Which strategies would you like to try from the Assessment category?
- (After trying a strategy or strategies) Describe your experience with the strategy/ies you tried. What might you do differently in the future based on your experience?

## Detailed Understanding Level – Assessment

### *Learning Goals*

- Be able to describe what teacher performance looks like at all five levels of the developmental scale for each element in the Assessment category
- Use teacher and student surveys to determine your current level of performance with the elements in the Assessment category
- If appropriate, set a goal to improve on at least one of the elements in the Assessment category
- Track your progress on at least one strategy associated with an element in the Assessment category

| Detailed Understanding Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Review the Informal Assessments of the Whole Class folio  | <a href="http://www.marzanoresources.com/online-compendium/informal-assessments-of-the-whole-class">www.marzanoresources.com/online-compendium/informal-assessments-of-the-whole-class</a> |    |
| Review the Formal Assessments of Individual Students folio  | <a href="http://www.marzanoresources.com/online-compendium/formal-assessments-of-the-whole-class">www.marzanoresources.com/online-compendium/formal-assessments-of-the-whole-class</a>     |    |
| Fill out the teacher survey for one or more of the elements in this category                      | Last page of each folio  |  |
| Ask your students to fill out the student survey for one of more of the elements in this category | Next-to-last page of each folio  |  |

| Detailed Understanding Activity  | Location of Activity   | Image(s)  |
|--|--|---|
| <p>(If setting a goal to work on an element in this category)</p> <p>Track your progress towards your goal element</p> | <p>First four pages of “Reproducibles” section of each folio</p> |  |


### Discussion Questions

- What does teacher performance at the Not Using (0), Beginning (1), Developing (2), Applying (3), and Innovating (4) level look like for each of the elements in the Assessment category?
  - Informal Assessments of the Whole Class
  - Formal Assessments of Individual Students
- Share your teacher and student survey data.
  - What observations do you have?
  - What conclusions can you draw?
  - What action might you take?
- If appropriate, which element in this category might you set a goal to improve on?
- (After working towards an element goal) Share data about your progress toward your goal.

## Knowledge Application and Extension Level – Assessment

### Learning Goals

- Understand how this category connects to other education topics
- Broaden your understanding of this category
- Revise your existing pedagogical knowledge and skill based on insights from this category
- Identify pedagogical practices that might warrant changes based on your learning relative to this category

| Knowledge Application and Extension Activity   | Location of Activity  | Image(s)  |
|--|---|---|
| <p>Watch the following video library unit related to the Assessment category:</p> <p>Classroom Assessment (8 videos)</p> | <p><a href="http://www.marzanoresources.com/online-compendium/video-library">www.marzanoresources.com/online-compendium/video-library</a></p> |  <p>The image shows a screenshot of a video library menu titled "Classroom Assessment". It lists eight video topics, each with a play button icon: "A New Paradigm", "Assessment-Friendly Curriculum", "Proficiency Scales", "Portfolio Assessments", "Measuring Process &amp; Types of Assessments", "Summative Scores", "Non-Subject Specific Skills", and "Record Keeping and Recording".</p> |

### *Discussion Questions*

- How does the Assessment category connect to other education topics?
- How did the video library unit you watched broaden your understanding of the Assessment category?
- What might you do differently in your teaching practice as a result of learning you gained from the video library unit you watched?


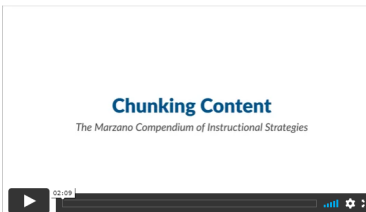
# Direct Instruction Lessons

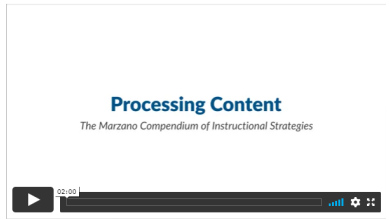
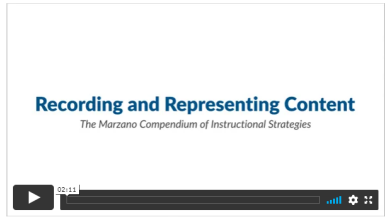
In a direct instruction lesson, a teacher is presenting new content. Simpler content, including factual information, vocabulary, and details from the proficiency scales are generally taught directly. This method of instruction is most effective at communicating new and simpler content because it allows teachers to guide students through unfamiliar concepts and lays the foundation for more complex explorations of the topic.

## Overview Level – Direct Instruction Lessons

### *Learning Goals*

- Understand the focus of this category
- Be able to describe each of the elements in the Direct Instruction Lessons category
  - Chunking Content
  - Processing Content
  - Recording and Representing Content
- Be able explain the research supporting elements in the Direct Instruction Lessons category
- Try out some strategies associated with the elements in the Direct Instruction Lessons category

| Overview Activity                                   | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Direct Instruction Lessons category video | <a href="http://www.marzanoresources.com/online-compendium/intro">www.marzanoresources.com/online-compendium/intro</a>                       |  |
| Watch the Chunking Content video                    | <a href="http://www.marzanoresources.com/online-compendium/chunking-content">www.marzanoresources.com/online-compendium/chunking-content</a> |  |

| Overview Activity                                  | Location of Activity   | Image(s)   |
|--|--|--|
| Watch the Processing Content video                 | <a href="http://www.marzanoresources.com/online-compendium/processing-content">www.marzanoresources.com/online-compendium/processing-content</a>                                 |  A video player interface showing a video titled "Processing Content" from "The Marzano Compendium of Instructional Strategies". The video has a duration of 02:00.                 |
| Watch the Recording and Representing Content video | <a href="http://www.marzanoresources.com/online-compendium/recording-and-representing-content">www.marzanoresources.com/online-compendium/recording-and-representing-content</a> |  A video player interface showing a video titled "Recording and Representing Content" from "The Marzano Compendium of Instructional Strategies". The video has a duration of 02:11. |

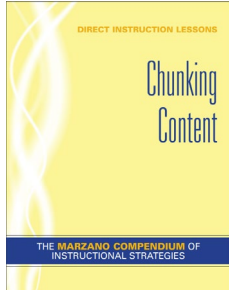
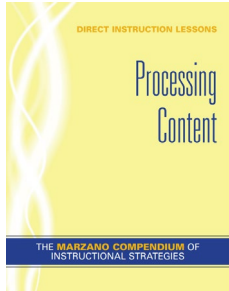
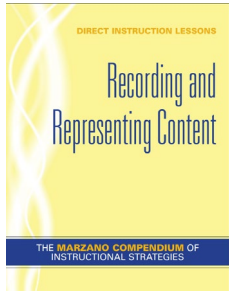
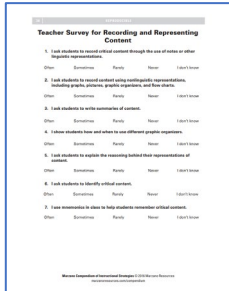
### *Discussion Questions*

- How would you describe the focus of the Direct Instruction Lessons category?
- In your own words, explain each element in the Direct Instruction Lessons category.
  - Chunking Content
  - Processing Content
  - Recording and Representing Content
- Why are the elements in the Direct Instruction Lessons category an important part of the New Art and Science of Teaching instructional framework, and of effective teaching?
- Which strategies would you like to try from the Direct Instruction Lessons category?
- (After trying a strategy or strategies) Describe your experience with the strategy/ies you tried. What might you do differently in the future based on your experience?

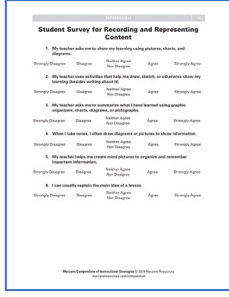
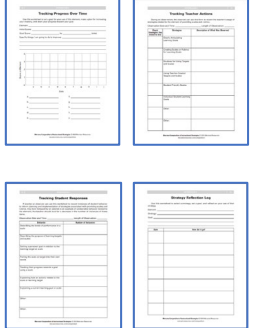
## Detailed Understanding Level – Direct Instruction Lessons

### *Learning Goals*

- Be able to describe what teacher performance looks like at all five levels of the developmental scale for each element in the Direct Instruction Lessons category
- Use teacher and student surveys to determine your current level of performance with the elements in the Direct Instruction Lessons category
- If appropriate, set a goal to improve on at least one of the elements in the Direct Instruction Lessons category
- Track your progress on at least one strategy associated with an element in the Direct Instruction Lessons category

| Detailed Understanding Activity  | Location of Activity   | Image(s)  |
|--|--|---|
| Review the Chunking Content folio  | <a href="http://www.marzanoresources.com/online-compendium/chunking-content">www.marzanoresources.com/online-compendium/chunking-content</a>                                     |    |
| Review the Processing Content folio  | <a href="http://www.marzanoresources.com/online-compendium/processing-content">www.marzanoresources.com/online-compendium/processing-content</a>                                 |    |
| Review the Recording and Representing Content folio                          | <a href="http://www.marzanoresources.com/online-compendium/recording-and-representing-content">www.marzanoresources.com/online-compendium/recording-and-representing-content</a> |  |
| Fill out the teacher survey for one or more of the elements in this category | Last page of each folio  |  |



| Detailed Understanding Activity   | Location of Activity                                      | Image(s)   |
|---|---|--|
| Ask your students to fill out the student survey for one of more of the elements in this category               | Next-to-last page of each folio                           |   |
| (If setting a goal to work on an element in this category)<br><br>Track your progress towards your goal element | First four pages of “Reproducibles” section of each folio |  |

### Discussion Questions


- What does teacher performance at the Not Using (0), Beginning (1), Developing (2), Applying (3), and Innovating (4) level look like for each of the elements in the Direct Instruction Lessons category?
  - Chunking Content
  - Processing Content
  - Recording and Representing Content
- Share your teacher and student survey data.
  - What observations do you have?
  - What conclusions can you draw?
  - What action might you take?
- If appropriate, which element in this category might you set a goal to improve on?
- (After working towards an element goal) Share data about your progress toward your goal.

## Knowledge Application and Extension Level – Direct Instruction Lessons

### Learning Goals

- Understand how this category connects to other education topics

- Broaden your understanding of this category
- Revise your existing pedagogical knowledge and skill based on insights from this category
- Identify pedagogical practices that might warrant changes based on your learning relative to this category

| Knowledge Application and Extension Activity  | Location of Activity  | Image(s)   |
|---|---|--|
| <p>Watch one or more of the following video library units related to the Direct Instruction Lessons category:</p> <p>Knowledge Maps (15 videos)</p> <p>A Comprehensive Approach to K-12 Vocabulary Instruction (5 videos)</p> | <p><a href="http://www.marzanoresources.com/online-compendium/video-library">www.marzanoresources.com/online-compendium/video-library</a></p> |  <p>The image shows a screenshot of the Marzano Resources website. It displays two sections of video library units. The first section, titled 'Knowledge Maps', lists 15 video titles: 'An Introduction to Knowledge Maps', 'Basic Relationships', 'Description Structures', 'Sequence Structures', 'Causation Structures', 'Problem-Solution Structures', 'Comparison Structures', 'Collection Structures', 'Classification Structures', 'Argumentation Structures', 'Reasoning Structures', 'Systems Structures', 'Episode Structures', 'Metaphor Structures', and 'Analogy Structures'. The second section, titled 'A Comprehensive Approach to K-12 Vocabulary Instruction', lists 5 video titles: 'The Importance of Vocabulary', 'The Six-Step Process (Steps 1-2)', 'The Six-Step Process (Steps 3-4)', 'Managing Vocabulary Instruction', and 'Designing a School or Districtwide Vocabulary Program'.</p> |

### Discussion Questions

- How does the Direct Instruction Lessons category connect to other education topics?
- How did the video library unit(s) you watched broaden your understanding of the Direct Instruction Lessons category?
- What might you do differently in your teaching practice as a result of learning you gained from the video library unit(s) you watched?

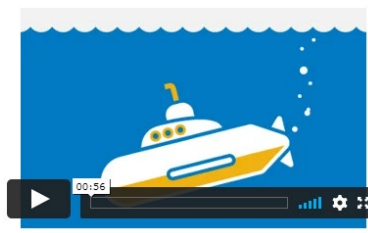
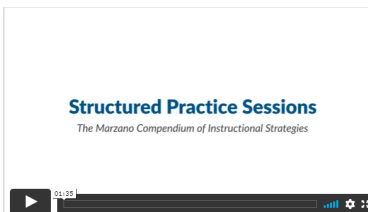
# Practicing and Deepening Lessons

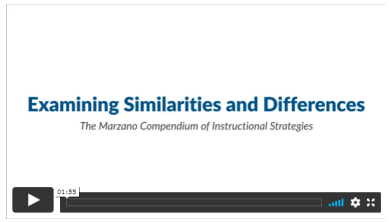
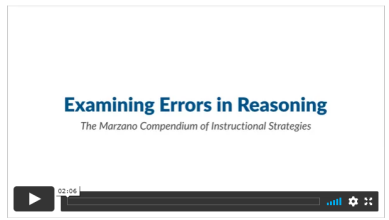
Practicing and deepening lessons encourage students to investigate a topic more rigorously. During these lessons, students begin developing the ability to employ skills, strategies, and processes fluently and accurately. Teachers can utilize these lessons to assist students in connecting their understanding of the topic with previously learned content and to facilitate the practice of essential skills.

## Overview Level – Practicing and Deepening Lessons

### *Learning Goals*

- Understand the focus of this category
- Be able to describe each of the elements in the Practicing and Deepening Lessons category
  - Structured Practice Sessions
  - Examining Similarities and Differences
  - Examining Errors in Reasoning
- Be able explain the research supporting elements in the Practicing and Deepening Lessons category
- Try out some strategies associated with the elements in the Practicing and Deepening Lessons category

| Overview Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Practicing and Deepening Lessons category video | <a href="http://www.marzanoresources.com/online-compendium/intro">www.marzanoresources.com/online-compendium/intro</a>   |  |
| Watch the Structured Practice Sessions video              | <a href="http://www.marzanoresources.com/online-compendium/structured-practice-sessions">www.marzanoresources.com/online-compendium/structured-practice-sessions</a> |  |

| Overview Activity                                      | Location of Activity   | Image(s)  |
|--|--|---|
| Watch the Examining Similarities and Differences video | <a href="http://www.marzanoresources.com/online-compendium/examining-similarities-and-differences">www.marzanoresources.com/online-compendium/examining-similarities-and-differences</a> |  |
| Watch the Examining Errors in Reasoning video          | <a href="http://www.marzanoresources.com/online-compendium/examining-errors-in-reasoning">www.marzanoresources.com/online-compendium/examining-errors-in-reasoning</a>                   |  |

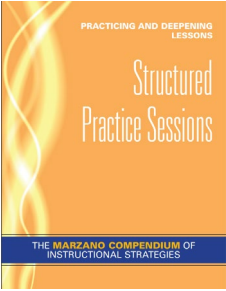
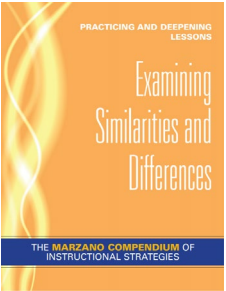
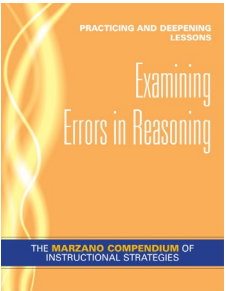
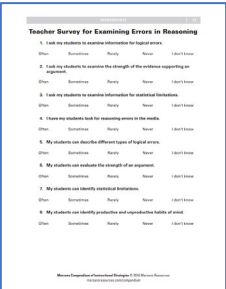
### *Discussion Questions*

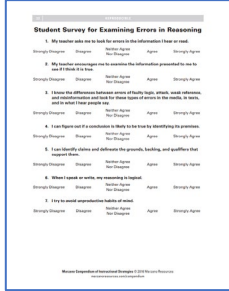
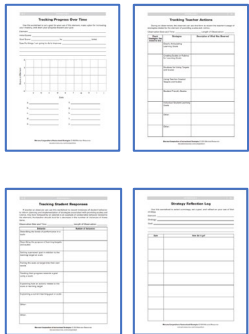
- How would you describe the focus of the Practicing and Deepening Lessons category?
- In your own words, explain each element in the Practicing and Deepening Lessons category.
  - Structured Practice Sessions
  - Examining Similarities and Differences
  - Examining Errors in Reasoning
- Why are the elements in the Practicing and Deepening Lessons category an important part of the New Art and Science of Teaching instructional framework, and of effective teaching?
- Which strategies would you like to try from the Practicing and Deepening Lessons category?
- (After trying a strategy or strategies) Describe your experience with the strategy/ies you tried. What might you do differently in the future based on your experience?

## Detailed Understanding Level – Practicing and Deepening Lessons

### *Learning Goals*

- Be able to describe what teacher performance looks like at all five levels of the developmental scale for each element in the Practicing and Deepening Lessons category
- Use teacher and student surveys to determine your current level of performance with the elements in the Practicing and Deepening Lessons category
- If appropriate, set a goal to improve on at least one of the elements in the Practicing and Deepening Lessons category
- Track your progress on at least one strategy associated with an element in the Practicing and Deepening Lessons category

| Detailed Understanding Activity  | Location of Activity   | Image(s)  |
|--|--|---|
| Review the Structured Practice Sessions folio                                | <a href="http://www.marzanoresources.com/online-compendium/structured-practice-sessions">www.marzanoresources.com/<br/>online-compendium/<br/>structured-practice-sessions</a>                     |    |
| Review the Examining Similarities and Differences folio                      | <a href="http://www.marzanoresources.com/online-compendium/examining-similarities-and-differences">www.marzanoresources.com/<br/>online-compendium/<br/>examining-similarities-and-differences</a> |    |
| Review the Examining Errors in Reasoning folio                               | <a href="http://www.marzanoresources.com/online-compendium/examining-errors-in-reasoning">www.marzanoresources.com/<br/>online-compendium/<br/>examining-errors-in-reasoning</a>                   |  |
| Fill out the teacher survey for one or more of the elements in this category | Last page of each folio  |  |

| Detailed Understanding Activity   | Location of Activity                                      | Image(s)   |
|---|---|--|
| Ask your students to fill out the student survey for one of more of the elements in this category               | Next-to-last page of each folio                           |   |
| (If setting a goal to work on an element in this category)<br><br>Track your progress towards your goal element | First four pages of “Reproducibles” section of each folio |  |


### Discussion Questions

- What does teacher performance at the Not Using (0), Beginning (1), Developing (2), Applying (3), and Innovating (4) level look like for each of the elements in the Practicing and Deepening Lessons category?
  - Structured Practice Sessions
  - Examining Similarities and Differences
  - Examining Errors in Reasoning
- Share your teacher and student survey data.
  - What observations do you have?
  - What conclusions can you draw?
  - What action might you take?
- If appropriate, which element in this category might you set a goal to improve on?
- (After working towards an element goal) Share data about your progress toward your goal.

## Knowledge Application and Extension Level – Practicing and Deepening Lessons

### Learning Goals

- Understand how this category connects to other education topics
- Broaden your understanding of this category
- Revise your existing pedagogical knowledge and skill based on insights from this category
- Identify pedagogical practices that might warrant changes based on your learning relative to this category

| Knowledge Application and Extension Activity   | Location of Activity   | Image(s)  |
|--|--|---|
| Watch the following video library unit related to the Practicing and Deepening Lessons category:<br><br>Cognitive Analysis Skills (9 videos) | <a href="http://www.marzanoresources.com/online-compendium/video-library">www.marzanoresources.com/<br/>online-compendium/video-<br/>library</a> |  The image shows a screenshot of a video library interface titled "Cognitive Analysis Skills". It lists nine video topics: "An Introduction to Cognitive Analysis Skills", "Comparing", "Analogical Reasoning", "Classifying", "Analyzing Perspectives", "Constructing Support", "Analyzing Inferences", "Analyzing Errors in Reasoning", and "Generating Mental Images". Each item has a small play button icon to its left. |

### Discussion Questions

- How does the Practicing and Deepening Lessons category connect to other education topics?
- How did the video library unit you watched broaden your understanding of the Practicing and Deepening Lessons category?
- What might you do differently in your teaching practice as a result of learning you gained from the video library unit you watched?

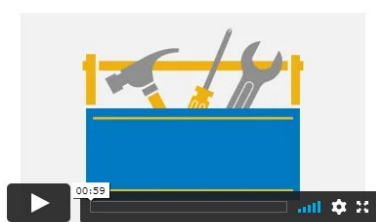

# Knowledge Application Lessons

Knowledge application lessons encourage students to move beyond the content and begin generating their own claims and conclusions. In these lessons, teachers facilitate students' exploration of their knowledge by providing guidance and resources. Ultimately, knowledge application lessons not only help students master the content but also help them examine the intrinsic ideas within content and how these concepts might apply to the overarching unit.

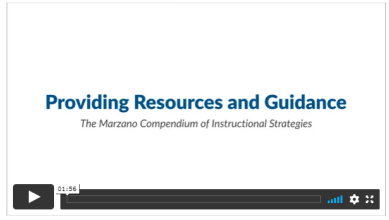
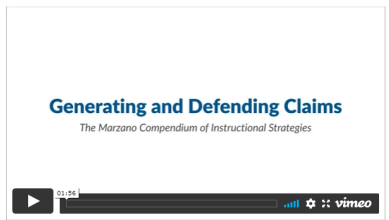
## Overview Level – Knowledge Application Lessons

### *Learning Goals*

- Understand the focus of this category
- Be able to describe each of the elements in the Knowledge Application Lessons category
  - Engaging Students in Cognitively Complex Tasks
  - Providing Resources and Guidance
  - Generating and Defending Claims
- Be able explain the research supporting elements in the Knowledge Application Lessons category
- Try out some strategies associated with the elements in the Knowledge Application Lessons category

| Overview Activity  | Location of Activity   | Image(s)  |
|--|--|---|
| Watch the Knowledge Application Lessons category video         | <a href="http://www.marzanoresources.com/online-compendium/intro">www.marzanoresources.com/online-compendium/intro</a>   |  |
| Watch the Engaging Students in Cognitively Complex Tasks video | <a href="http://www.marzanoresources.com/online-compendium/engaging-students-in-cognitively-complex-tasks">www.marzanoresources.com/online-compendium/engaging-students-in-cognitively-complex-tasks</a> |  |



| Overview Activity                                | Location of Activity   | Image(s)  |
|--|--|---|
| Watch the Providing Resources and Guidance video | <a href="http://www.marzanoresources.com/online-compendium/providing-resources-and-guidance">www.marzanoresources.com/online-compendium/providing-resources-and-guidance</a> |  |
| Watch the Generating and Defending Claims video  | <a href="http://www.marzanoresources.com/online-compendium/generating-and-defending-claims">www.marzanoresources.com/online-compendium/generating-and-defending-claims</a>   |  |

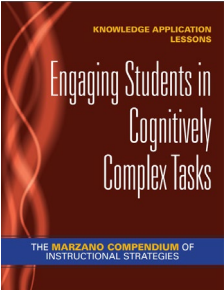
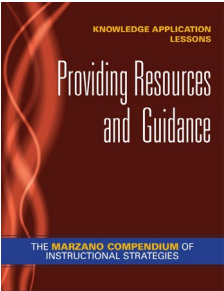
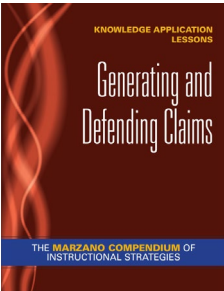
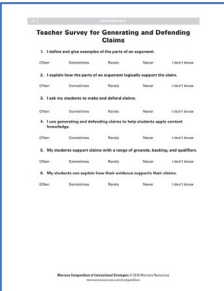
### *Discussion Questions*

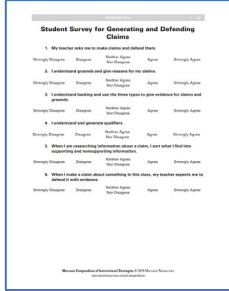
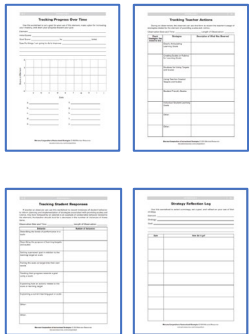
- How would you describe the focus of the Knowledge Application Lessons category?
- In your own words, explain each element in the Knowledge Application Lessons category.
  - Engaging Students in Cognitively Complex Tasks
  - Providing Resources and Guidance
  - Generating and Defending Claims
- Why are the elements in the Knowledge Application Lessons category an important part of the New Art and Science of Teaching instructional framework, and of effective teaching?
- Which strategies would you like to try from the Knowledge Application Lessons category?
- (After trying a strategy or strategies) Describe your experience with the strategy/ies you tried. What might you do differently in the future based on your experience?

## Detailed Understanding Level – Knowledge Application Lessons

### *Learning Goals*

- Be able to describe what teacher performance looks like at all five levels of the developmental scale for each element in the Knowledge Application Lessons category
- Use teacher and student surveys to determine your current level of performance with the elements in the Knowledge Application Lessons category
- If appropriate, set a goal to improve on at least one of the elements in the Knowledge Application Lessons category
- Track your progress on at least one strategy associated with an element in the Knowledge Application Lessons category

| Detailed Understanding Activity  | Location of Activity   | Image(s)  |
|--|--|---|
| Review the Engaging Students in Cognitively Complex Tasks folio              | <a href="http://www.marzanoresources.com/online-compendium/engaging-students-in-cognitively-complex-tasks">www.marzanoresources.com/online-compendium/engaging-students-in-cognitively-complex-tasks</a> |    |
| Review the Providing Resources and Guidance folio                            | <a href="http://www.marzanoresources.com/online-compendium/providing-resources-and-guidance">www.marzanoresources.com/online-compendium/providing-resources-and-guidance</a>                             |    |
| Review the Generating and Defending Claims folio                             | <a href="http://www.marzanoresources.com/online-compendium/generating-and-defending-claims">www.marzanoresources.com/online-compendium/generating-and-defending-claims</a>                               |  |
| Fill out the teacher survey for one or more of the elements in this category | Last page of each folio  |  |

| Detailed Understanding Activity   | Location of Activity                                      | Image(s)   |
|---|---|--|
| Ask your students to fill out the student survey for one of more of the elements in this category               | Next-to-last page of each folio                           |   |
| (If setting a goal to work on an element in this category)<br><br>Track your progress towards your goal element | First four pages of “Reproducibles” section of each folio |  |


### Discussion Questions

- What does teacher performance at the Not Using (0), Beginning (1), Developing (2), Applying (3), and Innovating (4) level look like for each of the elements in the Knowledge Application Lessons category?
  - Engaging Students in Cognitively Complex Tasks
  - Providing Resources and Guidance
  - Generating and Defending Claims
- Share your teacher and student survey data.
  - What observations do you have?
  - What conclusions can you draw?
  - What action might you take?
- If appropriate, which element in this category might you set a goal to improve on?
- (After working towards an element goal) Share data about your progress toward your goal.

## Knowledge Application and Extension Level – Knowledge Application Lessons

### Learning Goals

- Understand how this category connects to other education topics
- Broaden your understanding of this category
- Revise your existing pedagogical knowledge and skill based on insights from this category
- Identify pedagogical practices that might warrant changes based on your learning relative to this category

| Knowledge Application and Extension Activity   | Location of Activity  | Image(s)  |
|--|---|---|
| <p>Watch one or more of the following video library units related to the Knowledge Application Lessons category:</p> <p>Knowledge Application Skills (7 videos)</p> <p>Critical Thinking and Analytical Reasoning (4 videos)</p> | <p><a href="http://www.marzanoresources.com/online-compendium/video-library">www.marzanoresources.com/online-compendium/video-library</a></p> |  <p>The image shows a screenshot of a video library interface. It is divided into two main sections. The top section is titled 'Knowledge Application Skills' and lists seven video units: 'All Introduction to Knowledge Application Skills', 'Decision Making', 'Problem Solving', 'Invention', 'Experimental Inquiry', 'Investigation', and 'Systems Analysis'. The bottom section is titled 'Critical Thinking and Analytical Reasoning' and lists four video units: 'Introduction', 'Distinguishing Fact from Opinion', 'Evaluating Conclusions', and 'Crafting Coherent Arguments'. Each unit is represented by a blue horizontal bar with a white bullet point and text.</p> |

### Discussion Questions

- How does the Knowledge Application Lessons category connect to other education topics?
- How did the video library unit(s) you watched broaden your understanding of the Knowledge Application Lessons category?
- What might you do differently in your teaching practice as a result of learning you gained from the video library unit(s) you watched?

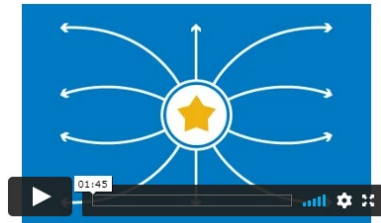
# Strategies That Appear in All Types of Lessons

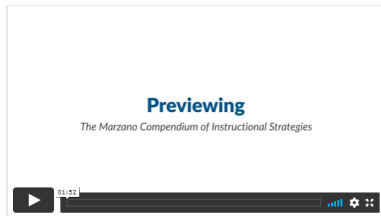

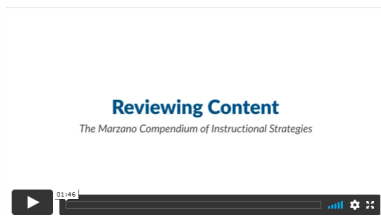
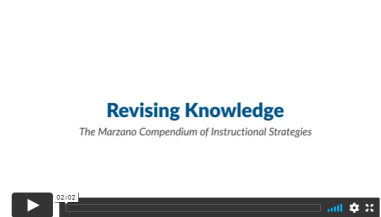
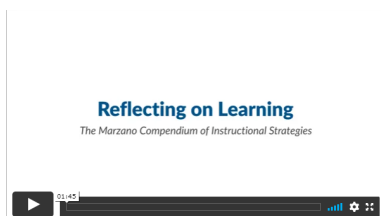
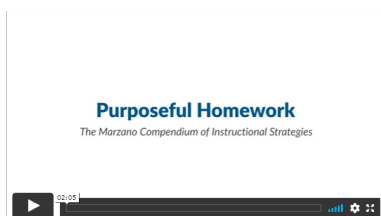
There are eight essential strategies that appear in nearly all types of lessons. Teachers can use these strategies to systematically guide students through the learning of content and to provide students with multiple opportunities to more deeply engage with and understand curriculum. When these strategies are used in tandem with one another, they can provide cohesion to lessons and longer units.

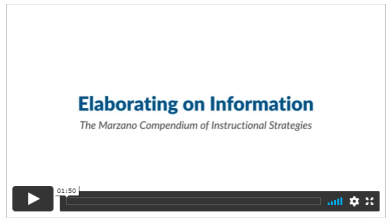
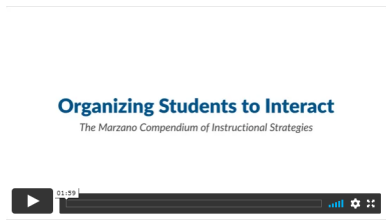
## Overview Level – Strategies That Appear in All Types of Lessons

### *Learning Goals*

- Understand the focus of this category
- Be able to describe each of the elements in the Strategies That Appear in All Types of Lessons category
  - Previewing
  - Highlighting Critical Information
  - Reviewing Content
  - Revising Knowledge
  - Reflecting on Learning
  - Purposeful Homework
  - Elaborating on Information
  - Organizing Students to Interact
- Be able explain the research supporting elements in the Strategies That Appear in All Types of Lessons category
- Try out some strategies associated with the elements in the Strategies That Appear in All Types of Lessons category

| Overview Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Strategies That Appear in All Types of Lessons category video | <a href="http://www.marzanoresources.com/online-compendium/intro">www.marzanoresources.com/online-compendium/intro</a> |  |

| Overview Activity                                 | Location of Activity  | Image(s)  |
|---|---|---|
| Watch the Previewing video                        | <a href="http://www.marzanoresources.com/online-compendium/previewing">www.marzanoresources.com/<br/>online-compendium/<br/>previewing</a>  |    |
| Watch the Highlighting Critical Information video | <a href="http://www.marzanoresources.com/online-compendium/highlighting-critical-information">www.marzanoresources.com/<br/>online-compendium/<br/>highlighting-critical-<br/>information</a> |    |
| Watch the Reviewing Content video                 | <a href="http://www.marzanoresources.com/online-compendium/reviewing-content">www.marzanoresources.com/<br/>online-compendium/<br/>reviewing-content</a>                                      |   |
| Watch the Revising Knowledge video                | <a href="http://www.marzanoresources.com/online-compendium/revising-knowledge">www.marzanoresources.com/<br/>online-compendium/<br/>revising-<br/>knowledge</a>                               |  |
| Watch the Reflecting on Learning video            | <a href="http://www.marzanoresources.com/online-compendium/reflecting-on-learning">www.marzanoresources.com/<br/>online-compendium/<br/>reflecting-on-learning</a>                            |  |
| Watch the Purposeful Homework video               | <a href="http://www.marzanoresources.com/online-compendium/purposeful-homework">www.marzanoresources.com/<br/>online-compendium/<br/>purposeful-homework</a>                                  |  |

| Overview Activity                               | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Elaborating on Information video      | <a href="http://www.marzanoresources.com/online-compendium/elaborating-on-information">www.marzanoresources.com/<br/>online-compendium/<br/>elaborating-on-information</a>           |  |
| Watch the Organizing Students to Interact video | <a href="http://www.marzanoresources.com/online-compendium/organizing-students-to-interact">www.marzanoresources.com/<br/>online-compendium/<br/>organizing-students-to-interact</a> |  |

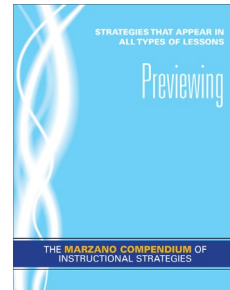
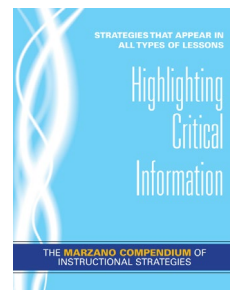
### *Discussion Questions*

- How would you describe the focus of the Strategies That Appear in All Types of Lessons category?
- In your own words, explain each element in the Strategies That Appear in All Types of Lessons category.
  - Previewing
  - Highlighting Critical Information
  - Reviewing Content
  - Revising Knowledge
  - Reflecting on Learning
  - Purposeful Homework
  - Elaborating on Information
  - Organizing Students to Interact
- Why are the elements in the Strategies That Appear in All Types of Lessons category an important part of the New Art and Science of Teaching instructional framework, and of effective teaching?
- Which strategies would you like to try from the Strategies That Appear in All Types of Lessons category?
- (After trying a strategy or strategies) Describe your experience with the strategy/ies you tried. What might you do differently in the future based on your experience?

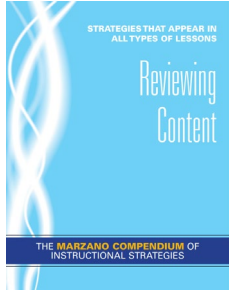
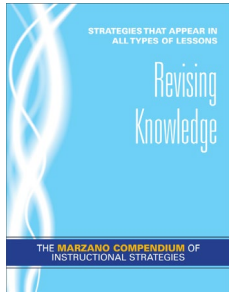
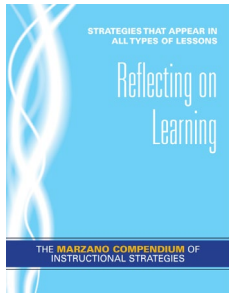
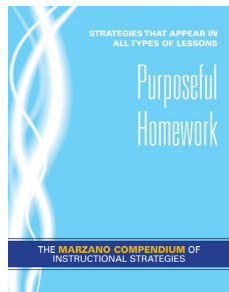
## Detailed Understanding Level – Strategies That Appear in All Types of Lessons

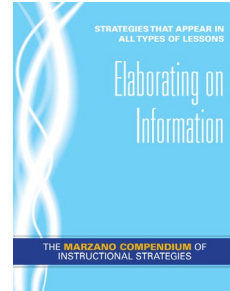
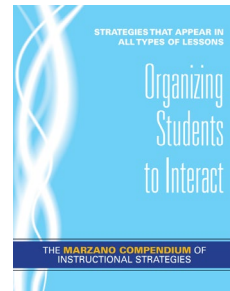
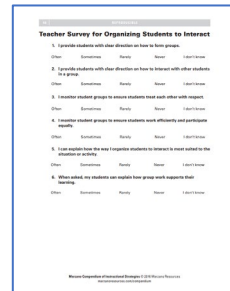
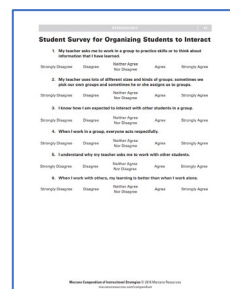
### *Learning Goals*

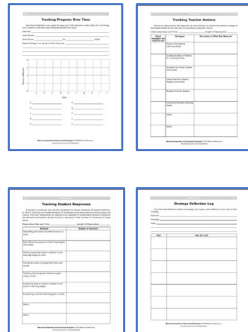
- Be able to describe what teacher performance looks like at all five levels of the developmental scale for each element in the Strategies That Appear in All Types of Lessons category
- Use teacher and student surveys to determine your current level of performance with the elements in the Strategies That Appear in All Types of Lessons category
- If appropriate, set a goal to improve on at least one of the elements in the Strategies That Appear in All Types of Lessons category
- Track your progress on at least one strategy associated with an element in the Strategies That Appear in All Types of Lessons category

| Detailed Understanding Activity                    | Location of Activity  | Image(s)  |
|--|---|---|
| Review the Previewing folio                        | <a href="http://www.marzanoresources.com/online-compendium/previewing">www.marzanoresources.com/<br/>online-compendium/<br/>previewing</a>  |   |
| Review the Highlighting Critical Information folio | <a href="http://www.marzanoresources.com/online-compendium/highlighting-critical-information">www.marzanoresources.com/<br/>online-compendium/<br/>highlighting-critical-<br/>information</a> |  |



| Detailed Understanding Activity         | Location of Activity   | Image(s)  |
|---|--|---|
| Review the Reviewing Content folio      | <a href="http://www.marzanoresources.com/online-compendium/reviewing-content">www.marzanoresources.com/online-compendium/reviewing-content</a>           |    |
| Review the Revising Knowledge folio     | <a href="http://www.marzanoresources.com/online-compendium/revising-knowledge">www.marzanoresources.com/online-compendium/revising-knowledge</a>         |    |
| Review the Reflecting on Learning folio | <a href="http://www.marzanoresources.com/online-compendium/reflecting-on-learning">www.marzanoresources.com/online-compendium/reflecting-on-learning</a> |  |
| Review the Purposeful Homework folio    | <a href="http://www.marzanoresources.com/online-compendium/purposeful-homework">www.marzanoresources.com/online-compendium/purposeful-homework</a>       |  |

| Detailed Understanding Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Review the Elaborating on Information folio   | <a href="http://www.marzanoresources.com/online-compendium/elaborating-on-information">www.marzanoresources.com/online-compendium/elaborating-on-information</a>           |    |
| Review the Organizing Students to Interact folio  | <a href="http://www.marzanoresources.com/online-compendium/organizing-students-to-interact">www.marzanoresources.com/online-compendium/organizing-students-to-interact</a> |    |
| Fill out the teacher survey for one or more of the elements in this category                      | Last page of each folio  |  |
| Ask your students to fill out the student survey for one of more of the elements in this category | Next-to-last page of each folio  |  |

| Detailed Understanding Activity  | Location of Activity   | Image(s)  |
|--|--|---|
| <p>(If setting a goal to work on an element in this category)</p> <p>Track your progress towards your goal element</p> | <p>First four pages of “Reproducibles” section of each folio</p> |  |

### Discussion Questions

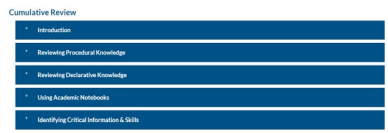
- What does teacher performance at the Not Using (0), Beginning (1), Developing (2), Applying (3), and Innovating (4) level look like for each of the elements in the Strategies That Appear in All Types of Lessons category?
  - Previewing
  - Highlighting Critical Information
  - Reviewing Content
  - Revising Knowledge
  - Reflecting on Learning
  - Purposeful Homework
  - Elaborating on Information
  - Organizing Students to Interact
- Share your teacher and student survey data.
  - What observations do you have?
  - What conclusions can you draw?
  - What action might you take?
- If appropriate, which element in this category might you set a goal to improve on?
- (After working towards an element goal) Share data about your progress toward your goal.

## Knowledge Application and Extension Level – Strategies That Appear in All Types of Lessons

### Learning Goals

- Understand how this category connects to other education topics
- Broaden your understanding of this category
- Revise your existing pedagogical knowledge and skill based on insights from this category

- Identify pedagogical practices that might warrant changes based on your learning relative to this category

| Knowledge Application and Extension Activity  | Location of Activity  | Image(s)  |
|---|---|---|
| <p>Watch the following video library unit related to the Strategies That Appear in All Types of Lessons category:</p> <p>Cumulative Review (5 videos)</p> | <p><a href="http://www.marzanoresources.com/online-compendium/video-library">www.marzanoresources.com/online-compendium/video-library</a></p> |  |

### *Discussion Questions*

- How does the Strategies That Appear in All Types of Lessons category connect to other education topics?
- How did the video library unit you watched broaden your understanding of the Strategies That Appear in All Types of Lessons category?
- What might you do differently in your teaching practice as a result of learning you gained from the video library unit(s) you watched?

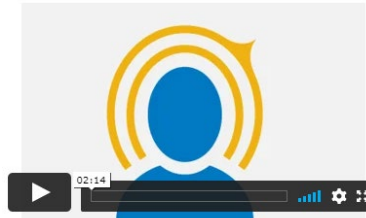
# Engagement


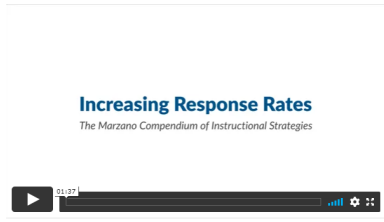
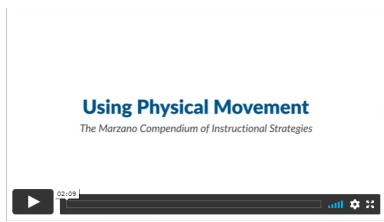
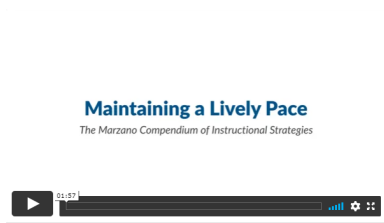
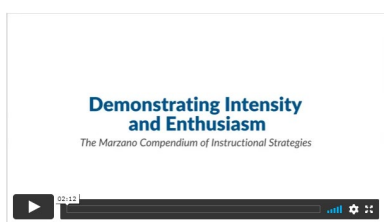
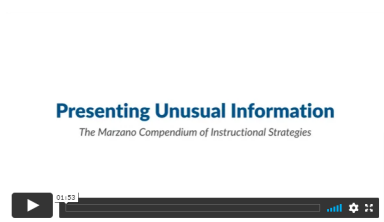
Engagement is a critical component of deepening students' knowledge. Effective engagement strategies often encourage students to interact with the content in purposeful but unexpected ways and allow students to personally respond to the information presented to them. Teachers should notice when students seem disinterested and employ these strategies to enhance students' motivation to learn.

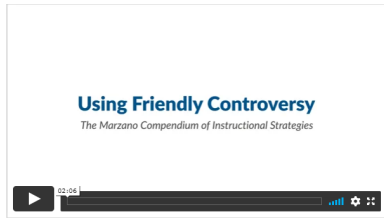
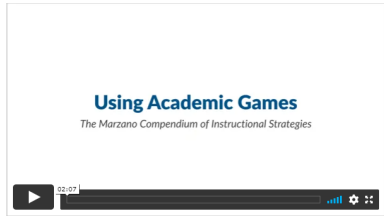
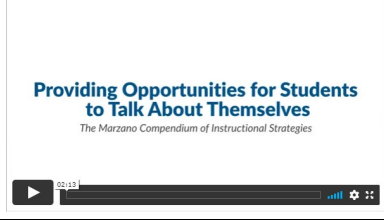
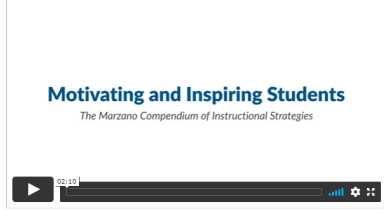
## Overview Level – Engagement

### *Learning Goals*

- Understand the focus of this category
- Be able to describe each of the elements in the Engagement category
  - Noticing When Students Are Not Engaged and Reacting
  - Increasing Response Rates
  - Using Physical Movement
  - Maintaining a Lively Pace
  - Demonstrating Intensity and Enthusiasm
  - Presenting Unusual Information
  - Using Friendly Controversy
  - Using Academic Games
  - Providing Opportunities for Students to Talk About Themselves
  - Motivating and Inspiring Students
- Be able explain the research supporting elements in the Engagement category
- Try out some strategies associated with the elements in the Engagement category

| Overview Activity                   | Location of Activity   | Image(s)  |
|-------------------------------------|--|---|
| Watch the Engagement category video | <a href="http://www.marzanoresources.com/online-compendium/intro">www.marzanoresources.com/online-compendium/intro</a> |  |

| Overview Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Noticing When Students Are Not Engaged and Reacting video | <a href="http://www.marzanoresources.com/online-compendium/noticing-when-students-are-not-engaged">www.marzanoresources.com/online-compendium/noticing-when-students-are-not-engaged</a> |    |
| Watch the Increasing Response Rates video                           | <a href="http://www.marzanoresources.com/online-compendium/increasing-response-rates">www.marzanoresources.com/online-compendium/increasing-response-rates</a>                           |    |
| Watch the Using Physical Movement video                             | <a href="http://www.marzanoresources.com/online-compendium/using-physical-movement">www.marzanoresources.com/online-compendium/using-physical-movement</a>                               |   |
| Watch the Maintaining a Lively Pace video                           | <a href="http://www.marzanoresources.com/online-compendium/maintaining-a-lively-pace">www.marzanoresources.com/online-compendium/maintaining-a-lively-pace</a>                           |  |
| Watch the Demonstrating Intensity and Enthusiasm video              | <a href="http://www.marzanoresources.com/online-compendium/demonstrating-intensity-and-enthusiasm">www.marzanoresources.com/online-compendium/demonstrating-intensity-and-enthusiasm</a> |  |
| Watch the Presenting Unusual Information video                      | <a href="http://www.marzanoresources.com/online-compendium/presenting-unusual-information">www.marzanoresources.com/online-compendium/presenting-unusual-information</a>                 |  |

| Overview Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Using Friendly Controversy video                                    | <a href="http://www.marzanoresources.com/online-compendium/using-friendly-controversy">www.marzanoresources.com/online-compendium/using-friendly-controversy</a>   |    |
| Watch the Using Academic Games video  | <a href="http://www.marzanoresources.com/online-compendium/using-academic-games">www.marzanoresources.com/online-compendium/using-academic-games</a>   |    |
| Watch the Providing Opportunities for Students to Talk About Themselves video | <a href="http://www.marzanoresources.com/online-compendium/providing-opportunities-for-students-to-talk-about-themselves">www.marzanoresources.com/online-compendium/providing-opportunities-for-students-to-talk-about-themselves</a> |   |
| Watch the Motivating and Inspiring Students video                             | <a href="http://www.marzanoresources.com/online-compendium/motivating-and-inspiring-students">www.marzanoresources.com/online-compendium/motivating-and-inspiring-students</a>   |  |

### Discussion Questions

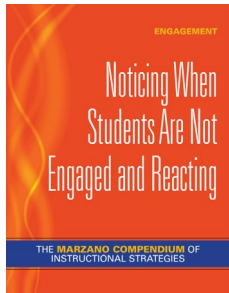
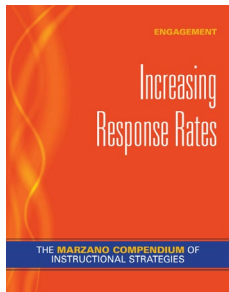
- How would you describe the focus of the Engagement category?
- In your own words, explain each element in the Engagement category.
  - Noticing When Students Are Not Engaged and Reacting
  - Increasing Response Rates
  - Using Physical Movement
  - Maintaining a Lively Pace
  - Demonstrating Intensity and Enthusiasm
  - Presenting Unusual Information
  - Using Friendly Controversy
  - Using Academic Games
  - Providing Opportunities for Students to Talk About Themselves
  - Motivating and Inspiring Students

- Why are the elements in the Engagement category an important part of the New Art and Science of Teaching instructional framework, and of effective teaching?
- Which strategies would you like to try from the Engagement category?
- (After trying a strategy or strategies) Describe your experience with the strategy/ies you tried. What might you do differently in the future based on your experience?

## Detailed Understanding Level – Engagement

### *Learning Goals*

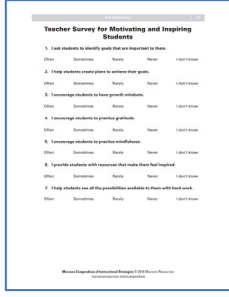
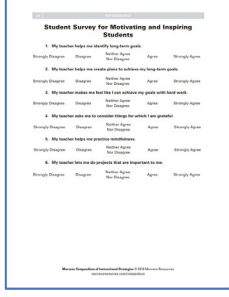
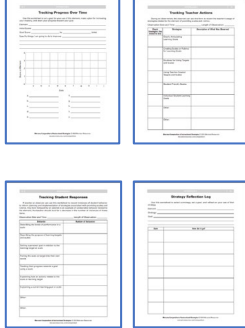
- Be able to describe what teacher performance looks like at all five levels of the developmental scale for each element in the Engagement category
- Use teacher and student surveys to determine your current level of performance with the elements in the Engagement category
- If appropriate, set a goal to improve on at least one of the elements in the Engagement category
- Track your progress on at least one strategy associated with an element in the Engagement category

| Detailed Understanding Activity                                      | Location of Activity   | Image(s)  |
|--|--|---|
| Review the Noticing When Students Are Not Engaged and Reacting folio | <a href="http://www.marzanoresources.com/online-compendium/noticing-when-students-are-not-engaged">www.marzanoresources.com/online-compendium/noticing-when-students-are-not-engaged</a> |  |
| Review the Increasing Response Rates folio                           | <a href="http://www.marzanoresources.com/online-compendium/increasing-response-rates">www.marzanoresources.com/online-compendium/increasing-response-rates</a>                           |  |



| Detailed Understanding Activity                         | Location of Activity   | Image(s)  |
|---|--|---|
| Review the Using Physical Movement folio                | <a href="http://www.marzanoresources.com/online-compendium/using-physical-movement">www.marzanoresources.com/online-compendium/using-physical-movement</a>                               |    |
| Review the Maintaining a Lively Pace folio              | <a href="http://www.marzanoresources.com/online-compendium/maintaining-a-lively-pace">www.marzanoresources.com/online-compendium/maintaining-a-lively-pace</a>                           |    |
| Review the Demonstrating Intensity and Enthusiasm folio | <a href="http://www.marzanoresources.com/online-compendium/demonstrating-intensity-and-enthusiasm">www.marzanoresources.com/online-compendium/demonstrating-intensity-and-enthusiasm</a> |  |
| Review the Presenting Unusual Information folio         | <a href="http://www.marzanoresources.com/online-compendium/presenting-unusual-information">www.marzanoresources.com/online-compendium/presenting-unusual-information</a>                 |  |

| Detailed Understanding Activity  | Location of Activity   | Image(s)  |
|--|--|---|
| Review the Using Friendly Controversy folio                                    | <a href="http://www.marzanoresources.com/online-compendium/using-friendly-controversy">www.marzanoresources.com/online-compendium/using-friendly-controversy</a>   |    |
| Review the Using Academic Games folio  | <a href="http://www.marzanoresources.com/online-compendium/using-academic-games">www.marzanoresources.com/online-compendium/using-academic-games</a>   |    |
| Review the Providing Opportunities for Students to Talk About Themselves folio | <a href="http://www.marzanoresources.com/online-compendium/providing-opportunities-for-students-to-talk-about-themselves">www.marzanoresources.com/online-compendium/providing-opportunities-for-students-to-talk-about-themselves</a> |  |
| Review the Motivating and Inspiring Students folio                             | <a href="http://www.marzanoresources.com/online-compendium/motivating-and-inspiring-students">www.marzanoresources.com/online-compendium/motivating-and-inspiring-students</a>   |  |

| Detailed Understanding Activity   | Location of Activity                                      | Image(s)  |
|---|---|---|
| Fill out the teacher survey for one or more of the elements in this category                                    | Last page of each folio                                   |    |
| Ask your students to fill out the student survey for one of more of the elements in this category               | Next-to-last page of each folio                           |    |
| (If setting a goal to work on an element in this category)<br><br>Track your progress towards your goal element | First four pages of “Reproducibles” section of each folio |  |

### Discussion Questions


- What does teacher performance at the Not Using (0), Beginning (1), Developing (2), Applying (3), and Innovating (4) level look like for each of the elements in the Engagement category?
  - Noticing When Students Are Not Engaged and Reacting
  - Increasing Response Rates
  - Using Physical Movement
  - Maintaining a Lively Pace
  - Demonstrating Intensity and Enthusiasm
  - Presenting Unusual Information
  - Using Friendly Controversy
  - Using Academic Games

- Providing Opportunities for Students to Talk About Themselves
- Motivating and Inspiring Students
- Share your teacher and student survey data.
  - What observations do you have?
  - What conclusions can you draw?
  - What action might you take?
- If appropriate, which element in this category might you set a goal to improve on?
- (After working towards an element goal) Share data about your progress toward your goal.

## Knowledge Application and Extension Level – Engagement

### *Learning Goals*

- Understand how this category connects to other education topics
- Broaden your understanding of this category
- Revise your existing pedagogical knowledge and skill based on insights from this category
- Identify pedagogical practices that might warrant changes based on your learning relative to this category

| Knowledge Application and Extension Activity  | Location of Activity  | Image(s)  |
|---|---|---|
| <p>Watch the following video library unit related to the Engagement category:</p> <p>Motivating and Inspiring Students (7 videos)</p> | <p><a href="http://www.marzanoresources.com/online-compendium/video-library">www.marzanoresources.com/online-compendium/video-library</a></p> |  |

### *Discussion Questions*

- How does the Engagement category connect to other education topics?
- How did the video library unit you watched broaden your understanding of the Engagement category?
- What might you do differently in your teaching practice as a result of learning you gained from the video library unit you watched?


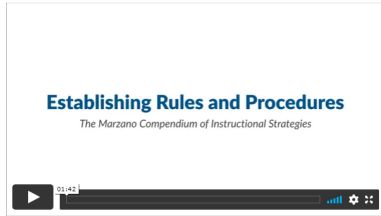
# Rules and Procedures

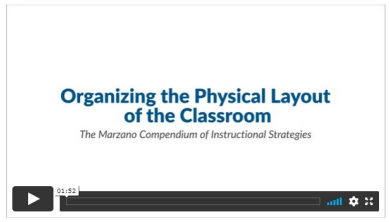
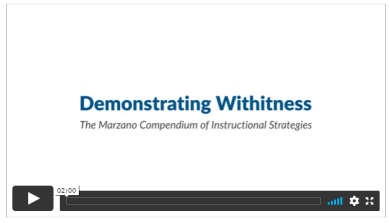


Rules and procedures are a facet of classroom management that provide the framework for student behavior and practices throughout the school year. All established rules and procedures should be clearly defined by the teacher and should help prevent behavior that might interfere with students' learning. In addition, good classroom management also considers students' needs and how certain routines might encourage, or discourage, students' learning habits. In this set of strategies, rules refer to general expectations or standards for the classroom, while procedures more specifically delineate how students are to behave or perform certain tasks.

## Overview Level – Rules and Procedures

### *Learning Goals*

- Understand the focus of this category
- Be able to describe each of the elements in the Rules and Procedures category
  - Establishing Rules and Procedures
  - Organizing the Physical Layout of the Classroom
  - Demonstrating Withitness
  - Acknowledging Adherence to Rules and Procedures
  - Acknowledging Lack of Adherence to Rules and Procedures
- Be able explain the research supporting elements in the Rules and Procedures category
- Try out some strategies associated with the elements in the Rules and Procedures category

| Overview Activity                                 | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Rules and Procedures category video     | <a href="http://www.marzanoresources.com/online-compendium/intro">www.marzanoresources.com/online-compendium/intro</a>   |  |
| Watch the Establishing Rules and Procedures video | <a href="http://www.marzanoresources.com/online-compendium/establishing-rules-and-procedures">www.marzanoresources.com/online-compendium/establishing-rules-and-procedures</a> |  |

| Overview Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Organizing the Physical Layout of the Classroom video         | <a href="http://www.marzanoresources.com/online-compendium/organizing-the-physical-layout-of-the-classroom">www.marzanoresources.com/online-compendium/organizing-the-physical-layout-of-the-classroom</a>                 |    |
| Watch the Demonstrating Withitness video                                | <a href="http://www.marzanoresources.com/online-compendium/demonstrating-withitness">www.marzanoresources.com/online-compendium/demonstrating-withitness</a>   |    |
| Watch the Acknowledging Adherence to Rules and Procedures video         | <a href="http://www.marzanoresources.com/online-compendium/acknowledging-adherence-to-rules-and-procedures">www.marzanoresources.com/online-compendium/acknowledging-adherence-to-rules-and-procedures</a>                 |   |
| Watch the Acknowledging Lack of Adherence to Rules and Procedures video | <a href="http://www.marzanoresources.com/online-compendium/acknowledging-lack-of-adherence-to-rules-and-procedures">www.marzanoresources.com/online-compendium/acknowledging-lack-of-adherence-to-rules-and-procedures</a> |  |

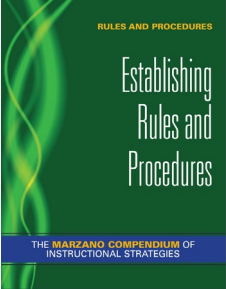
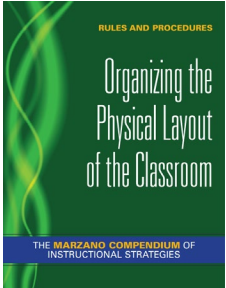
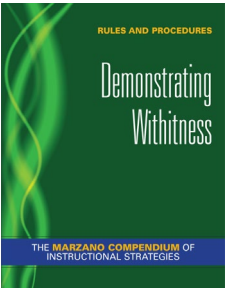
### Discussion Questions

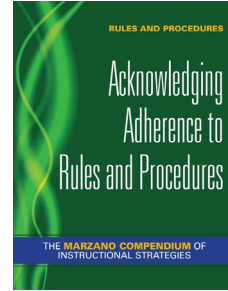
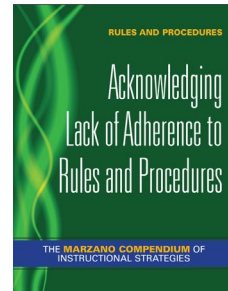
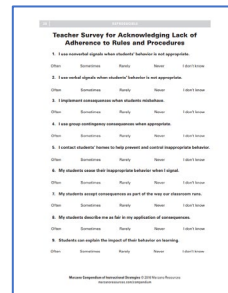
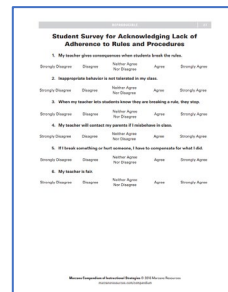
- How would you describe the focus of the Rules and Procedures category?
- In your own words, explain each element in the Rules and Procedures category.
  - Establishing Rules and Procedures
  - Organizing the Physical Layout of the Classroom
  - Demonstrating Withitness
  - Acknowledging Adherence to Rules and Procedures
  - Acknowledging Lack of Adherence to Rules and Procedures
- Why are the elements in the Rules and Procedures category an important part of the New Art and Science of Teaching instructional framework, and of effective teaching?
- Which strategies would you like to try from the Rules and Procedures category?
- (After trying a strategy or strategies) Describe your experience with the strategy/ies you tried. What might you do differently in the future based on your experience?

## Detailed Understanding Level – Rules and Procedures

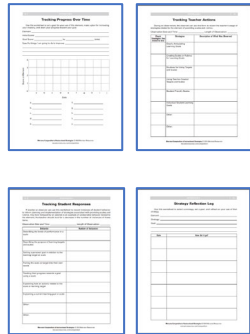
### *Learning Goals*

- Be able to describe what teacher performance looks like at all five levels of the developmental scale for each element in the Rules and Procedures category
- Use teacher and student surveys to determine your current level of performance with the elements in the Rules and Procedures category
- If appropriate, set a goal to improve on at least one of the elements in the Rules and Procedures category
- Track your progress on at least one strategy associated with an element in the Rules and Procedures category

| Detailed Understanding Activity                                  | Location of Activity   | Image(s)  |
|--|--|---|
| Review the Establishing Rules and Procedures folio               | <a href="http://www.marzanoresources.com/online-compendium/establishing-rules-and-procedures">www.marzanoresources.com/online-compendium/establishing-rules-and-procedures</a>                             |   |
| Review the Organizing the Physical Layout of the Classroom folio | <a href="http://www.marzanoresources.com/online-compendium/organizing-the-physical-layout-of-the-classroom">www.marzanoresources.com/online-compendium/organizing-the-physical-layout-of-the-classroom</a> |  |
| Review the Demonstrating Withitness folio                        | <a href="http://www.marzanoresources.com/online-compendium/demonstrating-withitness">www.marzanoresources.com/online-compendium/demonstrating-withitness</a>   |  |

| Detailed Understanding Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Review the Acknowledging Adherence to Rules and Procedures folio                                  | <a href="http://www.marzanoresources.com/online-compendium/acknowledging-adherence-to-rules-and-procedures">www.marzanoresources.com/online-compendium/acknowledging-adherence-to-rules-and-procedures</a>                 |    |
| Review the Acknowledging Lack of Adherence to Rules and Procedures folio                          | <a href="http://www.marzanoresources.com/online-compendium/acknowledging-lack-of-adherence-to-rules-and-procedures">www.marzanoresources.com/online-compendium/acknowledging-lack-of-adherence-to-rules-and-procedures</a> |    |
| Fill out the teacher survey for one or more of the elements in this category                      | Last page of each folio  |  |
| Ask your students to fill out the student survey for one of more of the elements in this category | Next-to-last page of each folio  |  |



| Detailed Understanding Activity  | Location of Activity   | Image(s)  |
|--|--|---|
| <p>(If setting a goal to work on an element in this category)</p> <p>Track your progress towards your goal element</p> | <p>First four pages of “Reproducibles” section of each folio</p> |  |


### Discussion Questions

- What does teacher performance at the Not Using (0), Beginning (1), Developing (2), Applying (3), and Innovating (4) level look like for each of the elements in the Rules and Procedures category?
  - Establishing Rules and Procedures
  - Organizing the Physical Layout of the Classroom
  - Demonstrating Withitness
  - Acknowledging Adherence to Rules and Procedures
  - Acknowledging Lack of Adherence to Rules and Procedures
- Share your teacher and student survey data.
  - What observations do you have?
  - What conclusions can you draw?
  - What action might you take?
- If appropriate, which element in this category might you set a goal to improve on?
- (After working towards an element goal) Share data about your progress toward your goal.

## Knowledge Application and Extension Level – Rules and Procedures

### Learning Goals

- Understand how this category connects to other education topics
- Broaden your understanding of this category
- Revise your existing pedagogical knowledge and skill based on insights from this category
- Identify pedagogical practices that might warrant changes based on your learning relative to this category

| Knowledge Application and Extension Activity  | Location of Activity  | Image(s)  |
|---|---|---|
| <p>Watch the following video library unit related to the Rules and Procedures category:</p> <p>Supporting Student Agency (5 videos)</p> | <p><a href="http://www.marzanoresources.com/online-compendium/video-library">www.marzanoresources.com/online-compendium/video-library</a></p> |  <p>The image shows a screenshot of a video library menu titled "Supporting Student Agency". It lists five video units: "An Introduction to Supporting Student Agency", "Classroom Goals", "Physical Environment", "Values &amp; Choices", and "Standard Operating Procedures". Each item is preceded by a small blue square icon.</p> |

### *Discussion Questions*

- How does the Rules and Procedures category connect to other education topics?
- How did the video library unit you watched broaden your understanding of the Rules and Procedures category?
- What might you do differently in your teaching practice as a result of learning you gained from the video library unit(s) you watched?


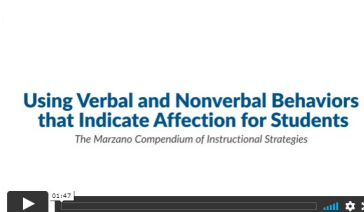
# Relationships

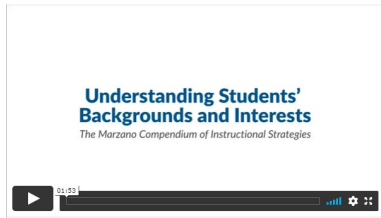
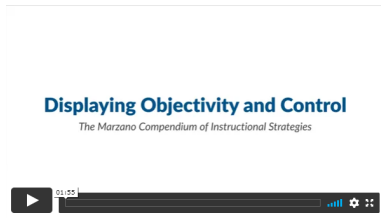
A strong relationship between a teacher and his or her students can enhance every other aspect of the classroom environment. Teachers must maintain a balance between their roles as classroom leaders who impart order and structure and team members who care about the success of each student. Certain behaviors and strategies build teacher-student relationships and contribute to an atmosphere that promotes learning, engagement, and cooperation.

## Overview Level – Relationships

### *Learning Goals*

- Understand the focus of this category
- Be able to describe each of the elements in the Relationships category
  - Using Verbal and Nonverbal Behaviors that Indicate Affection for Students
  - Understanding Students' Backgrounds and Interests
  - Displaying Objectivity and Control
- Be able explain the research supporting elements in the Relationships category
- Try out some strategies associated with the elements in the Relationships category

| Overview Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Relationships category video  | <a href="http://www.marzanoresources.com/online-compendium/intro">www.marzanoresources.com/online-compendium/intro</a>   |  |
| Watch the Using Verbal and Nonverbal Behaviors that Indicate Affection for Students video | <a href="http://www.marzanoresources.com/online-compendium/using-verbal-and-nonverbal-behaviors">www.marzanoresources.com/online-compendium/using-verbal-and-nonverbal-behaviors</a> |  |

| Overview Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Understanding Students' Backgrounds and Interests video | <a href="http://www.marzanoresources.com/online-compendium/understanding-students-backgrounds-and-interests">www.marzanoresources.com/online-compendium/understanding-students-backgrounds-and-interests</a> |  |
| Watch the Displaying Objectivity and Control video                | <a href="http://www.marzanoresources.com/online-compendium/displaying-objectivity-and-control">www.marzanoresources.com/online-compendium/displaying-objectivity-and-control</a>                             |  |

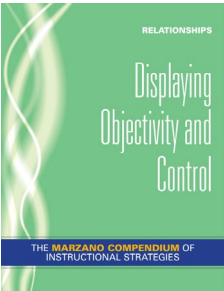
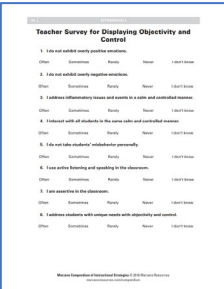
### *Discussion Questions*

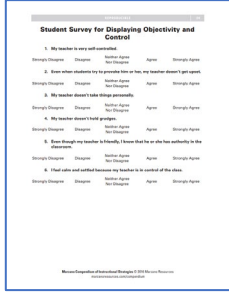
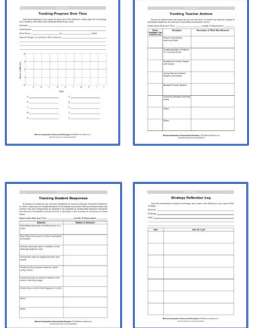
- How would you describe the focus of the Relationships category?
- In your own words, explain each element in the Relationships category.
  - Using Verbal and Nonverbal Behaviors that Indicate Affection for Students
  - Understanding Students' Backgrounds and Interests
  - Displaying Objectivity and Control
- Why are the elements in the Relationships category an important part of the New Art and Science of Teaching instructional framework, and of effective teaching?
- Which strategies would you like to try from the Relationships category?
- (After trying a strategy or strategies) Describe your experience with the strategy/ies you tried. What might you do differently in the future based on your experience?

## Detailed Understanding Level – Relationships

### *Learning Goals*

- Be able to describe what teacher performance looks like at all five levels of the developmental scale for each element in the Relationships category
- Use teacher and student surveys to determine your current level of performance with the elements in the Relationships category
- If appropriate, set a goal to improve on at least one of the elements in the Relationships category
- Track your progress on at least one strategy associated with an element in the Relationships category

| Detailed Understanding Activity  | Location of Activity   | Image(s)  |
|--|--|---|
| Review the Using Verbal and Nonverbal Behaviors that Indicate Affection for Students folio | <a href="http://www.marzanoresources.com/online-compendium/using-verbal-and-nonverbal-behaviors">www.marzanoresources.com/online-compendium/using-verbal-and-nonverbal-behaviors</a>                         |    |
| Review the Understanding Students' Backgrounds and Interests folio                         | <a href="http://www.marzanoresources.com/online-compendium/understanding-students-backgrounds-and-interests">www.marzanoresources.com/online-compendium/understanding-students-backgrounds-and-interests</a> |    |
| Review the Displaying Objectivity and Control folio  | <a href="http://www.marzanoresources.com/online-compendium/displaying-objectivity-and-control">www.marzanoresources.com/online-compendium/displaying-objectivity-and-control</a>                             |  |
| Fill out the teacher survey for one or more of the elements in this category               | Last page of each folio  |  |

| Detailed Understanding Activity   | Location of Activity                                      | Image(s)   |
|---|---|--|
| Ask your students to fill out the student survey for one of more of the elements in this category               | Next-to-last page of each folio                           |   |
| (If setting a goal to work on an element in this category)<br><br>Track your progress towards your goal element | First four pages of “Reproducibles” section of each folio |  |

### Discussion Questions

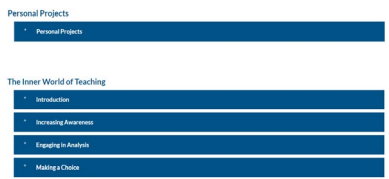
- What does teacher performance at the Not Using (0), Beginning (1), Developing (2), Applying (3), and Innovating (4) level look like for each of the elements in the Relationships category?
  - Using Verbal and Nonverbal Behaviors that Indicate Affection for Students
  - Understanding Students’ Backgrounds and Interests
  - Displaying Objectivity and Control
- Share your teacher and student survey data.
  - What observations do you have?
  - What conclusions can you draw?
  - What action might you take?
- If appropriate, which element in this category might you set a goal to improve on?
- (After working towards an element goal) Share data about your progress toward your goal.

## Knowledge Application and Extension Level – Relationships

### Learning Goals

- Understand how this category connects to other education topics

- Broaden your understanding of this category
- Revise your existing pedagogical knowledge and skill based on insights from this category
- Identify pedagogical practices that might warrant changes based on your learning relative to this category

| Knowledge Application and Extension Activity   | Location of Activity  | Image(s)   |
|--|---|--|
| <p>Watch one or more of the following video library units related to the Relationships category:</p> <p>Personal Projects (1 extended video)</p> <p>The Inner World of Teaching (4 videos)</p> | <p><a href="http://www.marzanoresources.com/online-compendium/video-library">www.marzanoresources.com/online-compendium/video-library</a></p> |  <p>The image shows a screenshot of the Marzano Resources website. It displays two sections: 'Personal Projects' and 'The Inner World of Teaching'. Each section has a list of video units with a play button icon. The 'Personal Projects' section lists 'Personal Projects'. The 'The Inner World of Teaching' section lists 'Introduction', 'Increasing Awareness', 'Engaging in Analysis', and 'Making a Choice'.</p> |

### *Discussion Questions*

- How does the Relationships category connect to other education topics?
- How did the video library unit(s) you watched broaden your understanding of the Relationships category?
- What might you do differently in your teaching practice as a result of learning you gained from the video library unit(s) you watched?


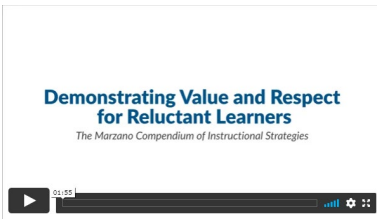
# Communicating High Expectations

What a teacher expects of his or her students can greatly impact students' achievement. Teachers that consistently communicate high expectations for all of their students are also implicitly communicating that they value and care about every student's success. Teachers may not be aware of how often their perceptions color their treatment and expectations of students. It is important that teachers monitor how they approach students and make sure their interactions promote an environment with equal expectations for all students.

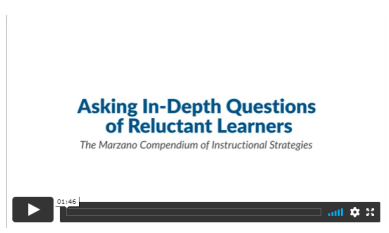
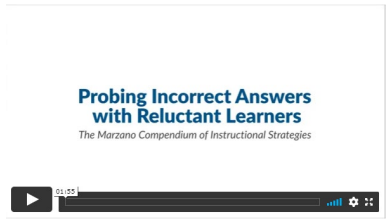
## Overview Level – Communicating High Expectations

### *Learning Goals*

- Understand the focus of this category
- Be able to describe each of the elements in the Communicating High Expectations category
  - Demonstrating Value and Respect for Reluctant Learners
  - Asking In-Depth Questions of Reluctant Learners
  - Probing Incorrect Answers with Reluctant Learners
- Be able explain the research supporting elements in the Communicating High Expectations category
- Try out some strategies associated with the elements in the Communicating High Expectations category

| Overview Activity  | Location of Activity   | Image(s)  |
|--|--|---|
| Watch the Communicating High Expectations category video               | <a href="http://www.marzanoresources.com/online-compendium/intro">www.marzanoresources.com/online-compendium/intro</a>   |  |
| Watch the Demonstrating Value and Respect for Reluctant Learners video | <a href="http://www.marzanoresources.com/online-compendium/demonstrating-value-and-respect">www.marzanoresources.com/online-compendium/demonstrating-value-and-respect</a> |  |



| Overview Activity   | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the Asking In-Depth Questions of Reluctant Learners video   | <a href="http://www.marzanoresources.com/online-compendium/asking-in-depth-questions-of-reluctant-learners">www.marzanoresources.com/online-compendium/asking-in-depth-questions-of-reluctant-learners</a>     |  |
| Watch the Probing Incorrect Answers with Reluctant Learners video | <a href="http://www.marzanoresources.com/online-compendium/probing-incorrect-answers-with-reluctant-learners">www.marzanoresources.com/online-compendium/probing-incorrect-answers-with-reluctant-learners</a> |  |

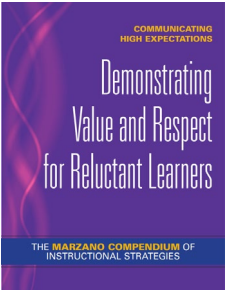
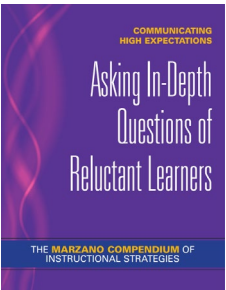
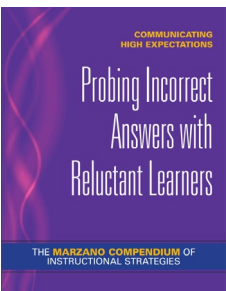
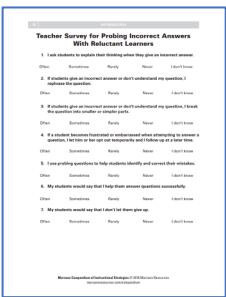
### Discussion Questions

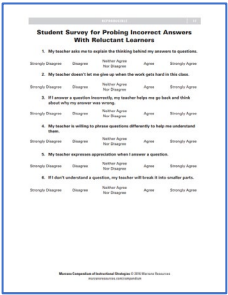
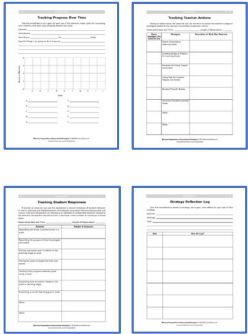
- How would you describe the focus of the Communicating High Expectations category?
- In your own words, explain each element in the Communicating High Expectations category.
  - Demonstrating Value and Respect for Reluctant Learners
  - Asking In-Depth Questions of Reluctant Learners
  - Probing Incorrect Answers with Reluctant Learners
- Why are the elements in the Communicating High Expectations category an important part of the New Art and Science of Teaching instructional framework, and of effective teaching?
- Which strategies would you like to try from the Communicating High Expectations category?
- (After trying a strategy or strategies) Describe your experience with the strategy/ies you tried. What might you do differently in the future based on your experience?

## Detailed Understanding Level – Communicating High Expectations

### Learning Goals

- Be able to describe what teacher performance looks like at all five levels of the developmental scale for each element in the Communicating High Expectations category
- Use teacher and student surveys to determine your current level of performance with the elements in the Communicating High Expectations category
- If appropriate, set a goal to improve on at least one of the elements in the Communicating High Expectations category
- Track your progress on at least one strategy associated with an element in the Communicating High Expectations category

| Detailed Understanding Activity  | Location of Activity   | Image(s)  |
|--|--|---|
| Review the Demonstrating Value and Respect for Reluctant Learners folio      | <a href="http://www.marzanoresources.com/online-compendium/demonstrating-value-and-respect">www.marzanoresources.com/online-compendium/demonstrating-value-and-respect</a>                                     |    |
| Review the Asking In-Depth Questions of Reluctant Learners folio             | <a href="http://www.marzanoresources.com/online-compendium/asking-in-depth-questions-of-reluctant-learners">www.marzanoresources.com/online-compendium/asking-in-depth-questions-of-reluctant-learners</a>     |   |
| Review the Probing Incorrect Answers with Reluctant Learners folio           | <a href="http://www.marzanoresources.com/online-compendium/probing-incorrect-answers-with-reluctant-learners">www.marzanoresources.com/online-compendium/probing-incorrect-answers-with-reluctant-learners</a> |  |
| Fill out the teacher survey for one or more of the elements in this category | Last page of each folio  |  |

| Detailed Understanding Activity   | Location of Activity                                      | Image(s)   |
|---|---|--|
| Ask your students to fill out the student survey for one of more of the elements in this category               | Next-to-last page of each folio                           |   |
| (If setting a goal to work on an element in this category)<br><br>Track your progress towards your goal element | First four pages of “Reproducibles” section of each folio |  |


### Discussion Questions

- What does teacher performance at the Not Using (0), Beginning (1), Developing (2), Applying (3), and Innovating (4) level look like for each of the elements in the Communicating High Expectations category?
  - Demonstrating Value and Respect for Reluctant Learners
  - Asking In-Depth Questions of Reluctant Learners
  - Probing Incorrect Answers with Reluctant Learners
- Share your teacher and student survey data.
  - What observations do you have?
  - What conclusions can you draw?
  - What action might you take?
- If appropriate, which element in this category might you set a goal to improve on?
- (After working towards an element goal) Share data about your progress toward your goal.

## Knowledge Application and Extension Level – Communicating High Expectations

### Learning Goals

- Understand how this category connects to other education topics
- Broaden your understanding of this category
- Revise your existing pedagogical knowledge and skill based on insights from this category
- Identify pedagogical practices that might warrant changes based on your learning relative to this category

| Knowledge Application and Extension Activity  | Location of Activity   | Image(s)  |
|---|--|---|
| Watch the following video library unit related to the Communicating High Expectations category:<br><br>Metacognitive Skills (11 videos) | <a href="http://www.marzanoresources.com/online-compendium/video-library">www.marzanoresources.com/<br/>online-compendium/video-<br/>library</a> |  <p>The image shows a screenshot of a video library interface titled "Metacognitive Skills". It lists 11 video topics, each preceded by a small blue icon. The topics are: Introduction to Metacognitive Skills, Staying Focused When Answers and Solutions Are Not Immediately Apparent, Pushing the Limits of One's Knowledge and Skills, Generating and Pursuing One's Own Standards for Performance, Seeking Incremental Steps, Seeking Accuracy, Seeking Clarity, Seeking Involvement, Seeking Consensus and Collaboration, Setting Goals and Making Plans, and Growth Mindset Thinking.</p> |

### Discussion Questions

- How does the Communicating High Expectations category connect to other education topics?
- How did the video library unit you watched broaden your understanding of the Communicating High Expectations category?
- What might you do differently in your teaching practice as a result of learning you gained from the video library unit you watched?

# Appendix

## Descriptions of Video Library Units

### Classroom Assessment

#### *A New Paradigm*

Dr. Marzano discusses classroom assessment within the framework of The New Art and Science of Teaching and emphasizes the importance of making assessments reliable and valid. Dr. Marzano analyzes the standard systems of assessment using reliability scores and shows how to improve reliability with classroom assessments that focus on a single topic and are given frequently over time to produce a set of scores that can be analyzed together. The video ends with an overview of proficiency scales and how they lay the foundation for accurate assessments.

#### *Assessment-Friendly Curriculum*

Dr. Marzano explains the difficulties of teaching to state standards and how to translate those into an assessment-friendly curriculum. State standards are often too detailed, redundant, and equivocal to teach directly, but teachers can work together to create a small list of measurement topics that directly translate into proficiency scales, while other content will be covered through incidental learning. Dr. Marzano discusses why a small set of measurement topics is key to creating a focused, lean curriculum to guide instruction and assessment.

#### *Proficiency Scales*

Dr. Marzano discusses the format of proficiency scales and how to create them based on the measurement topics discussed in the previous segment. Dr. Marzano also details some of the common pitfalls teachers run into while creating their scales, and emphasizes the importance of distinguishing between declarative knowledge and procedural knowledge when creating scales.

#### *Parallel Assessments*

Dr. Marzano discusses the importance of parallel assessments, the history and components of parallel assessments, and how proficiency scales make it easy to create parallel assessments. A strong parallel assessment is unidimensional—that is, it covers only one topic on each test—and has equal levels of difficulty on each assessment. Proficiency scales, particularly when created by collaborative teams, can be used to create assessments that automatically have those qualities, are easy to score, and provide clear data to help make important decisions about students.

#### *Measuring Process & Types of Assessments*

Dr. Marzano discusses different types of assessments that a teacher can use once proficiency scales are in place. In particular, Dr. Marzano explains the importance of alternative types of assessment

such as probing discussions, observation, checklists, and student-lead assessments. The video also covers how to assess and score supplemental topics and how to get instructional feedback through assessments.

### ***Summative Scores***

Dr. Marzano discusses the difference between summative assessments and summative scores and explains how to calculate summative scores. Dr. Marzano offers a method using gradebook software or Excel formulas as well as a low-tech record keeping option. Both of these methods track progress over time and allow teachers to make informed choices on current summative scores.

### ***Non-Subject Specific Skills***

Dr. Marzano discusses the importance of tracking and assessment of non-subject-specific skills such as Cognitive Analysis Skills, Knowledge Application Skills, Metacognitive Skills, and General Behavior Skills. Each category has specific traits that can be measured and assessed using proficiency scales written for these skills and not tied directly to other content. Dr. Marzano gives examples of what those proficiency scales should look like at different grade levels.

### ***Record Keeping and Recording***

Dr. Marzano discusses approaches to record keeping and reporting that use learning management systems that are compatible with proficiency scales. Dr. Marzano gives examples of how to record scores for activities that use more than one scale and how to translate proficiency scale scores into overall grades for subject areas. He also covers how to include grades for measurement topics in a report card and emphasizes the benefits of reporting that shows growth over time.

## **Cognitive Analysis Skills**

### ***An Introduction to Cognitive Analysis Skills***

Dr. Marzano provides an overview of cognitive analysis skills. These skills involve the human ability to process thoughts and learn new knowledge and skills. These skills should be a normal part of the K-12 curriculum, allowing students to better reflect on their learning and understand content more deeply.

### ***Comparing***

Dr. Marzano provides an overview of the cognitive analysis skill of comparing. Comparisons help students remember more of the information they learn; teaching comparison processes directly allow students to organize and remember information efficiently and effectively. The comparison process involves students identifying characteristics of the items to be compared and considering similarities and differences between those characteristics to generate substantive comparisons."

## ***Analogical Reasoning***

Dr. Marzano focuses on the cognitive analysis skill of analogical reasoning. Analogies are statements that compare or contrast two things that, on the surface, seem unrelated. When students learn to reason analogically, it allows them to extend their knowledge and problem solve more flexibly.

## ***Classifying***

Dr. Marzano provides an overview of the cognitive analysis skill of classifying. Classifying involves grouping things into categories based on their attributes. Importantly, students should be able to identify and critique the logic of both implicit and explicit classifications in literature and the media.

## ***Analyzing Perspectives***

Dr. Marzano focuses on the cognitive analysis skill of analyzing perspectives. This skill allows students to recognize their own perspectives and understand how people interpret information and events differently. A detailed process for analyzing perspectives allows teachers to help students compare their perspectives to alternative perspectives, and find reasons for both.

## ***Constructing Support***

Dr. Marzano focuses on the cognitive analysis skill of constructing support. This skill helps students organize their thoughts and defend their perspectives. Using a process for constructing support allows students to systematically construct arguments and support them with valid reasoning.

## ***Analyzing Inferences***

Dr. Marzano takes an in-depth look at the cognitive analysis skill of analyzing inferences. Students who are able to distinguish between different types of inferences are able to analyze and critique those inferences more effectively. Since many arguments are supported by inferential evidence, this is a critical skill for the development of other knowledge and skills related to argumentation.

## ***Analyzing Errors in Reasoning***

Dr. Marzano provides an overview of the cognitive analysis skill of analyzing errors in reasoning. As students learn content, they may develop errors in their understanding; often, these errors are related to faulty reasoning. Analyzing their own reasoning and learning about the different types of errors that might occur allows students to examine and re-examine the content to deepen their understanding.

## ***Generating Mental Images***

Dr. Marzano overviews the cognitive analysis skill of generating mental images. In many cases, humans generate mental images naturally, but students can learn to use them in more detailed and precise ways to enhance their understanding and retention of content. Students who have formed mental images of content usually understand it in deeper and more flexibly ways than students who do not engage in this critical skill.

## A Comprehensive Approach to K-12 Vocabulary Instruction

### *The Importance of Vocabulary*

Dr. Marzano and Julia Simms explain the importance of vocabulary and what factors can affect vocabulary development. The three factors that can affect vocabulary development are fluid intelligence, life experience, and socioeconomics. Marzano and Simms provide a process that teachers can put in place to address these factors that affect vocabulary development. This process involves direct approaches, indirect approaches, and direct vocabulary instruction. The most effective way that schools can address vocabulary gaps is through direct vocabulary instruction.

### *The Six-Step Process (Steps 1–3)*

Dr. Marzano and Julia Simms explain how teachers should use the first three steps of a six-step process for teaching vocabulary. During the first step, the teacher describes and explains a term. Then, in the second step, the student is asked to provide an example of the term and explain it in their own words. Finally, during the third step, students are asked to construct a picture of the term.

### *The Six-Step Process (Steps 4–6)*

Dr. Marzano and Julia Simms discuss steps 4 through 6 of a six-step process for teaching vocabulary. All of these steps engage students in activities that deepen their knowledge of the terms they have learned. These activities should be taken as a kind of menu that a teacher can choose from to periodically engage the students in collaborative learning and inconsequential competition.

### *Managing Vocabulary Instruction*

Dr. Marzano and Julia Simms discuss approaches to managing vocabulary instruction, including monitoring student progress through formal and informal assessment, student tracking, and self-assessment. They also discuss considerations relevant to setting up the classroom such as working with English learners, managing time, and grouping approaches. Each section includes detailed descriptions or examples of activities to support vocabulary instruction.

### *Designing a School or Districtwide Vocabulary Program*

Dr. Marzano and Julia Simms explain how vocabulary can be organized into three tiers and how and when those tiers need to be taught. Each tier requires a different type of instruction; each type is explained, along with examples of how to adjust instruction to student needs. Marzano and Simms also discuss how a school or district should set up lists of vocabulary that fit into the curriculum and can be taught in the time allowed. A good vocabulary program will help students identify when they don't know a word and give them the curiosity to find out its meaning.



## Critical Thinking and Analytical Reasoning

### *Introduction*

Dr. Marzano and Julia Simms share research demonstrating that critical thinking and analytical reasoning can be taught to significantly improve student thinking skills. There are two types of reasoning that are defined and a three-step process is identified to help students determine which type of reasoning to use. The four types of critical thinking skills are also explained and practical examples of teacher strategies are shared.

### *Distinguishing Fact from Opinion*

Dr. Marzano and Julia Simms define the qualities of facts and opinions. It is important students learn that facts can change over time and that often things are not just fact or opinion, but both. This critical thinking skill provides students the foundation needed to build other critical thinking and reasoning skills.

### *Evaluating Conclusions*

With a focus on teaching strategies, Dr. Marzano and Julia Simms share processes for students to standardize and evaluate information to determine if conclusions are true and/or valid. The result of this learning will be lasting, creating desirable thinking habits even if they do not continue to use these exact processes. This practical skill is critical for students to be successful learners and consumers of information and in order to make informed decisions.

### *Crafting Complex Arguments*

Dr. Marzano and Julia Simms outline the structure for crafting complex arguments that are supported by evidence. Students will learn how to determine if claims support their argument and how to incorporate textual evidence into claims. In a world filled with sound bites, this is a critical skill for students to acquire.

## Cumulative Review

### *Introduction*

Dr. Marzano and Julia Simms introduce the instructional strategy of cumulative review. Dr. Marzano states that if he had to choose one instructional strategy to start with it would be cumulative review. The reason that cumulative review is essential is because content will fade in students' memories if it is not systematically reviewed. Cumulative review differs from other types of review in that it covers content over the course of an entire semester or school year. Julia Simms introduces a four-step process for cumulative review.

## *Reviewing Procedural Knowledge*

Dr. Marzano and Julia Simms introduce the instructional strategy of reviewing procedural knowledge. Julia Simms discusses the four steps involved in reviewing procedural knowledge: (1) identifying errors and omissions, (2) adding to previous learning, (3) practicing to develop fluency, and (4) seeing how the content fits into a bigger picture. Teachers can use specific questions to support students as they practice the steps needed to review procedural knowledge.

## *Reviewing Declarative Knowledge*

Dr. Marzano and Julia Simms discuss the four steps involved in reviewing declarative knowledge: (1) identifying errors and omissions, (2) identifying new learning, (3) merging new information, and (4) developing comprehensive statements about the content. Teacher can ask their students specific questions to scaffold their learning as they practice reviewing declarative knowledge.

## *Using Academic Notebooks*

Dr. Marzano emphasizes the importance of academic notebooks in the process of encoding information—that is, capturing information in our memories in the form of language or imagery—and Julia Simms explains the details of how to create academic notebooks that cover both types of encoding. Once academic notebooks are in place, teachers can use student and peer review as powerful strategies for cumulative review. Both methods allow students to emphasize critical information and make revisions in the notes and their learning.

## *Identifying Critical Information & Skills*

Dr. Marzano and Julia Simms discuss the role standards play in choosing topics for cumulative review, hinging on the question, “Is this something for which students will be held accountable at the end of the semester or at the end of the year?” These topics may be chosen from the standards by the school or teacher, or are available in a resource called the Critical Concepts. The Critical Concepts were created by distilling many different standards into a package of measurement topics and proficiency scales. Using either their own measurement topics, or those provided in the Critical Concepts, teachers can implement a review strategy that includes both declarative and procedural content.

# **The Inner World of Teaching**

## *Introduction*

Dr. Marzano and Julia Simms discuss why a teacher’s thoughts and emotions in the classroom directly impact students learning and achievement. Dr. Marzano introduces a three-phase management process designed to promote awareness, analysis, and choice. This management process includes the use of scripts, which are appropriate sequences of actions for particular contexts. He also outlines negative and positive consequences of scripts. In addition, Maslow’s hierarchy of needs is discussed in relationship to the inner world of teaching.

## *Increasing Awareness*

Dr. Marzano and Julia Simms discuss the first phase, awareness, in the three-phase management process for the inner world of teaching. They discuss two questions related to increasing awareness: 1. What emotions am I experiencing right now? 2. What is my interpretation of this situation? They explain how to identify one's moral purpose and ideals to cultivate personal and professional satisfaction. Julia Simms shares how high activation negative emotions (fear and anger) often trigger negative interpretations and the execution of negative scripts. She also explains mental strategies that encourage mindfulness and patterns of positive thinking.

## *Engaging in Analysis*

Dr. Marzano and Julia Simms discuss the second phase, analysis, in the three-phase management process for the inner world of teaching. They discuss three questions related to engaging in analysis: 1. What script will I probably execute as the result of my interpretation? 2. What will be the most probable outcome of my actions? 3. Will this outcome be the most positive for all concerned? Julia Simms discusses how the execution of a negative script typically results in a negative outcome and the execution of a positive script results in a positive outcome. She also discusses how to form habits for executing positive scripts in the classroom and strategies to help manage volatile situations in the classroom.

## *Making a Choice*

Dr. Marzano and Julia Simms discuss the third and final phase, choice, in the three-phase management process for the inner world of teaching. They discuss two questions related to making a choice: 1. What is my preferred outcome? 2. What script do I have to execute to attain this outcome? Marzano and Simms discuss how one's mental health plays an important role in making choices and provide strategies to self-assess your mental state in regard to career, family, and friends.

# Knowledge Application Skills

## *An Introduction to Knowledge Application Skills*

Julia Simms provides an overview of knowledge application skills, which involve a student's ability to use knowledge in complex ways. There are six knowledge application skills: decision making, problem solving, invention, experimental inquiry, investigation, and systems analysis. Julia discusses why teachers should teach knowledge application skills, how to embed them into subject-area content, and how to score them using proficiency scales.

## *Decision Making*

Julia Simms defines decision making and gives guidelines about when the use of a formal decision-making process is appropriate. To engage in decision making, students need to be able to list alternatives and select appropriate criteria by which to evaluate each alternative; an organizer, called a decision matrix, can help students articulate and evaluate alternatives using criteria. Julia reviews decision-making proficiency scales for grades 3-5 (basic decision-making process), grades 6-8

(complete decision-making process), and grades 9-12 (sophisticated decision-making process) and provides examples of decisions that students could evaluate to practice their decision-making skills.

### ***Problem Solving***

Julia Simms defines problem solving and explains how typical instructional approaches to problem solving are similar to those of decision making. Julia discusses two types of problems, structured and unstructured, and provides examples of each. Unstructured problems need goal clarification; clarifying the goal often determines the remaining steps in the problem-solving process. Julia reviews decision-making proficiency scales for grades 3-5, 6-8, and 9-12 and summarizes the foundational content students must know to successfully engage in a problem-solving process.

### ***Invention***

Julia Simms describes the iterative process of invention and how it differs from problem solving and discovery. Asking questions is an important aspect of the invention process, as is analogical reasoning (often used to come up with ideas for inventions). Julia reviews invention proficiency scales for grades 3-5, 6-8, and 9-12, and summarizes foundational content that helps students acquire invention skills.

### ***Experimental Inquiry***

Julia Simms explains the process of experimental inquiry, which is driven by four main questions. Typically associated with science content, experimental inquiry can also be used in humanities, liberal arts, and fine-arts content. Julia reviews experimental-inquiry proficiency scales for grades 3-5, 6-8, and 9-12 and explains how fundamental knowledge builds over the grade levels as students learn to determine if an experiment needs to be adjusted, repeated, or changed.

### ***Investigation***

Julia Simms defines investigation and explains the difference between the three types of investigation: definitional, historical, and projective. Using these three types flexibly allows for the use of investigation in a wide variety of content areas and grade levels. Julia reviews investigation proficiency scales for the 3-5, 6-8, and 9-12 grade bands and provides guidance on instruction and evaluation of investigation skills. When students are successfully performing this skill, they will be able to create explanations to clear up contradiction and confusion, which is the purpose of investigation.

### ***Systems Analysis***

Julia Simms defines systems analysis, which involves identifying various parts in a system, describing how they interact, explaining what would happen if one part changed, and articulating how that change would impact other parts. All systems are comprised of parts or groups of parts, and the way that various parts function usually affects other parts of the system. Julia reviews systems-analysis proficiency scales for grades 3-5, 6-8, and 9-12 and identifies the target and foundational content for each scale.

## Knowledge Maps

### *An Introduction to Knowledge Maps*

Dr. Marzano and Julia Simms introduce knowledge maps as graphic representations of how human beings store and communicate information. These maps can be used to help students understand knowledge structures and organize information, especially when teachers use knowledge maps systematically across different topics.

### *Basic Relationships*

Julia Simms introduces the four basic relationships that are the foundation of all other structures. Addition relationships indicate that things are alike or the same, contrast relationships indicate things that are opposite or different, time relationships indicate when things happen, and cause relationships indicate why things happened. The video provides signal words that help students understand which type of relationship they might be seeing.

### *Description Structures*

Julia Simms explains the next level of knowledge maps, known as description structures. These are simple structures with an item in the middle and the descriptors organized about it. In narrative texts, the descriptions are often sensory details; in informational texts, descriptions often list facts or characteristics of an item.

### *Sequence Structures*

Julia Simms presents two different types of sequence structures: simple and complex. Simple sequence structures are series of events in order and can be used in narratives or informational texts. Complex sequence structures give events in order, but allow for layers of events that interact with each other across narrators (as in narrative) or locations (as in history).

### *Causation Structures*

Julia Simms explains both simple and complex causation structures. Simple structures show basic cause and event chains that work for simple narratives and some informational texts. Complex structures better reflect real-world cause and effect chains that combine, branch off, and create even more causes and effects. The video includes examples of texts and types of information that work with simple and complex causation structures.

### *Problem-Solution Structures*

Julia Simms presents three different types of problem-solution structures—simple, complex, and advanced. Simple problem-solution structures present a problem, some possible solutions, and then indicate the best solution. Complex problem-solution structures add additional criteria to judge the best solution, and advanced problem-solution structures add weights to the criteria, allowing for the best solution to be calculated by a scoring system. Each type of problem-solution structure involves decision-making and argumentation processes.

## ***Comparison Structures***

Julia Simms explains that comparison structures involve comparing several different items according to certain characteristics. These structures can be depicted using a grid format with columns for items and rows for characteristics, as well as boxes for similarities and differences and an overall summary. This level of structure leads to more substantive and defensible comparisons than less structured comparison formats.

## ***Collection Structures***

Julia Simms explains the collection structures of simple lists, combined lists, intersecting lists, and nested lists. A simple list of data items can be augmented with data in a combined list; however, a combined list may be redundant. An intersecting list can eliminate that redundancy, but if more than two categories of data are being matched to a set of items, a nested list is the best choice.

## ***Classification Structures***

Classification structures are simple organizational tools that help sort information into categories using nested circles. This structure helps students organize and sort information and evaluate the logic of categorical arguments. Julia Simms gives examples of how to use these structures in classroom activities.

## ***Argumentation Structures***

Julia Simms presents argumentation structures that allow students to articulate a claim and provide evidence to support that claim. The simple argumentation structure can be used as early as kindergarten. Complex argumentation structures add backing, which is information to support the grounds, as well as qualifiers, which articulate situations in which the claims might not be true.

## ***Reasoning Structures***

Julia Simms presents reasoning structures for both inductive and deductive reasoning. Inductive reasoning moves from observations to a claim or conclusion and deductive reasoning moves from a generalization or principle to a prediction about a specific situation. Using the structures that go with each type can help students make more substantive claims and conclusions from observations and more defensible and accurate predictions in specific situations.

## ***Systems Structures***

Julia Simms presents system structures in four types—process, cycle, flow chart, and complex systems. Process structures are a series of steps that don't repeat, while cycles have steps that do repeat. Flow charts involve making and tracking decisions and can help students analyze whether an argument contains errors in reasoning. Complex systems are a series of nodes connected by two-way arrows and involved analyzing all the relationships between the parts or nodes.

## *Episode Structures*

Julia Simms explains how several previously discussed structures, such as time sequence structure and causation structure, come together to form an episode structure used to either tell or analyze a narrative. The goal is to help students examine the pieces of a narrative in depth in order to draw substantive conclusions about the whole narrative.

## *Metaphor Structures*

Julia Simms explains how metaphor structures are used to analyze or compose a metaphor. The structure is made of two items and their characteristics, connected by a middle column which provides an abstract description of both sets of characteristics. When students use this structure to compose metaphors, it yields a highly defensible explanation for the appropriateness of their metaphor.

## *Analogy Structures*

Analogy structures feature pairs of items that are connected by a particular type of relationship, and the key to these structures is to figure out what kind of relationship is being presented. Julia Simms explains the nine types of relationships present in analogy structures and explains how these structures develop creative thinking skills. Analogic thinking and analogy structures help students practice the idea generation so critical to creative problem solving.

# **Metacognitive Skills**

## *Introduction to Metacognitive Skills*

Dr. Marzano introduces the concept of metacognitive skills, sometimes referred to as "dispositions," which allow students to consider how they approach learning, challenges, and other situations often encountered in school and in life. He makes the case that these skills should be taught directly, as a part of the K-12 curriculum, and offers a list of metacognitive skills to focus on.

## *Staying Focused When Answers and Solutions Are Not Immediately Apparent*

Dr. Marzano focuses on the metacognitive skill of staying focused when answers and solutions are not immediately apparent. When students come across a problem or question that cannot be solved or answered immediately, this metacognitive skill allows them to persevere and not give up.

## *Pushing the Limits of One's Knowledge and Skills*

Dr. Marzano focuses on the metacognitive skill of pushing the limits of one's knowledge and skills. The natural human tendency is often to stop when one thinks they've exhausted all their resources. Pushing beyond such a threshold allows students to engage in creative problem solving and find innovative answers to difficult questions.



## ***Generating and Pursuing One's Own Standards for Performance***

Dr. Marzano explains the metacognitive skill of generating and pursuing one's own standards for performance. The natural human tendency is often to adopt external standards for one's performance. Students who are able to generate and pursue their own internal standards for performance are able to think more broadly and stay focused in the face of challenges.

## ***Seeking Incremental Steps***

Dr. Marzano explains the metacognitive skill of seeking incremental steps. Teachers can teach students to solve problems by breaking them into incremental steps, which mitigates the natural human tendency to be overwhelmed by complex tasks or a large number of details. Students begin by learning to recognize situations that could benefit from using incremental steps and work their way up to breaking down complex problems or tasks.

## ***Seeking Accuracy***

Dr. Marzano explains the metacognitive skill of seeking accuracy. He defines seeking accuracy as fighting against the natural human tendency to take information at face-value, which is particularly important when information is designed to persuade us.

## ***Seeking Clarity***

Dr. Marzano discusses the metacognitive skill of seeking clarity. He defines seeking clarity as a method for working against the natural human tendency to assume there is something wrong with us if we don't understand something and avoid embarrassment by not asking questions. The goal is to teach students that asking questions makes you an efficient learner and teach them how to execute strategies to seek clarity.

## ***Resisting Impulsivity***

Dr. Marzano focuses on the metacognitive skill of resisting impulsivity. He explains resisting impulsivity as countering the natural human tendency to come to conclusions and make judgements quickly. The basic building blocks for this skill include asking students to pause, think about their conclusions, and consider other actions.

## ***Seeking Cohesion and Coherence***

Dr. Marzano discusses the metacognitive skill of seeking cohesion and coherence. He defines seeking cohesion and coherence as working against the natural human tendency to get lost in the details of project instead of viewing them as a whole. This skill is about seeing how details fit together to make a bigger picture and can be especially important to writing-based projects.

## ***Setting Goals and Making Plans***

Dr. Marzano examine the metacognitive skill of setting goals and making plans. He defines setting goals and making plans as working against the natural human tendency to jump in and start taking



steps without making plans. This combines a lot of previously covered metacognitive skills and is best used with big projects, such as a yearly personal project.

### ***Growth Mindset Thinking***

Dr. Marzano focuses on the metacognitive skill of growth mindset thinking. He defines growth mindset thinking as working against the natural human tendency to get discouraged or give up before we start something we think we can't do. Work on this skill can start at the primary level; students will eventually be able to identify when they are thinking positively and negatively, and articulate strategies to change their thinking.

## **Motivating and Inspiring Students**

### ***Introduction***

Dr. Marzano and Julia Simms provide an overview of the motivation and inspiration framework, based upon the underlying principles of Rachel's Challenge and Maslow's Hierarchy of Needs as it applies to students' needs and goals in the classroom. Each of the six levels of the hierarchy can be accessed only when the needs are fulfilled for the levels below it and examples of students' needs for each level are provided. Dr. Marzano further clarifies that when teachers try to meet students' needs for the lower four levels, they are dealing with student engagement and attention while the top two levels focus on inspiration and motivation.

### ***Physiology***

Physiological needs are the foundation of the hierarchy and if not met, it's highly unlikely students will be able to move to the upper levels of the hierarchy. In this video, Julia Simms discusses five specific physiological student needs that teachers can develop an awareness for and address as needed - hunger, sleep, physical health, mental health, and homelessness. Symptoms and warning signs (especially those related to student worry/mental health) are provided as well as strategies to help teachers meet students' needs.

### ***Safety***

Julia Simms describes the two types of safety that are important for teachers to consider when trying to meet the needs of students: actual safety and perceived safety. While actual safety refers to emergency procedures (e.g., tornadoes, fire drills, medical, security, etc.), perceived safety relates to students' opinions of how safe or dangerous their environment is. Strategies to create a sense of order, fairness, and consistency are discussed, with Dr. Marzano addressing the effects of teacher expectations with regards to equitable treatment of students, both academically and behaviorally.

### ***Belonging***

Belonging is the third level of the hierarchy as it relates to students' sense of community and having positive relationships within that community. To ensure students' belonging needs are met, teachers can focus on four main ideas within belonging: inclusion, respect, affection, and cooperation. Dr.

Marzano and Julia Simms provide strategies and activities to cultivate a positive classroom community with recommendations of how and when to implement those strategies.

### *Esteem within a Community*

Dr. Marzano and Julia Simms discuss esteem within the classroom community through four recommendations with ideas for supporting activities. The first step is helping students understand esteem—that is, their self-concept and how they think about themselves—and then students can move on to reflecting on and revising their thoughts that affect esteem. Then, a teacher may address competence and significance, with an emphasis on student growth and student impact on the classroom.

### *Self-Actualization*

Dr. Marzano and Julia Simms discuss the fifth level of the student hierarchy of needs, which serves as a transition from engagement and attention into inspiration and motivation. To help students reach self-actualization, activities can focus on mental dispositions, the growth mindset, possible selves, and personal goal setting. Dr. Marzano emphasizes the importance of the personal project in helping a student set goals and gain a growth mindset.

### *Connection to Something Greater than Self*

Dr. Marzano and Julia Simms discuss the final level of the hierarchy of student needs: the connection to something greater than self. This video discusses in detail four recommendations that include how to use inspirational movies and quotes in the classroom, engaging students in altruistic projects, strategies related to empathy, forgiveness, gratitude, and mindfulness. Dr. Marzano also discusses how programs like Rachel's Challenge can help students connect to each other and grow as productive, satisfied human beings.

## **The New Art and Science of Teaching**

Dr. Marzano gives a brief overview of The New Art and Science of Teaching, specifically addressing the changes from a previous version of this book. The New Art and Science of Teaching includes new research and strategies developed in the decade since with the 2007 publication, with particular focus on the mental states and processes that enhance student learning. Dr. Marzano explains how those processes fit into the categories of instruction and the effective application of instruction strategies.

## **The New Art and Science of Teaching Observational Protocol**

### *Introduction*

Dr. Marzano outlines how The New Art and Science of Teaching framework can be used for more effective teacher observation. By using the Ten Categories and a Generic Scale for Student

Observations, a clear picture of a teacher's success can be measured in the limited amount of time available in the modern-day classroom. The emphasis is placed on observing the student's mental thoughts and processes and the ten categories that encompass what we know to be good teaching.

### ***Feedback***

Dr. Marzano discusses how to use The New Art and Science of Teaching category of Feedback to effectively observe and evaluate teachers. The Feedback category contains the design areas of Providing and Communicating Clear Learning Goals and Using Assessments. Dr. Marzano explains how to analyze success in those categories by looking at student actions, answers, and artifacts for examples of how the teacher incorporates feedback. Examples include the teacher's gradebook, student-made progress charts, and direct questioning of the students.

### ***Content***

Dr. Marzano discusses the observational protocol for The New Art and Science of Teaching overarching category of Content. Content contains four design areas: Direct Instruction Lessons, Practicing and Deepening Lessons, Knowledge Application Lessons, and Strategies for All Types of Lessons. Dr. Marzano emphasizes the importance of observing all these categories through the lenses of student actions, answers, and artifacts, and of observing that a teacher is looping the students back through content so they may revise their knowledge as they go.

### ***Context***

Dr. Marzano shows how to incorporate The New Art and Science of Teaching overarching category of Context into the observational protocol. Context addresses the psychological state students enter when all their needs are met, and includes the four design areas of Engagement, Rules and Procedures, Relationships, and Communicating High Expectations. Dr. Marzano emphasizes the importance of making a student feel safe and valued in the classroom and how that affects a teacher's success. The video also contains a short overview on how to address any issues that the observational protocol reveals and emphasizes the importance of encouraging teacher growth.

## **Personal Projects**

Dr. Marzano and Julia Simms discuss the details of guiding students through a semester or year-long personal project that teaches them about goal setting and envisioning their own future. The video discusses the three overarching focuses of Personal Projects—identifying a goal the student would like to achieve, learn a process by which they might achieve that goal, and develop the knowledge and skills necessary to help them achieve this goal—and details the seven phases the teacher will guide the students through. Dr. Marzano emphasizes the importance of Personal Projects in student agency and learning how to pursue a goal.

## Proficiency Scales

### *An Introduction to Proficiency Scales*

Dr. Marzano discusses the basics of proficiency scales—how they work, how they are applied in assessment, and their advantages over traditional grading scales or learning progressions. Proficiency scales should be put in place for each topic to be taught in a given year and consist of a 0-4 point scale, with the 3.0 level as the target content. Level 2.0 is the simpler content necessary for proficiency, while level 4.0 is above and beyond the target content, and each level can be as detailed or granular as necessary for the topic. Dr. Marzano explains how the levels work together, provide an accurate assessment for each student, and help students understand exactly what they need to know and do to hit the 3.0 target.

### *Designing and Scoring Assessments Using Proficiency Scales*

Dr. Marzano details how proficiency scales are used to create assessments and how these types of assessments are more efficient and precise than traditional systems. When creating an assessment based on a proficiency scale, the teacher can split the items into sections that correspond to the 4.0, 3.0, and 2.0 levels of the proficiency scale. When each section is taken together, the overall picture of where the student's knowledge fits onto the proficiency scale emerges. Dr. Marzano emphasizes the importance of using multiple assessments over a grading period to cover the material, and how using proficiency scales and response codes makes assessments more precise, easier for students to interpret, and faster for teachers to evaluate and record.

### *Using Proficiency Scales With Different Assessment Formats*

Dr. Marzano takes an in-depth look at how to use different types of assessments--such as essays, performance tasks, probing discussion, student-generated assessments, and student self-assessment--with proficiency scales. Dr. Marzano explains how each type of assessment is created and scored using the proficiency scale and the particular benefits of each type of assessment. The emphasis in this video is on the variety of assessments possible and how they can work together with the proficiency scales to accurately show student growth over time.

### *The Measurement Process and Summative Scores*

Dr. Marzano explains the details of using proficiency scale-based assessments to create a current summative score that accurately represents a student's knowledge on a given topic. The first and last assessment should be written by a collaborative team and given to all students on the same day, with a variety of other types of assessments given in between. Analyzing the scores can be done with electronic gradebooks, which use mathematical equations to calculate a representative score, or by using the Method of Mounting Evidence in a more traditional grade book. Dr. Marzano details how each method works and how both result in a current summative score that looks at patterns over time to accurately assess a student's knowledge.

## *Reporting and Grading Using Proficiency Scales*

Dr. Marzano demonstrates how proficiency-scale scores are used in reporting and grading, both in traditional systems and in competency-based education. Using example report cards, Dr. Marzano demonstrates how a proficiency scale-based report works and how the more detailed information shows educators, students, and parents a clear picture of student knowledge and growth over time. This video also explains how to grade with a conjunctive approach when a certain topic spans more than one grading period and emphasizes the value of providing this extra information to the students and their parents.

## **Supporting Student Agency**

### *An Introduction to Supporting Student Agency*

Dr. Marzano and Julia Simms discuss the concept of student agency and how certain strategies and structures (such as giving students input into teaching, learning, and assessment activities in the classroom) lead to increased engagement. The goal of student agency in the classroom is to help students feel as if they are in control of their educational experience. Student agency helps develop a sense of self-efficacy, that is, the belief that one is ultimately in control of one's own life, and helps students develop the skills they need to actualize that belief.

### *Classroom Goals*

Dr. Marzano and Julia Simms discuss the process of setting and monitoring classroom goals using a five-step procedure. The five steps are: (1) unpack the school's shared vision, (2) set goals aligned with the shared vision, (3) identify behavioral traits to meet goals, (4) create tools to measure progress, and (5) establish monitoring and reflection systems. Each step is covered in detail with concrete steps about how to complete this process in the classroom. Dr. Marzano emphasizes the importance of taking time with the process and allowing it to happen from the ground up.

### *Physical Environment*

Dr. Marzano and Julia Simms discuss how to create a flexible physical environment to support classroom learning goals and student agency. They discuss considerations such as what resources are available, how to incorporate student input, what issues might arise, and how to support different needs and learning styles. A flexible learning environment might include collaborative spaces, reading/resources areas, and technology stations, and can be designed using student input within the classroom and school parameters.

### *Voice & Choice*

Dr. Marzano and Julia Simms discuss student-centered versus teacher-centered classrooms, focusing on the subjects of student voice and choice. Student voice refers to student input and feedback, while student choice involves students making decisions or selecting alternatives. Four recommendations for implementing voice and choice are presented—(1) follow through, (2) choose

wisely, (3) be transparent, and (3) start smart—along with guidelines for gathering feedback about academic and classroom issues.

### *Standard Operating Procedures*

Dr. Marzano and Julia Simms discuss standard operating procedures (SOPs) and a process for creating them in the classroom. SOPs are sets of step-by-step instructions formulated jointly by teachers and students to independently achieve desired results consistently; they allow students to take responsibility for behaviors and actions traditionally managed by the teacher. To create SOPs, teachers and students should: (1) identify common inefficiencies, (2) prioritize inefficiencies based on need, (3) determine complexity and type of procedure, and (4) develop procedures with student input.

## Unpacking Content

### *Introduction*

Dr. Marzano and Julia Simms explain the first two steps of the Marzano process for unpacking standards. Participants will learn to identify learning targets by separating standards that contain multiple targets and identifying the kind of knowledge (declarative or procedural) that is most important to achieve each learning target. Through this process, teachers are able to articulate what needs to be directly taught and emphasized.

### *Declarative Knowledge*

Dr. Marzano and Julia Simms explain how to address learning targets that focus primarily on declarative knowledge. They explain various knowledge structures and how they can be used as cues to increase comprehension and recall of information. Examples of related knowledge maps are shared. Including knowledge structures as a formal part of the curriculum is suggested as declarative knowledge is foundational to procedural knowledge.

### *Procedural Knowledge*

Dr. Marzano and Julia Simms explain the hierarchy of procedural knowledge (declarative knowledge, skills, and complex processes) and the importance of articulating these elements as part of the learning progression. For example, for a student to be proficient at a skill, the student must have declarative knowledge of the steps of that skill in their permanent memory. If they don't, they will need direct instruction about the steps. In the case of a complex process, students must have fluency with the underlying related skills. Identifying what is required to demonstrate student proficiency for each learning target and the associated foundational elements helps a teacher select appropriate instructional activities.

### *Learning Activities*

Dr. Marzano and Julia Simms describe and exemplify learning activities that can be used to develop declarative and procedural knowledge. Then, they walk through the process of unpacking a standard from multiple content areas to develop proficiency scales/learning progressions.