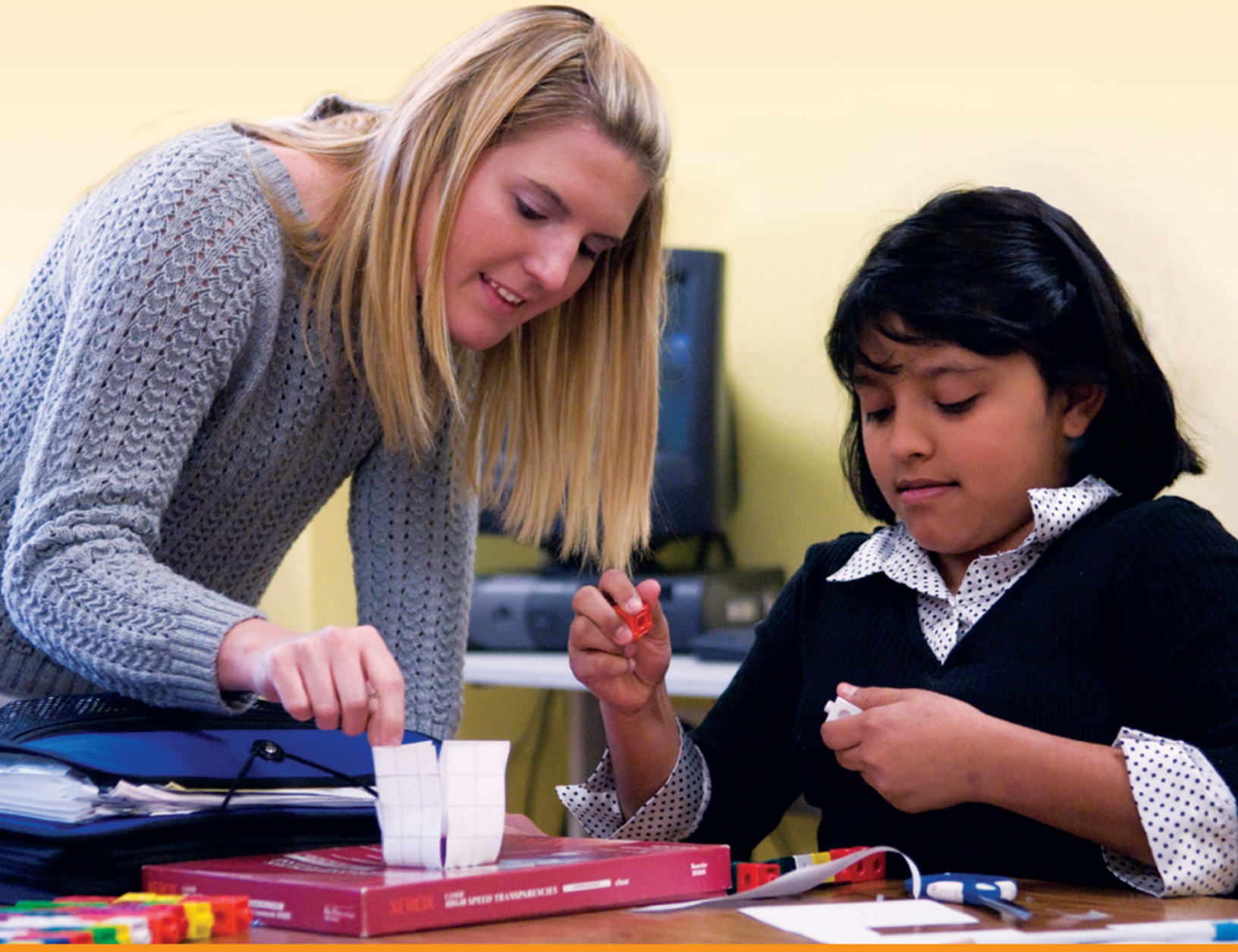
The System for Teacher and Student Advancement

# CAREER TEACHER HANDBOOK:
## TAP Instructional Rubrics



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# EXPLANATION OF TAP'S TEACHING SKILLS, KNOWLEDGE AND RESPONSIBILITIES PERFORMANCE STANDARDS

## » INTRODUCTION

To measure teaching skills, knowledge and responsibilities, TAP has defined a set of professional indicators required of all TAP teachers. A comprehensive rubric has been developed to measure teachers' performance in each of those indicators. It is essential that all teachers in a TAP school develop an in-depth understanding of teaching expectations as well as how teachers' performance will be measured using these rubrics.

This handbook serves as a guide for both teachers and teacher leaders in implementing the TAP teaching standards. Teachers are encouraged to use this handbook as a guide towards understanding and implementing best practices. This handbook provides numerous examples of what each of these indicators looks and sounds like in the classroom. Understanding the indicators in isolation, however, does not guarantee that teachers will accurately and consistently implement them. Teachers also need to see what each indicator looks like in the context of their instructional practice in order to understand how they are accurately applied.

Throughout this handbook, we have emphasized that it is the responsibility of the leadership team to continually define and demonstrate how these indicators support teachers as they implement instructional strategies used to address specific identified student needs. Therefore, it is essential for the leadership team to understand the TAP Teaching Standards and how the indicators describe effective teaching that results in increased student achievement. Master and mentor teachers should model and label the indicators when facilitating cluster, as well as in the classroom when providing follow-up support to teachers.

While many instructional strategies may be considered "proven best practices," it takes a high-quality implementation of these strategies in order for them to have a positive impact on student achievement. In the same way, application of the teaching indicators apart from a specific instructional purpose will not have a positive impact on student achievement. Only when teachers adeptly implement instructional strategies and apply the TAP Teaching Standards will student achievement gains be realized.

TAP's *Teaching Skills, Knowledge and Responsibilities Performance Standards* are divided into four domains. Within each domain, performance indicators are listed with bulleted descriptors and a rubric specifying performance levels for measuring actual teacher performance. Teachers may earn a score of a 1, 2, 3 ,4 or 5 for each indicator.

Throughout this section we have used the "exemplary" column as a platform to discuss each indicator. This is done to ensure that every aspect of each descriptor is considered. It should be noted that a teacher exhibiting consistent traits associated with the "proficient" column is considered a "rock solid" teacher and has instructed at a high level for the observed lesson.

## » TEACHING SKILLS, KNOWLEDGE AND RESPONSIBILITIES PERFORMANCE STANDARDS OVERVIEW

| INSTRUCTION | THE LEARNING ENVIRONMENT |
|---|---|
| 1. Standards and Objectives*<br>2. Motivating Students*<br>3. Presenting Instructional Content*<br>4. Lesson Structure and Pacing*<br>5. Activities and Materials*<br>6. Questioning*<br>7. Academic Feedback*<br>8. Grouping Students*<br>9. Teacher Content Knowledge*<br>10. Teacher Knowledge of Students*<br>11. Thinking*<br>12. Problem Solving* | 1. Expectations*<br>2. Managing Student Behavior*<br>3. Environment*<br>4. Respectful Culture* |
| **DESIGNING AND PLANNING INSTRUCTION** | **RESPONSIBILITIES** |
| 13. Instructional Plans<br>14. Student Work<br>15. Assessment | 1. Staff Development**<br>2. Instructional Supervision**<br>3. Mentoring**<br>4. Community Involvement**<br>5. School Responsibilities**<br>6. Growing and Developing Professionally<br>7. Reflecting on Teaching |

* Indicates criteria that are evaluated during classroom observations.

** Indicates criteria that are applied only to master and mentor teachers.

The following pages will review the important elements of the first three TAP *Teaching Skills, Knowledge and Responsibilities Performance Standards*. The details of the fourth domain, Responsibilities, are flexible based on local expectations. However, we provide samples of master, mentor and career teachers' responsibilities surveys after the explanation of the TAP Teaching Standards.

In the following pages, you will find the TAP Rubric and then a presentation of all the indicators for *Instruction, Designing and Planning Instruction* and *The Learning Environment*. Each indicator's descriptors will be explained with examples of how these descriptors might be implemented in a classroom and modeled in cluster. When appropriate, we will make connections between the TAP Teaching Standards and the Cluster Observation Rubric. Finally, we will include suggested reflection questions for teachers to use when planning for their own lessons.

| INSTRUCTION | | | |
|---|---|---|---|
| | **Exemplary (5)*** | **Proficient (3)*** | **Unsatisfactory (1)*** |
| **Standards and Objectives** | • All learning objectives and state content standards are explicitly communicated.<br>• Sub-objectives are aligned and logically sequenced to the lesson's major objective.<br>• Learning objectives are: (a) consistently connected to what students have previously learned, (b) known from life experiences, and (c) integrated with other disciplines.<br>• Expectations for student performance are clear, demanding, and high.<br>• State standards are displayed and referenced throughout the lesson.<br>• There is evidence that most students demonstrate mastery of the objective. | • Most learning objectives and state content standards are communicated.<br>• Sub-objectives are mostly aligned to the lesson's major objective.<br>• Learning objectives are connected to what students have previously learned.<br>• Expectations for student performance are clear.<br>• State standards are displayed.<br>• There is evidence that most students demonstrate mastery of the objective. | • Few learning objectives and state content standards are communicated.<br>• Sub-objectives are inconsistently aligned to the lesson's major objective.<br>• Learning objectives are rarely connected to what students have previously learned.<br>• Expectations for student performance are vague.<br>• State standards are displayed.<br>• There is evidence that few students demonstrate mastery of the objective. |
| **Motivating Students** | • The teacher consistently organizes the content so that it is personally meaningful and relevant to students.<br>• The teacher consistently develops learning experiences where inquiry, curiosity, and exploration are valued.<br>• The teacher regularly reinforces and rewards effort. | • The teacher sometimes organizes the content so that it is personally meaningful and relevant to students.<br>• The teacher sometimes develops learning experiences where inquiry, curiosity, and exploration are valued.<br>• The teacher sometimes reinforces and rewards effort. | • The teacher rarely organizes the content so that it is personally meaningful and relevant to students.<br>• The teacher rarely develops learning experiences where inquiry, curiosity, and exploration are valued.<br>• The teacher rarely reinforces and rewards effort. |
| **Presenting Instructional Content** | Presentation of content always includes:<br>• visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson;<br>• examples, illustrations, analogies, and labels for new concepts and ideas;<br>• modeling by the teacher to demonstrate his or her performance expectations;<br>• concise communication;<br>• logical sequencing and segmenting;<br>• all essential information and;<br>• no irrelevant, confusing, or nonessential information. | Presentation of content most of the time includes:<br>• visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson;<br>• examples, illustrations, analogies, and labels for new concepts and ideas;<br>• modeling by the teacher to demonstrate his or her performance expectations;<br>• concise communication;<br>• logical sequencing and segmenting;<br>• all essential information and;<br>• no irrelevant, confusing, or nonessential information. | Presentation of content rarely includes:<br>• visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson;<br>• examples, illustrations, analogies, and labels for new concepts and ideas;<br>• modeling by the teacher to demonstrate his or her performance expectations;<br>• concise communication;<br>• logical sequencing and segmenting;<br>• all essential information and;<br>• no irrelevant, confusing, or nonessential information. |
| **Lesson Structure and Pacing** | • All lessons start promptly.<br>• The lesson's structure is coherent, with a beginning, middle, end, and time for reflection.<br>• Pacing is brisk and provides many opportunities for individual students who progress at different learning rates.<br>• Routines for distributing materials are seamless.<br>• No instructional time is lost during transitions. | • Most lessons start promptly.<br>• The lesson's structure is coherent, with a beginning, middle, and end.<br>• Pacing is appropriate and sometimes provides opportunities for students who progress at different learning rates.<br>• Routines for distributing materials are efficient.<br>• Little instructional time is lost during transitions. | • Lessons are not started promptly.<br>• The lesson has a structure, but may be missing closure or introductory elements.<br>• Pacing is appropriate for less than half of the students and rarely provides opportunities for students who progress at different learning rates.<br>• Routines for distributing materials are inefficient.<br>• Considerable time is lost during transitions. |

*** Performance definitions are provided at levels 5, 3, and 1. Raters can score performance at levels 2 or 4 based on their professional judgment.**

| INSTRUCTION - *Continued* | | | |
|---|---|---|---|
| | **Exemplary (5)** | **Proficient (3)** | **Unsatisfactory (1)** |
| **Activities and Materials** | Activities and materials include all of the following:<br>• support the lesson objectives;<br>• are challenging;<br>• sustain students' attention;<br>• elicit a variety of thinking;<br>• provide time for reflection;<br>• are relevant to students' lives;<br>• provide opportunities for student-to-student interaction;<br>• induce student curiosity and suspense;<br>• provide students with choices;<br>• incorporate multimedia and technology and;<br>• incorporate resources beyond the school curriculum texts (e.g., teacher-made materials, manipulatives, resources from museums, cultural centers, etc.).<br>• In addition, sometimes activities are game-like, involve simulations, require creating products, and demand self-direction and self-monitoring. | Activities and materials include most of the following:<br>• support the lesson objectives;<br>• are challenging;<br>• sustain students' attention;<br>• elicit a variety of thinking;<br>• provide time for reflection;<br>• are relevant to students' lives;<br>• provide opportunities for student-to-student interaction;<br>• induce student curiosity and suspense;<br>• provide students with choices;<br>• incorporate multimedia and technology and;<br>• incorporate resources beyond the school curriculum texts (e.g., teacher-made materials, manipulatives, resources from museums, cultural centers, etc.). | Activities and materials include few of the following:<br>• support the lesson objectives;<br>• are challenging;<br>• sustain students' attention;<br>• elicit a variety of thinking;<br>• provide time for reflection;<br>• are relevant to students' lives;<br>• provide opportunities for student-to-student interaction;<br>• induce student curiosity and suspense;<br>• provide students with choices;<br>• incorporate multimedia and technology and;<br>• incorporate resources beyond the school curriculum texts (e.g., teacher-made materials, manipulatives, resources from museums, etc.). |
| **Questioning** | Teacher questions are varied and high quality, providing a balanced mix of question types:<br>o knowledge and comprehension;<br>o application and analysis; and<br>o creation and evaluation.<br>• Questions are consistently purposeful and coherent.<br>• A high frequency of questions is asked.<br>• Questions are consistently sequenced with attention to the instructional goals.<br>• Questions regularly require active responses (e.g., whole class signaling, choral responses, written and shared responses, or group and individual answers).<br>• Wait time (3-5 seconds) is consistently provided.<br>• The teacher calls on volunteers and nonvolunteers, and a balance of students based on ability and sex.<br>• Students generate questions that lead to further inquiry and self-directed learning. | Teacher questions are varied and high quality, providing for some, but not all, question types:<br>o knowledge and comprehension;<br>o application and analysis; and<br>o creation and evaluation.<br>• Questions are usually purposeful and coherent.<br>• A moderate frequency of questions asked.<br>• Questions are sometimes sequenced with attention to the instructional goals.<br>• Questions sometimes require active responses (e.g., whole class signaling, choral responses, or group and individual answers).<br>• Wait time is sometimes provided.<br>• The teacher calls on volunteers and nonvolunteers, and a balance of students based on ability and sex. | Teacher questions are inconsistent in quality and include few question types:<br>o knowledge and comprehension;<br>o application and analysis; and<br>o creation and evaluation.<br>• Questions are random and lack coherence.<br>• A low frequency of questions is asked.<br>• Questions are rarely sequenced with attention to the instructional goals.<br>• Questions rarely require active responses (e.g., whole class signaling, choral responses, or group and individual answers).<br>• Wait time is inconsistently provided.<br>• The teacher mostly calls on volunteers and high ability students. |

| INSTRUCTION - *Continued* | | | |
|---|---|---|---|
| | **Exemplary (5)** | **Proficient (3)** | **Unsatisfactory (1)** |
| **Academic Feedback** | • Oral and written feedback is consistently academically focused, frequent, and high quality.<br>• Feedback is frequently given during guided practice and homework review.<br>• The teacher circulates to prompt student thinking, assess each student's progress, and provide individual feedback.<br>• Feedback from students is regularly used to monitor and adjust instruction.<br>• Teacher engages students in giving specific and high-quality feedback to one another. | • Oral and written feedback is mostly academically focused, frequent, and mostly high quality.<br>• Feedback is sometimes given during guided practice and homework review.<br>• The teacher circulates during instructional activities to support engagement and monitor student work.<br>• Feedback from students is sometimes used to monitor and adjust instruction. | • The quality and timeliness of feedback is inconsistent.<br>• Feedback is rarely given during guided practice and homework review.<br>• The teacher circulates during instructional activities, but monitors mostly behavior.<br>• Feedback from students is rarely used to monitor or adjust instruction. |
| **Grouping Students** | • The instructional grouping arrangements (either whole class, small groups, pairs, or individual; heterogeneous or homogeneous ability) consistently maximize student understanding and learning efficiency.<br>• All students in groups know their roles, responsibilities, and group work expectations.<br>• All students participating in groups are held accountable for group work and individual work.<br>• Instructional group composition is varied (e.g., race, gender, ability, and age) to best accomplish the goals of the lesson.<br>• Instructional groups facilitate opportunities for students to set goals, reflect on, and evaluate their learning. | • The instructional grouping arrangements (either whole class, small groups, pairs, or individual; heterogeneous or homogeneous ability) adequately enhance student understanding and learning efficiency.<br>• Most students in groups know their roles, responsibilities, and group work expectations.<br>• Most students participating in groups are held accountable for group work and individual work.<br>• Instructional group composition is varied (e.g., race, gender, ability, and age) to, most of the time, accomplish the goals of the lesson. | • The instructional grouping arrangements (either whole class, small groups, pairs, or individual; heterogeneous or homogeneous ability) inhibit student understanding and learning efficiency.<br>• Few students in groups know their roles, responsibilities, and group work expectations.<br>• Few students participating in groups are held accountable for group work and individual work.<br>• Instructional group composition remains unchanged, irrespective of the learning and instructional goals of a lesson. |
| **Teacher Content Knowledge** | • Teacher displays extensive content knowledge of all the subjects she or he teaches.<br>• Teacher regularly implements a variety of subject-specific instructional strategies to enhance student content knowledge.<br>• The teacher regularly highlights key concepts and ideas and uses them as bases to connect other powerful ideas.<br>• Limited content is taught in sufficient depth to allow for the development of understanding. | • Teacher displays accurate content knowledge of all the subjects he or she teaches.<br>• Teacher sometimes implements subject-specific instructional strategies to enhance student content knowledge.<br>• The teacher sometimes highlights key concepts and ideas and uses them as bases to connect other powerful ideas. | • Teacher displays under-developed content knowledge in several subject areas.<br>• Teacher rarely implements subject-specific instructional strategies to enhance student content knowledge.<br>• Teacher does not understand key concepts and ideas in the discipline and therefore presents content in an unconnected way. |
| **Teacher Knowledge of Students** | • Teacher practices display understanding of each student's anticipated learning difficulties.<br>• Teacher practices regularly incorporate student interests and cultural heritage.<br>• Teacher regularly provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught. | • Teacher practices display understanding of some students' anticipated learning difficulties.<br>• Teacher practices sometimes incorporate student interests and cultural heritage.<br>• Teacher sometimes provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught. | • Teacher practices demonstrate minimal knowledge of students' anticipated learning difficulties.<br>• Teacher practices rarely incorporate student interests or cultural heritage.<br>• Teacher practices demonstrate little differentiation of instructional methods or content. |

| INSTRUCTION - *Continued* | | | |
|---|---|---|---|
| | **Exemplary (5)** | **Proficient (3)** | **Unsatisfactory (1)** |
| **Thinking** | Over the course of multiple observations, the teacher consistently and thoroughly teaches all four types of thinking:<br>• analytical thinking, where students analyze, compare and contrast, and evaluate and explain information;<br>• practical thinking, where students use, apply, and implement what they learn in real-life scenarios;<br>• creative thinking, where students create, design, imagine, and suppose and;<br>• research-based thinking, where students explore and review a variety of ideas, models, and solutions to problems.<br>The teacher regularly provides opportunities where students:<br>• generate a variety of ideas and alternatives;<br>• analyze problems from multiple perspectives and viewpoints and;<br>• monitor their thinking to ensure that they understand what they are learning, are attending to critical information, and are aware of the learning strategies that they are using and why. | Over the course of multiple observations, the teacher consistently and thoroughly teaches two types of thinking:<br>• analytical thinking, where students analyze, compare and contrast, and evaluate and explain information;<br>• practical thinking, where students use, apply, and implement what they learn in real-life scenarios;<br>• creative thinking, where students create, design, imagine, and suppose and;<br>• research-based thinking, where students explore and review a variety of ideas, models, and solutions to problems.<br>The teacher sometimes provides opportunities where students:<br>• generate a variety of ideas and alternatives and;<br>• analyze problems from multiple perspectives and viewpoints. | The teacher implements few learning experiences that thoroughly teach any type of thinking.<br><br>The teacher provides few opportunities where students:<br>• generate a variety of ideas and alternatives and;<br>• analyze problems from multiple perspectives and viewpoints.<br><br>NOTE: If the teacher regularly and thoroughly teaches one type of thinking, he or she shall receive a score of 2. |
| **Problem Solving** | Over the course of multiple observations the teacher implements activities that teach and reinforce 6 or more of the following problem-solving types.<br>• Abstraction<br>• Categorization<br>• Drawing Conclusions/Justifying Solutions<br>• Predicting Outcomes<br>• Observing and Experimenting<br>• Improving Solutions<br>• Identifying Relevant/Irrelevant Information<br>• Generating Ideas<br>• Creating and Designing | Over the course of multiple observations the teacher implements activities that teach and reinforce 4 or more of the following problem-solving types.<br>• Abstraction<br>• Categorization<br>• Drawing Conclusions/Justifying Solution<br>• Predicting Outcomes<br>• Observing and Experimenting<br>• Improving Solutions<br>• Identifying Relevant/Irrelevant Information<br>• Generating Ideas<br>• Creating and Designing | Over the course of multiple observations the teacher implements less than 2 activities that teach the following problem-solving types.<br>• Abstraction<br>• Categorization<br>• Drawing Conclusions/Justifying Solution<br>• Predicting Outcomes<br>• Observing and Experimenting<br>• Improving Solutions<br>• Identifying Relevant/Irrelevant Information<br>• Generating Ideas<br>• Creating and Designing |

## DESIGNING AND PLANNING INSTRUCTION

| | Exemplary (5) | Proficient (3) | Unsatisfactory (1) |
|---|---|---|---|
| **Instructional Plans** | Instructional plans include:<br>• measurable and explicit goals aligned to state content standards;<br>• activities, materials, and assessments that:<br>o are aligned to state standards.<br>o are sequenced from basic to complex.<br>o build on prior student knowledge, are relevant to students' lives, and integrate other disciplines.<br>o provide appropriate time for student work, student reflection, and lesson and unit closure;<br>• evidence that plan is appropriate for the age, knowledge, and interests of all learners and;<br>• evidence that the plan provides regular opportunities to accommodate individual student needs. | Instructional plans include:<br>• goals aligned to state content standards;<br>• activities, materials, and assessments that:<br>o are aligned to state standards.<br>o are sequenced from basic to complex.<br>o build on prior student knowledge.<br>o provide appropriate time for student work, and lesson and unit closure;<br>• evidence that plan is appropriate for the age, knowledge, and interests of most learners and;<br>• evidence that the plan provides some opportunities to accommodate individual student needs. | Instructional plans include:<br>• few goals aligned to state content standards;<br>• activities, materials, and assessments that:<br>o are rarely aligned to state standards.<br>o are rarely logically sequenced.<br>o rarely build on prior student knowledge<br>o inconsistently provide time for student work, and lesson and unit closure;<br>• little evidence that the plan is appropriate for the age, knowledge, or interests of the learners and;<br>• little evidence that the plan provides some opportunities to accommodate individual student needs. |
| **Student Work** | Assignments require students to:<br>• organize, interpret, analyze, synthesize, and evaluate information rather than reproduce it;<br>• draw conclusions, make generalizations, and produce arguments that are supported through extended writing and;<br>• connect what they are learning to experiences, observations, feelings, or situations significant in their daily lives, both inside and outside of school. | Assignments require students to:<br>• interpret information rather than reproduce it;<br>• draw conclusions and support them through writing and;<br>• connect what they are learning to prior learning and some life experiences. | Assignments require students to:<br>• mostly reproduce information;<br>• rarely draw conclusions and support them through writing and;<br>• rarely connect what they are learning to prior learning or life experiences. |
| **Assessment** | Assessment Plans:<br>• are aligned with state content standards;<br>• have clear measurement criteria;<br>• measure student performance in more than three ways (e.g., in the form of a project, experiment, presentation, essay, short answer, or multiple choice test;<br>• require extended written tasks;<br>• are portfolio-based with clear illustrations of student progress toward state content standards and;<br>• include descriptions of how assessment results will be used to inform future instruction. | Assessment Plans:<br>• are aligned with state content standards;<br>• have measurement criteria;<br>• measure student performance in more than two ways (e.g., in the form of a project, experiment, presentation, essay, short answer, or multiple choice test);<br>• require written tasks and;<br>• include performance checks throughout the school year. | Assessment Plans:<br>• are rarely aligned with state content standards;<br>• have ambiguous measurement criteria;<br>• measure student performance in less than two ways (e.g., in the form of a project, experiment, presentation, essay, short answer, or multiple choice test) and;<br>• include performance checks, although the purpose of these checks is not clear. |

## THE LEARNING ENVIRONMENT

| | Exemplary (5) | Proficient (3) | Unsatisfactory (1) |
|---|---|---|---|
| **Expectations** | • Teacher sets high and demanding academic expectations for every student.<br>• Teacher encourages students to learn from mistakes.<br>• Teacher creates learning opportunities where all students can experience success.<br>• Students take initiative and follow through with their own work.<br>• Teacher optimizes instructional time, teaches more material, and demands better performance from every student. | • Teacher sets high and demanding academic expectations for every student.<br>• Teacher encourages students to learn from mistakes.<br>• Teacher creates learning opportunities where most students can experience success.<br>• Students complete their work according to teacher expectations. | • Teacher expectations are not sufficiently high for every student.<br>• Teacher creates an environment where mistakes and failure are not viewed as learning experiences.<br>• Students demonstrate little or no pride in the quality of their work. |
| **Managing Student Behavior** | • Students are consistently well-behaved and on task.<br>• Teacher and students establish clear rules for learning and behavior.<br>• The teacher uses several techniques, such as social approval, contingent activities, and consequences to maintain appropriate student behavior.<br>• The teacher overlooks inconsequential behavior.<br>• The teacher deals with students who have caused disruptions rather than the entire class.<br>• The teacher attends to disruptions quickly and firmly. | • Students are mostly well-behaved and on task, some minor learning disruptions may occur.<br>• Teacher establishes rules for learning and behavior.<br>• The teacher uses some techniques, such as social approval, contingent activities, and consequences to maintain appropriate student behavior.<br>• The teacher overlooks some inconsequential behavior, but other times addresses it, stopping the lesson.<br>• The teacher deals with students who have caused disruptions, yet sometimes he or she addresses the entire class. | • Students are not well-behaved and are often off task.<br>• Teacher establishes few rules for learning and behavior.<br>• The teacher uses few techniques to maintain appropriate student behavior.<br>• The teacher cannot distinguish between inconsequential behavior and inappropriate behavior.<br>• Disruptions frequently interrupt instruction. |
| **Environment** | The classroom<br>• welcomes all members and guests.<br>• is organized and understandable to all students.<br>• supplies, equipment, and resources are easily and readily accessible.<br>• displays student work that frequently changes.<br>• is arranged to promote individual and group learning. | The classroom<br>• welcomes most members and guests.<br>• is organized and understandable to most students.<br>• supplies, equipment, and resources are accessible.<br>• displays student work.<br>• is arranged to promote individual and group learning. | The classroom<br>• is somewhat cold and uninviting.<br>• is not well organized and understandable to students.<br>• supplies, equipment, and resources are difficult to access.<br>• does not display student work.<br>• is not arranged to promote group learning. |
| **Respectful Culture** | • Teacher-student interactions demonstrate caring and respect for one another.<br>• Students exhibit caring and respect for one another.<br>• Teacher seeks out and is receptive to the interests and opinions of all students.<br>• Positive relationships and interdependence characterize the classroom. | • Teacher-student interactions are generally friendly, but may reflect occasional inconsistencies, favoritism, or disregard for students' cultures.<br>• Students exhibit respect for the teacher and are generally polite to each other.<br>• Teacher is sometimes receptive to the interests and opinions of students. | • Teacher-student interactions are sometimes authoritarian, negative, or inappropriate.<br>• Students exhibit disrespect for the teacher.<br>• Student interaction is characterized by conflict, sarcasm, or put-downs.<br>• Teacher is not receptive to interests and opinions of students. |

# » DESIGNING AND PLANNING INSTRUCTION

One of the main ingredients of a successful lesson is a well-developed lesson plan. When planning, teachers should begin by identifying the student learning outcomes: exactly what the student is expected to learn and what will be evidence of mastery. The instructional plan is a tool to guide instruction and focus the lesson. When instructional plans are sequenced from basic to complex, build upon prior knowledge and deepen understanding, learning is relevant, organized and comprehensible. The goal is to develop a quality lesson plan with rigor that promotes learning for all students.

Time spent developing strong lesson plans yields many benefits. Lesson plans contribute to better-managed classrooms and more effective and efficient learning experiences for students. The leadership team can reach consensus within individual schools on critical elements that should be included in each teacher's lesson plan. This should be determined at the school level based on individual school needs. There is no formal TAP lesson plan template.

## How is Evidence Collected for *Designing and Planning Instruction*?

Evidence is collected for this domain before, during and even after an evaluation has been conducted. It is critical for evidence to be collected in this comprehensive manner in order to give teachers a clear picture as to how to effectively design and plan for instruction. Some evaluators have the misconception that the lesson plan and the pre-conference (if applicable) are the only places to gather evidence. Again, to truly evaluate how teachers plan for instruction, evidence must be also gathered before, during and even following an evaluation.

### *Before the Lesson*

The lesson plan is used by the evaluator to gather information about what the teacher has planned to accomplish in the lesson being observed. If the evaluation is announced, the lesson plan is used to guide the planning of the pre-conference so that the evaluator can identify the questions that need to be asked to gain clarity about what is happening in the lesson, as well as possible places within the lesson where the teacher may need to reflect upon the way he/she is planning to teach the lesson concepts. After all, the pre-conference is not a "gotcha," but rather an opportunity to help teachers become more reflective practitioners. It allows the teacher an opportunity to mentally rehearse the lesson that he/she is planning to teach.

The goal is for teachers to become more reflective practitioners. Reflecting on the lessons that will be taught (lesson plan and pre-conference) and reflecting on the lessons that have already been taught (post-conference) will ultimately strengthen the quality of teaching that educators provide to students on a daily basis.

The evidence that is gleaned from reviewing the lesson plan and from the pre-conference is used to support the indicators/descriptors from the *Designing and Planning* domain. When reviewing lesson plans to identify the questions that may need to be asked in a pre-conference, the following guiding questions may be helpful to evaluators to assist them in framing the questions they will ask.

- What should the students know and be able to do by the end of the lesson?
- What will the teacher and students be doing to show progress toward mastery of the objective(s)?
- How will the teacher know that students have mastered the objective(s)?

It is important to note that even after reviewing the lesson plan extensively and conducting the pre-conference on an announced lesson, evaluators are not yet able to score the lesson appropriately, as evidence for this domain should also be gathered during the lesson.

### *During the Lesson*

If evaluators consider scoring only the lesson plan itself and do not look for the effectiveness of planning within the lesson, the results will typically not improve instruction through more effective planning practices. Rather, often this practice will result in teachers writing very extensive lesson plans that are disconnected from what actually transpires in the lesson and thus do not positively impact instructional practice or student achievement.

The purpose of planning for lessons is so that lessons are designed to maximize learning when instruction is delivered. Evidence of effective planning should be gathered by the evaluator during the lesson and then be used to score the indicators and descriptors from *Designing and Planning*. Evaluators should see that planning was effective as evidenced by the instruction that is ultimately provided. Evaluators must always ask themselves, "Was the teacher's planning at the level it needed to be in order to support the students' mastery of the learning objective in the lesson itself?"

### *After the Lesson*

Following the lesson, evaluators may still need additional evidence for some of the indicators/descriptors in *Designing and Planning*. For example, evaluators need to examine the student work produced within the lesson and perhaps may need clarity as to how the student work will be assessed by the teacher to assess student progress and determine next steps for instruction. This may be especially important for unannounced observations that do not include a pre-conference. Protocols should be established by leadership teams to guide the process for collecting evidence following the lesson so that all evaluators on the team are on the same page. Typically, teachers appreciate the fact that evaluators want to give them the best possible snapshot of their teaching and welcome the questions that may need to be asked. Once evidence has been gathered, evaluators can then assign scores.

This section includes resources and information on the three indicators under *Designing and Planning Instruction*:

1. Instructional Plans
2. Student Work
3. Assessment

# INSTRUCTIONAL PLANS

## Exemplary Descriptors for Instructional Plans

Instructional plans include:

1. Measurable and explicit goals aligned to state content standards;
2. Activities, materials, and assessments that:
   - » Are aligned to state standards.
   - » Are sequenced from basic to complex.
   - » Build on prior student knowledge, are relevant to students' lives, and integrate other disciplines.
   - » Provide appropriate time for student work, student reflection, and lesson and unit closure.
3. Evidence that plan is appropriate for the age, knowledge, and interests of all learners; and
4. Evidence that the plan provides regular opportunities to accommodate individual student needs.

Classroom examples of these descriptors can be found beginning on page 15.

Instruction in a TAP school is based heavily on state standards as well as analysis of formative and summative student assessments. Therefore, it is important that teachers incorporate these into their daily planning.

### SUGGESTED REFLECTION QUESTIONS ON INSTRUCTIONAL PLANS

- » Why is aligning the objectives to the standards important?
- » Which standards seem the most difficult for students to master? Why do you think students are having difficulty mastering those in particular?
- » Which sub-objectives need to be taught for students to master a standard?
- » Was there a connection between the students' mastery of the learning objective and the lesson plan?
- » How did you decide to choose the activities, materials and assessments included in this lesson plan?
- » How did you plan to accommodate students' individual interests and needs?

## Evaluating Instructional Plans

It is suggested that leadership teams create a system to provide feedback to teachers on individual lesson plans on a regular basis. This development would be an appropriate activity for a leadership team meeting. Leadership team members might bring examples of lesson plans to a leadership team meeting and evaluate them utilizing the rubric for a specific purpose such as checking the alignment of activities, materials and assessments, or evaluating the learning objectives to ensure alignment to state standards. By focusing on specific descriptors of this indicator, a leadership team can more narrowly focus their learning and evaluation of teachers' lesson plans. Specific written feedback can then be provided to teachers. An outcome for this type of activity may be: "Cluster leaders will provide copies of their own lesson plans to teachers as they relate to the strategy being modeled in cluster with an emphasis on a specific area of need identified during the leadership team's lesson plan evaluations."

It is important to note there is no TAP lesson plan template, although schools and districts may create their own based upon the needs of their population. Teachers should be encouraged to make the lesson plan format their own, and flexibility within the plan should be encouraged.

### Additional Resource

Wiggins, Grant and Jay McTighe. "What is Backward Design?" in *Understanding by Design*. 1st edition, Upper Saddle River, NJ: Merrill Prentice Hall, 2001, pp. 7–19.

*CLICK HERE* to view the "Designing and Planning Rubric-Instructional Plans Training Module."

## STUDENT WORK

### What makes students want to do good work?

It starts with teachers planning meaningful work. Student work should deepen student understanding and build essential skills. When planning for student work, teachers should determine if the planned task:

- has a clear academic purpose;
- efficiently demonstrates student learning;
- promotes ownership by offering choices and being personally relevant;
- instills a sense of competence; and
- appears enjoyable and interesting.

### Exemplary Descriptors for Student Work

Assignments require students to:

1. Organize, interpret, analyze, synthesize, and evaluate information rather than reproduce it;
2. Draw conclusions, make generalizations, and produce arguments that are supported through extended writing; and
3. Connect what they are learning to experiences, observations, feelings, or situations significant in their daily lives both inside and outside of school.

Classroom examples of these descriptors can be found beginning on page 15.

#### SUGGESTED REFLECTION QUESTIONS ON STUDENT WORK

- How closely was the student work aligned to the lesson objective and/or state standard?
- How did you model the thinking necessary for students to apply in order to complete the work?
- Using Bloom's Taxonomy, at what level is the student work that was assigned? Is it at the appropriate level considering the students' stage of learning?
- How engaged did students appear when they completed the assignment?
- How was evidence from student work used to determine success in meeting teacher expectations?
- As you facilitated students working on assignments, what challenges were evident and how did you address those issues?
- How did the completed work demonstrate the evaluation criteria? Did most students' work meet the teacher's expectations? If not, what reasons might explain why?
- How are the guidelines for student work going to mesh with the next grade level's guidelines and state standards?
- Why is it important for students to connect what they are doing in the classroom to their daily lives?

### Additional Resource

The North Cascades and Olympic Science Partnership provides a variety of protocols for looking at student work at http://www.ncosp.wwu.edu/Tools/index.php?toolID=7.

*CLICK HERE* to view the "Designing and Planning Rubric-Student Work Training Module."

## ASSESSMENT

Effective assessment is a fundamental part of instruction and learning. The goal of this section is to provide information and examples to help expand knowledge of assessment. An effective assessment plan answers the questions, "What do I want my students to be able to do as a result of my teaching?" and, "How do I know the students learned what I taught?" When these questions are asked and answered regularly, the teacher can effectively plan, diagnose and intervene on a continual basis to raise student achievement.

### Exemplary Descriptors for Assessment Plans

Assessment plans:

1. Are aligned with state content standards;
2. Have clear measurement criteria;
3. Measure student performance in more than three ways (e.g., in the form of a project, experiment, presentation, essay, short answer, or multiple choice test);
4. Require extended written tasks;
5. Are portfolio-based with clear illustrations of student progress towards state content standards; and
6. Include descriptions of how assessment results will be used to inform future instruction.

Classroom examples of these descriptors can be found beginning on page 15.

### SUGGESTED REFLECTION QUESTIONS ON ASSESSMENT

- How was the criteria used in developing or selecting the assessment(s)?
- How did you decide on the types of assessments needed to evaluate student learning?
- How did the assessment(s) used accommodate the needs and interests of individual students?
- How will the results of the assessment(s) be used to impact future instruction?
- How were the criteria for scoring student work communicated and modeled to students?
- Why is it important to clearly communicate the criteria for student work to students prior to their completion of the assignment?
- Why is it important to model expectations for performance as well as communicate expectations to students?
- How were the criteria for student work aligned to the standards and high-stakes test? Why is it important that they are aligned?

## Additional Resource

Black, P., Harrison, C., Lee, C., Marshall, B., Wiliam, D. "Working inside the black box: Assessment for learning in the classroom." *Phi Delta Kappan*, Vol, 86, 2004. Available at the following link: http://datause.cse.ucla.edu/DOCS/pb_wor_2004.pdf

*CLICK HERE* to view the "Designing and Planning-Assessment Training Module."

**Note: The descriptions used in this chart are from the "Proficient" column of the rubric.*

| INSTRUCTIONAL PLANS | | |
|---|---|---|
| | **DESCRIPTIONS** | **EXAMPLES** |
| **Instructional Plans Include:** | | |
| Goals aligned to state content standards. | There is evidence that the Instructional Plans are aligned to grade-appropriate state/core standards. This can be in the form of an objective, standard or essential question. | **Standard Format:** Compare and Contrast two or more versions of the same story by different authors or from different cultures.<br>**Kid-Friendly Objective Format:** Today I will learn how to compare and contrast two versions of the same fairy tale.<br>**Essential Question Format:** How can comparing and contrasting two versions of the same fairy tale using a Venn Diagram deepen my understanding of the two stories? |
| Activities, materials, and assessments that:<br>» Are aligned to state standards.<br>» Are sequenced from basic to complex.<br>» Build on prior student knowledge.<br>» Provide appropriate time for student work, and lesson and unit closure. | There is evidence that the activities and materials are directly in alignment with the written objective. Over time, the teacher's plan shows a progression from basic to complex that matches the level of students' needs. The plan should provide for adequate time for students to develop and deepen their understanding of the lesson's objective with appropriate time for closure and reflection. | The teacher will read two versions of Cinderella and model using a Venn Diagram to compare and contrast the two versions.<br>Based on student reading levels and interests, students will choose two versions of the same fairy tale to compare and contrast through a Venn Diagram.<br>The students then explain their completed Venn Diagrams in pairs. Students will complete an exit ticket answering the lesson's Essential Question: *How can comparing and contrasting two versions of the same fairy tale using a Venn Diagram deepen my understanding of the two stories?* |
| Evidence that plan is appropriate for the age, knowledge, and interests of most learners. | The plan should align with grade-level expectations and content standards. The plan should incorporate student interests and learning needs. | When teaching the standard, Compare and Contrast two or more versions of the same story by different authors or from different cultures, the teacher exposes students to a variety of reading levels with different (traditional, modern, cultural) versions of the same fairy tale. |
| Evidence that the plan provides some opportunities to accommodate individual student needs. | The instructional plan should indicate how the teacher will differentiate the lesson for the various student levels or needs. This may be in the form of ability levels based upon pre-assessments, interest levels and/or learning styles. | During a Guided Reading lesson, the teacher plans for students to compare and contrast two or more versions of the same fairy tale using multiple leveled texts based on the reading levels of the students in the class. The teacher also incorporates traditional and modern versions of the same fairy tale to spark student interest. |

| STUDENT WORK | | |
|---|---|---|
| | **DESCRIPTIONS** | **EXAMPLES** |
| **Assignments require students to:** | | |
| Interpret information rather than reproduce it. | The work requires students to think on a higher level rather than just duplicate the teacher's model. | Using a Political Cartoon from a particular historical event, students are required to complete a graphic organizer for analyzing the author's bias. Students analyze the political cartoon for tone, issue and author's bias. |
| Draw conclusions and support them through writing. | The work requires students to combine what they know with the assignment to make a conclusion through writing. It is often said that writing shows the students' thinking and allows students to think at a deeper level. For lower elementary, writing may be in the form of pictures/drawings or through speaking (with the teacher scribing). | Students will compare two political cartoons connected to the same historical event. Students will draw conclusions about each author's representation of the event and give written support for the conclusion they developed. |
| Connect what they are learning to prior learning and some life experiences. | The work requires students to use what they are learning and make connections to previous assignments and personal experiences. | Following a study of author's bias in political cartoons, students are required to create their own Political Cartoon based on a current political issue that is meaningful to them. Students analyze their political cartoon and explain in writing their perspective, the issue and their bias. |
| **ASSESSMENT** | | |
| | **DESCRIPTIONS** | **EXAMPLES** |
| **Assessment Plans:** | | |
| Are aligned with state content standards. | The assessment of the lesson should support the standard/objective taught. If the teacher's objective was to analyze examples of cause and effect in informational text, the assessment should be aligned by having students analyze and not identify examples of cause and effect using informational text. | Lesson Objective: Students will analyze informational text to identify cause-and-effect relationships.<br>Assessment: Using a Social Studies text, students analyze a given passage for examples of cause and effect. Students must justify how and why the examples chosen are cause-and-effect relationships. |
| Have measurement criteria. | The teacher's assessment plan should be clearly measurable and these criteria should be explained to students prior to the assessment. By having criteria that is measurable, the teacher should have a clear picture as to which students mastered the objective. | There is a clearly defined rubric developed prior to the assignment being given. These criteria could be established by the teacher with student support. Therefore, students would understand the difference between scoring a one or five in a particular category of the rubric prior to beginning the assignment. |

| ASSESSMENT - *Continued* | | |
|---|---|---|
| | **DESCRIPTIONS** | **EXAMPLES** |
| **Assessment Plans:** | | |
| Measure student performance in more than two ways (e.g., in the form of a project, experiment, presentation, essay, short answer, or multiple choice test). | The assessment plans should measure student performance in multiple ways in order to ensure mastery of the objective. This provides students opportunities to demonstrate mastery through a variety of formats. Assessments should be differentiated for the needs of the students. Informal and formal formative assessments should be used throughout a lesson to ensure that students are mastering the lesson objective(s) and to measure performance in multiple ways. This could be accomplished through the use of using questioning with thumbs-up/down, dry-erase boards, etc. | When assessing students' understanding of the Revolutionary War, the teacher offers students a choice of mastery representation.<br>**Choice 1: Song or Poem**<br>Create a song or poem about a specific person significant to the Revolutionary War. You can use modern-day music as your background. Record it as a podcast to share on our website. You will also need to turn in a copy of the lyrics or poem.<br>**Choice 2: Oral History/Costume**<br>Become a part of the Revolution. Choose a person to share with your classmates. Come to school dressed as your person of choice. Talk in their manner, explain why they are significant or tell their stories. |
| Require written tasks. | By requiring written tasks, teachers can better assess their students' thinking and understanding of the objective. | Choose to represent the Patriots or the Loyalists. Research the beliefs and causes of your party choice. Write a speech persuading a group either to join your cause or to protest the Revolution. State your solutions to the obstacles your party faces. Deliver your speech in front of the class or record it using a voice recorder. You will need to turn in a copy of the speech. Oral presentation and the written speech will be evaluated based on the rubric created in class. |
| Include performance checks throughout the school year. | Assessments include periodic checks for each student's progression towards specific goals. | Examples of performance checks may include:<br>Running Records<br>Daily Quick Checks of Sub-Objective<br>Pre/Post Assessments<br>Quick Writes<br>Journaling |

# » THE LEARNING ENVIRONMENT

This section includes resources and information on the four areas under *The Learning Environment*:

1. Expectations
2. Managing Student Behavior
3. Environment
4. Respectful Culture

## EXPECTATIONS

### Exemplary Descriptors for Expectations

1. Teacher sets high and demanding academic expectations for every student.
2. Teacher encourages students to learn from mistakes.
3. Teacher creates learning opportunities where all students can experience success.
4. Students take initiative and follow through with their own work.
5. Teacher optimizes instructional time, teaches more material, and demands better performance from every student.

The descriptors under this indicator directly connect to the *Instruction* domain. For a teacher to include the descriptors under Expectations, he/she must have knowledge of the students he/she is teaching. Differentiated instruction methods that are demanding for every student and create opportunities for all students to experience success can be implemented only when *a teacher's knowledge of students* is developed and utilized during instruction. When a teacher sets high and demanding expectations for every student, he/she is also able to develop and/or select *activities and materials* that are challenging.

The second descriptor connects to Motivating Students. When a teacher regularly reinforces and rewards efforts, students will be encouraged to learn from their mistakes and take risks. A teacher must be able to create a safe learning environment in which student's efforts are reinforced and valued in order for students to experience success. For a teacher to optimize instructional time, he/she must be able to implement lessons that include appropriate *lesson structure and pacing* for students who progress at different learning rates.

### SUGGESTED REFLECTION QUESTIONS ON EXPECTATIONS

- » Why is it important to have expectations that are high and demanding for all students?
- » Why is it important to know all of your students when considering the expectations you set for them?
- » What part does Lesson Structure and Pacing play in ensuring high expectations?
- » What does it look and sound like when students are encouraged to learn from their mistakes and take risks? How can you foster this type of environment?

# MANAGING STUDENT BEHAVIOR

## Exemplary Descriptors for Student Behavior

1. Students are consistently well-behaved and on task.
2. Teacher and students establish clear rules for learning and behavior
3. The teacher uses several techniques, such as social approval, contingent activities, and consequences to maintain appropriate student behavior.
4. The teacher overlooks inconsequential behavior.
5. The teacher deals with students who have caused disruptions rather than the entire class.
6. The teacher attends to disruptions quickly and firmly.

Timely and effective management of student behavior is critical for effective instruction to take place within a classroom. Descriptors under Standards and Objectives and Presenting Instructional Content address a teacher's modeling of clear expectations for students. While these indicators focus on instruction, expectations must also be clearly modeled for student behavior for effective instruction to occur that increases student achievement. For a teacher to manage student behavior effectively, he/she must not only model the expectations, but have knowledge of the students he/she is teaching. Teachers must be aware of and practice a variety of techniques to maintain appropriate behavior, which are dependent upon having knowledge of individual student's needs. Teachers must also know students' interests in order to motivate them to change inappropriate behaviors. Therefore, this indicator is also connected to Motivating Students.

### SUGGESTED REFLECTION QUESTIONS ON MANAGING STUDENT BEHAVIOR

- What systems are in place to effectively monitor student behavior?
- How do you plan to address inappropriate behavior should that become an issue during this lesson?
- How does your grouping enhance student behavior?
- What part does motivation play in student behavior?

## Additional Resources

- The topic of managing student behavior has generated many books and workshops. A good website for basic tips and information is Adprima at www.adprima.com/managing.htm.
- LEARN North Carolina also has great suggestions on classroom management at http://www.learnnc.org.

# ENVIRONMENT

## Exemplary Descriptors for Environment

The classroom:

1. Welcomes all members and guests.
2. Is organized and understandable to all students.
3. Supplies, equipment, and resources are easily and readily accessible.
4. Displays student work that frequently changes.
5. Is arranged to promote individual and group learning.

This indicator deals with the learning environment of the classroom, including the physical arrangement of the furniture and the availability of supplies for students to utilize. When supplies, equipment and resources are easily and readily accessible, then the descriptor, "routines for distributing materials are efficient" under Lesson Structure and Pacing, can be met.

Important environmental factors to consider:

- Various areas of the classroom are created for use in a variety of activities.
- Desks or general seating are arranged so that teachers can easily get to each student.
- The lighting in the room is adequate.
- The room temperature is generally moderate to cool. Warm classrooms lead students to be more lethargic, inattentive and consequently bored and disruptive.
- The entrance to your room does not cause distractions to students during lessons.
- There is a place in your classroom, away from the rest of the class, where you can have a private conversation or give a private reprimand to an individual student.
- The blackboard is visible to all students during lessons and is clean and uncluttered.
- Bulletin boards are attractive and not cluttered with "old work."
- The room has just the amount of furniture that is functional, and does not contain useless or nonessential furnishings.
- The seating arrangement is designed in an orderly way so that the organization of the seats helps the students to feel more organized.
- Study carrels are used only in conjunction with other types of seating arrangements.
- Students are seated far enough apart so that innocent moves by students do not distract other students.
- Seats are arranged in such a way as to reduce traffic distractions. For example, as students get up to go to the bathroom or pencil sharpener, they do not overly distract students they pass.
- Make sure that students have assigned seats and do not allow them to constantly change their seats.

### SUGGESTED REFLECTION QUESTIONS ON CLASSROOM ENVIRONMENT

- What evidence supports a welcoming environment?
- How is the environment set up so that it is welcoming to all students?
- How is the environment arranged to promote student independence? (Are materials readily available? Are procedures in place so that students can be prepared for activities/routines?)
- How do you determine the purpose for displaying student work?
- How is student work displayed in order to promote content or enhance the learning environment?
- How do you ensure that the room is arranged to accommodate individual as well as group work?
- How is information posted in the classroom so that it may be easily referenced by students (e.g., standards, punctuation rules, schedule)?
- Think about challenges that occur when preparing the learning environment for students; how do you address obstacles?

## Additional Resource

Hill, B. (2010). *The Next Step Guide to Enriching Classroom Environments: Rubrics and Resources for Self Evaluation and Goal Setting*. Portsmouth, NH: Heinemann.

*CLICK HERE* to view the "Environment Training Module."

# RESPECTFUL CULTURE

## Exemplary Descriptors for Respectful Culture

1. Teacher-student interactions demonstrate caring and respect for one another.
2. Students' exhibit caring and respect for one another.
3. Teacher seeks out and is receptive to the interests and opinions of all students.
4. Positive relationships and interdependence characterize the classroom.

Creating a positive classroom climate begins with showing respect to one another. Teachers most often set this in motion when they develop a set of collaborative ground rules for their classrooms and then model these for the students on a regular basis.

Teacher non-verbal cues that indicate respect and interest are:

- Tone of voice
- Eye contact
- Affirmative head nods
- Smiles
- Wait time
- Proximity to student

### SUGGESTED REFLECTION QUESTIONS ON RESPECTFUL CULTURE

- How are students involved in developing classroom procedures (e.g., classroom rules, procedures for supplies, routines)?
- How do you determine/plan appropriate procedures to ensure a respectful culture?
- How do you build interdependence among students?
- How do you provide opportunities for students to collaborate?
- How do you build safety in the classroom, promoting open communication and/or collaboration?
- How do you plan opportunities to teach, practice and reinforce social skills (e.g., listening to others, providing positive feedback, patience, respect)?

## Additional Resources


- Comer, J. P. (1999). Creating successful urban schools. *Brookings papers on education policy, 2*. Available online at www.jstor.org/pss/20067212.
- Lawrence-Lightfoot, S. (2000). *Respect: An exploration*. Cambridge, MA: Perseus Books.
- Williams, A. (2010). Five strategies for creating just, equitable, and inclusive classrooms. *School Climate Matters, 4*(4), 3.

# » INSTRUCTION

This section includes resources and information on the 12 indicators of *Instruction*:

1. Standards and Objectives
2. Motivating Students
3. Presenting Instructional Content
4. Lesson Structure and Pacing
5. Activities and Materials
6. Questioning
7. Academic Feedback
8. Grouping Students
9. Teacher Content Knowledge
10. Teacher Knowledge of Students
11. Thinking
12. Problem Solving

## STANDARDS AND OBJECTIVES

Planning effective lessons aligned to the standards is dependent upon the teacher's ability to create and communicate *clearly defined learning outcomes* or objectives appropriate for the students. In many ways this indicator is the foundation for all other indicators, because if the teacher is not clear about what he or she wants students to know and be able to do as a result of the lesson, the balance of the lesson cannot be properly developed or implemented. Both the students and the teacher should understand what is to be accomplished during each lesson and the purpose for what takes place.

### Exemplary Descriptors for Standards and Objectives

1. All learning objectives and state content standards are explicitly communicated.
2. Sub-objectives are aligned and logically sequenced to the lesson's major objective.
3. Learning objectives are:
   - » Consistently connected to what students have previously learned;
   - » Know from life experiences; and
   - » Integrated with other disciplines.
4. Expectations for student performance are clear, demanding, and high.
5. State standards are displayed and referenced throughout the lesson.
6. There is evidence that most students demonstrate mastery of the objective.

### Descriptor 1: All learning objectives and state content standards are explicitly communicated.

The first descriptor under Standards and Objectives deals with the ability to "explicitly communicate" the objective or learning outcome, whether it is a state standard or sub-objective of a standard. Before a learning objective can be clearly communicated, it must be clearly written.

There are three components of a clearly written objective:

1. Observable verbs/actions
2. Clear description of learning outcome
3. Measurable standards

Bloom's Taxonomy can assist in writing objectives. Observable verbs are arranged in order of complexity in thinking. However, "explicitly communicated objectives" go beyond merely stating a clearly written objective or standard. "Communicated" implies that the teacher can be certain that the students know and understand the learning objective. In order to communicate the objective or standard, there should be a sender and a receiver. This requires the teacher to continually make references to the objective/standard throughout the lesson and to make connections for what the teacher and students are doing as it relates to the lesson's objective. This enables the sender (teacher) to monitor whether or not the receiver (student) is deepening their understanding of the objective. This also provides purpose for what takes place during a lesson. The teacher and students may also refer to the stated objective/standard again at the end of the lesson for a reflection on how the students met the learning objective.

### Descriptor 2: Sub-objectives are aligned and logically sequenced to the lesson's major objective.

Once the objective is clearly defined, the next step is to develop the necessary sub-objectives. The selection of appropriate sub-objectives depends on the needs of the students, the complexity of the objective and the content. There are three basic reasons for including sub-objectives:

1. To review **prior learning**
2. To teach a **new sub-skill**
3. To teach a **process** that supports the main objective

#### EXAMPLE 1:

The teacher says: "Our goal is to be able draw conclusions and make inferences in oral and written responses about ideas and information in texts, including:

- nonfiction works
- short stories/novels
- five-act plays
- poetry/epics
- film/visual texts

Today, we will focus on drawing conclusions in writing, using a poem, *The Sparrow*. Based on yesterday's lesson, what might this entail? How might we accomplish this objective? As you draw conclusions, how will you defend your thinking?"

This example demonstrates how the teacher plans questions for students to ensure their understanding of the objective and the focus for the lesson. The teacher will reference the objective and overarching goal or standard throughout the lesson, using questioning to bring students into the process.

#### EXAMPLE 2:

The teacher says: "Today we will be creating a graph that illustrates how classmates responded to a questionnaire about sports, using the pie, bar or line format. I have put together a rubric to assist you in completing this assignment."

When looking at the objective above, several sub-objectives could be identified. In reality, the needs of the students would determine what sub-objectives to include. For this example, there are a few sub-objectives that would probably be included in this lesson so that all students could be successful:

- To understand how to apply the pie, bar and line graph (prior learning)
- To be able to calculate results of surveys into percentages (prior learning)
- To be able to apply the rubric to the project (process)

EXAMPLE 3:

The teacher says: "Today we are going to write a paragraph about a character in the story we just read. First you will complete this graphic organizer. It will provide guidance in describing your character effectively. Next you can write the paragraph. Use this paragraph checklist when you do your final edit."

This objective is very complex. It requires the student's ability to do many things other than the main objective of writing a paragraph. To what degree the sub-objectives must be taught may vary. As one might expect, there are times when what appeared to be a sub-objective becomes the lesson's objective based on the students' needs. Here are a few of the identifiable sub-objectives for this objective:

- To apply a paragraph format (prior learning)
- To be able to apply the pre-writing graphic organizer (sub-skill)
- To be able to identify the characteristics of characters from a text (sub-skill)
- To be able to access each item on the checklist (process)

## Descriptor 3: Learning objectives are:

- **Consistently connected to what students have previously learned;**
- **Know from life experiences; and**
- **Integrated with other disciplines.**

This descriptor is about making connections in learning. It is important for teachers to connect new learning to prior learning so students are able to see learning as a continuum and to make real-life connections about how this learning impacts their lives. This connection can be done in a variety of ways. This descriptor is closely related to the descriptors under Motivating Students and Teacher Knowledge of Students that refer to relevancy to students' lives and the incorporation of their interests and cultural heritage.

EXAMPLE:

A teacher may model his/her thought process as he/she makes a connection to a specific topic and then leads students to do this through questioning. It may also be accomplished through group projects based on real-life scenarios. For example, students learning measurement may calculate the amount of carpet or paint needed to redecorate their room. Students learning about the Great Depression may research how policies from Roosevelt's New Deal continue to affect them today.

It is also important for teachers to lead students to make connections for how what they learn in one content area connects to another content area. For example, when measuring or creating graphs in science, a teacher may make connections to math with an emphasis on the math vocabulary students are learning. In literature classes, connections may be made for what is being read and a historical time period students may be studying in social studies. It is important to make such connections significant and meaningful to students.

## Descriptor 4: Expectations for student performance are clear, demanding and high.

This descriptor deals with creating learning objectives and expectations that are demanding and of high quality for all students. Whether the teacher has succeeded in doing so can be determined only by the student's response to the lesson. It is important to look at assessment and other diagnostic methods for determining what to teach. For an objective to be demanding and high for all students, a teacher may need to develop different activities and/or assessments for different levels of students within the class. It is important that all students are challenged by the learning objective.

This descriptor refers not only to clear expectations for what students are to do to support their learning, but also to clear expectations for procedures and student behavior during the lesson. For expectations to be clear, students should be provided a model for what they are to do. This may include the use of visuals, teacher or student modeling, anchor papers and rubrics to demonstrate how student work will be assessed, written steps the students are to follow when completing the assignment, etc. If students are working in groups, expectations for each group member, as well as the expectation for the group as a whole, should be clearly explained. Students need to clearly understand how they will be held accountable for individual work and group work. Procedures for obtaining materials for the group work, the expected noise level, where students may work, etc., should all be clearly explained. This descriptor connects to the Presenting Instructional Content descriptor, "modeling by the teacher to demonstrate his/her performance expectations," and the Grouping Students descriptor, "all students in groups know their roles, responsibilities and group work expectations."

### Descriptor 5: State standards are displayed and referenced throughout the lesson.

This descriptor deals with the importance of providing a visual display of the state standard or learning objective that can be referenced by the teacher and students throughout the lesson.

### Posting the Standard or Objective

Posting the state standards in the classroom provides a visual purpose for why students are learning what they are learning. However, it is not beneficial to post a standard that all students cannot see, is not referenced, or is not understood. Therefore, it is important for the teacher to reference the standard in language that students understand throughout the lesson to provide direction and focus. Many state standards are also the language of the state test. Therefore, it is important to post the standard as an opportunity to teach students vocabulary they will need to know to be successful. In some cases, teachers use pictures or symbols to expand meaning for them. This is especially true for lower-grade students, visual learners, and students not familiar with the English language. To derive full meaning from posting the standards, the following suggestions are made:

- Post the standards in **large enough print so that all students can read** them from their seats. By doing this, the teacher can reference them any time and know that the students are able to see and read them. Posting standards that can be read only by the teacher does not provide a learning tool for the students.
- Post the standards **using some visual formatting** such as webbing, mapping or any other meaningful graphic organizer. This supports students in making connections among the standards and other content areas. For example, a teacher may create a web for standards connected to what the students will be learning about World War II. The center of the web would reference World War II. The spokes or lines extending from the center would reference the sub-standards or objectives that will be part of the unit, such as significant individuals they will be studying, important battles, etc.
- Post anchor papers or **examples of exemplary student work** along with scoring rubrics to demonstrate how students will be assessed for meeting the standard(s). These exemplary pieces may be from former students or teacher-created examples.
- **Post standards for a specific unit** together in the classroom. By doing this, the teacher and/or students can follow the progression of sub-objectives for a particular unit and date the standards as they are learned. This method of posting standards can provide students with a clear direction for a new unit of study.
- **Provide students copies of standards** to keep in their notebooks, on which they can record when each is taught and mastered.

## Referencing the Standards

State standards are usually broad in scope. Before mastery of the standard can be accomplished, it is often necessary that students master many subordinate sub-objectives first. A metaphor provides an understanding of how the standards relate to teaching on a daily basis. For example, a state standard can be compared to the main idea of a story, while the daily lessons represent the supporting details. Therefore, by referencing the state standards, the student has an opportunity to relate the lesson to the "big picture" and to prior learning.

## Involving the Students

There are many ways in which students can be involved with the referencing process for the standards. The following suggestions have been effective in classrooms:

- A student is assigned the job of recording standards. After the lesson objective is identified, the student records a date on the section of the standard that is being addressed in the lesson. This method provides additional purpose for displaying the standard in a manner that the teacher and students can continually reference.
- Students may have the standards at their desks where they each individually record the date beside the standard(s) represented in the lesson for the day and reflect on how they met the standard at the conclusion of the lesson.
- Students record at the top of the assigned paper which standard(s) is or are being addressed during the lesson.
- Students may also engage in a think/pair/share activity during which time students reflect on and verbalize the meaning of the standard and how they met it during the lesson. This activity also connects to the Activities and Materials descriptors "provide time for reflection" and "provide opportunities for student-to-student interaction." By allowing students to pair/share, a teacher implements the descriptor under Grouping Students, "the instructional grouping of students also becomes varied."
- Some teachers record the standard(s) being addressed on each student assignment. This helps when recording scores in the grade book as well. The more a teacher can document when and how the standards have been taught, the more precisely a teacher can provide evidence for students' mastery of a standard. Parents, board members, principals and other constituents are becoming increasingly insistent that there be evidence that the standards have been effectively taught and mastered.
- Many schools are posting student work and identifying the standards that are represented in the displays throughout the school. By displaying student work related to the state standards, parents and other visitors understand and appreciate what students are expected to learn. Showing work in this way also develops a better understanding of how a complex set of state standards progresses.
- Finally, it is important to note that while some lessons entail multi-day involvement for students, in order to fully meet the expectations of this descriptor (and of the intent of the indicator as a whole), it is necessary for the teacher to create distinct and measurable objectives on a per-day basis. One of the most important reasons for this is illustrated in the next descriptor, which asks that students demonstrate mastery of the objective. By breaking up larger objectives into smaller measurable pieces, the teacher is able to fully capture student mastery on a consistent basis.

## Descriptor 6: There is evidence that most students demonstrate mastery of the objective.

This descriptor is the most important one of all. No matter what teachers do or do not do, if students do not learn the information, then it is a waste of time and effort. Teachers must focus on what students have learned as opposed to what they themselves have taught. Effective teachers plan formative assessments (verbal and/or written) that enable them to check for student mastery of the material taught and make modifications to their future lesson plans to meet the needs still evident in the student work.

In an effort to check for mastery in a given lesson, it is critical to plan so that mastery is possible. In other words, planning so that the objective is attainable in one lesson ensures that instruction is a scaffold for students. For multi-day assignments, there should still be a clear way to assess whether or not students showed mastery for each day's work. While the overall unit objective is still the over-arching goal for the lesson(s), the teacher needs to have a way to assess student understanding on a consistent basis. This can be done through backward planning from the overall "unit" goal to the sub-objectives that need to be achieved in order to master the final goal.

### SUGGESTED REFLECTION QUESTIONS ON STANDARDS AND OBJECTIVES

- How do you decide on the standards/objectives you will teach?
- How do you identify the sub-objectives for a lesson?
- How do you decide on the method you will use to communicate the standards/objectives to students?
- Why is it important to display the standard/objective for a lesson?
- Why is it important to reference that display throughout the lesson?
- How do you communicate your expectations to the students?
- How will you obtain evidence that most students have demonstrated mastery of the objective?

## Additional Resources


- Applebee, A. N., Adler, M., & Flihan, S. (2007). Interdisciplinary Curricula in Middle and High School Classrooms: Case Studies of Approaches to Curriculum and Instruction. *American Educational Research Journal*, 44(4), 1002–1039.
- Meece, J. L., Anderman, E. M., & Anderman, L. H. (2006). Classroom goal structure, student motivation and academic achievement. *Annual Review of Psychology*, 57, 487–503.
- Seidel, T., Rimmele, R., & Prenzel, M. (2005). Clarity and coherence of lesson goals as a scaffold for student learning. *Learning and Instruction*, 15(6), 539–556.


*CLICK HERE* to view "Standards and Objectives Training Module-1."

*CLICK HERE* to view "Standards and Objectives Training Module-2."

# MOTIVATING STUDENTS

This indicator focuses on a teacher's ability to organize and present the content in a manner that motivates students to learn. For a teacher to be able to develop these types of learning experiences, a teacher must have an in-depth knowledge of the students he/she teaches. Therefore, this indicator connects strongly to Teacher Knowledge of Students, Standards and Objectives, Presenting Instructional Content and Thinking.

## Exemplary Descriptors for Motivating Students

1. The teacher consistently organizes the content so that it is personally meaningful and relevant to students.
2. The teacher consistently develops learning experiences where inquiry, curiosity, and exploration are valued.
3. The teacher regularly reinforces and rewards effort.

For content to be personally meaningful to students, there must be a clearly communicated purpose for student learning. This descriptor shows a clear link between motivating students and standards and objectives. Students also need to understand why the content or skill being taught in a lesson is important for them to master and how their mastery of this will impact their own lives. Lessons that value inquiry, curiosity and exploration provide opportunities for students to generate questions and conduct their own research or explore to locate the answers. Finally, when students have opportunities to generate their own questions about a given topic, their motivation to learn is usually increased as the learning becomes student directed than teacher directed.

### EXAMPLE 1:

A teacher presents a lesson on immigration during the 1860s. She brings in current newspaper articles on immigrants and refugees moving to the United States. Students also interview individuals who have immigrated to the United States. These activities make the content studied relevant to the students' lives and personally meaningful. Students also have the opportunity to develop their own questions to ask during the interviews, which provide experiences that value inquiry. This example also provides a real-world application of immigration.

### EXAMPLE 2:

A lesson begins with students looking at a visual and generating a list of topics that may be the focus for the new unit of study. Once the class has identified the new learning (example: poverty-stricken nations), they develop a list of questions that will be addressed as the unit of study progresses. To promote ownership, student will put their initials next to the questions they developed. Questions are charted and as the unit of study progresses, connections are made to the student-generated questions.

### EXAMPLE 3:

A teacher presents a lesson on measurement. Students design a new school cafeteria applying the measurement skills taught. An architect speaks to the students and explains how measurement is used in his profession.

Teachers may reinforce and reward effort in a variety of ways. Students may be rewarded through verbal praise or recognition. A teacher may also use several student examples of work as a model for other students to follow. When a teacher effectively uses *Academic Feedback*, he/she is also reinforcing and rewarding effort by acknowledging students' responses with an explanation for why the response may be accurate or inaccurate. This type of feedback supports an environment in which students feel safe to take risks and respond to questions. In this way it is rewarding and reinforcing their efforts.

### SUGGESTED REFLECTION QUESTIONS ON MOTIVATING STUDENTS

- How do you organize the content of a lesson so that it is meaningful and relevant to the students?
- How do you develop learning experiences that provide opportunities for students to ask questions and explore?
- How do you reinforce and reward the efforts of all students?
- Why is it important for students to have opportunities to develop their own questions and explore for the answers?
- How does student motivation impact student achievement?

### Additional Resources


- Costa, Arthur L., & Kallick, Bena (Eds.). Habits of Mind Across the Curriculum: Practical and Creative Strategies for Teachers. Alexandria, VA: Association for Supervision and Curriculum Development, 2009.
- Hidi, S., & Harackiewicz, J. M. (2000). Motivating the academically unmotivated: A critical issue for the 21st century. *Review of Educational Research*, 70(2), 151–179.


*CLICK HERE* to view "Motivating Students Training Module."

## PRESENTING INSTRUCTIONAL CONTENT

This indicator deals with the method in which content is taught within a lesson. The use of visuals and a teacher's ability to clearly communicate performance expectations in a concise and logically sequenced manner are addressed by this indicator's descriptors. The use of visuals with examples, illustrations, analogies and/or labels are important tools to use when introducing new concepts and can lead students to mastery of specific skills in a more efficient manner. However, it may be that all of these are not included in one lesson. It is important that they are used effectively and appropriately for the content and students taught.

### Exemplary Descriptors for Presenting Instructional Content

Presentation of content always includes:

1. Visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson;
2. Examples, illustrations, analogies, and labels for new concepts and ideas;
3. Modeling by the teacher to demonstrate his or her performance expectations;
4. Concise communication;
5. Logical sequencing and segmenting;
6. All essential information; and
7. No irrelevant, confusing, or nonessential information.

## Descriptor 1: Visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson

The first item under this indicator refers to the effective use of visual materials to assist the learner in making connections with prior learning and in clarifying newly acquired concepts. Visuals that preview the lesson also provide students with a direction for where they are headed and what they will be doing. They support students in identifying and understanding the progression of the lesson. Based on these indicators, there are two main applications for graphic organizers or visuals:

1. Visuals that assist in the learning process
2. Visuals that organize information for the learner

It is important to note that internal summaries (mini-reviews within a lesson of what has been taught) may be provided visually or orally by the teacher and students. When a teacher continually reviews sub-objectives in order to connect to the next sub-objective, students are led to ultimately move towards mastery of the lesson objective. Internal summaries provide students opportunities to have concepts restated and to reflect within a lesson on what they are learning, as opposed to waiting for a review of all concepts at the end of the lesson. Teachers can lead students in providing these summaries through his/her questions and group discussions.

### EXAMPLE 1:

The lesson begins with the teacher quickly referencing the agenda for the lesson.

- Today.... (objective in kid-friendly language)
- What happened yesterday? (review and make connections to yesterday's lesson)
- I Do...
  - Model
  - Expectations
- We Do...
  - Practice with a partner
  - Present to your team
- You Do...
  - Try it!
  - Teacher check-in
- Time to reflect and close

This example contains simple wording to not only preview what will occur in the lesson and when, but invoke some curiosity as well by leaving out detailed "usual or routine" wording. The agenda is used to preview the organization of the lesson, but can also guide internal summaries throughout the lesson.

### EXAMPLE 2:

The teacher says: "Where are we on the agenda? What have we done so far to accomplish our objective (referencing the learning objective)? Based on the agenda, what is next? How do you think this will impact where we are relative to accomplishing our learning objective for this lesson?"

## Descriptor 2: Examples, illustrations, analogies, and labels for new concepts and ideas

Words, mental pictures and other clarifying techniques simplify and organize new information for the learner. Application of the methods listed in this descriptor enhances learning in the following ways:

1. **Examples**: When presenting a new concept, carefully selected examples help students to understand information. For example, during a lesson about metaphors, the teacher provided visual examples of metaphors from her own writing. She also modeled her thinking process as she created the metaphors. This type of example provided opportunities not only for students to view metaphors, but also to gain an understanding for how they were created within the teacher's writing.

2. **Illustrations**: Providing an illustration of what is being studied helps all learners, especially visual learners. For example, before dissecting a frog, students studied an illustration depicting the internal organs. The illustration also demonstrated how to cut into the frog. Teachers may also use paintings or photographs to provide illustrations of new concepts or historical time periods.

3. **Analogies**: There are times when analogies clarify information for learners. For example, to clarify the distances related to the solar system, a teacher introduced nine common spheres of similar proportions as the planets. She then took students out on the playground and had students arrange them at appropriate distances from the sun, making clear connections for how what they were doing related to distances within the solar system. In this example, students actually participated in the analogy. Another example of an analogy is the comparison of appropriate graphic organizers to the choosing of appropriate tools to hammer in nails or tighten screws. The teacher explains to students that graphic organizers are 'tools' to support their organization of material, and different organizers support different tasks.

4. **Labels**: Labels help clarify information. For example, students were having a difficult time writing complete sentences, so the teacher decided to have students label the parts of their sentences. Pictures with labels may also be used to introduce vocabulary, important people or new concepts. This type of labeling would be strong since it combines the use of illustrations and labels. During a study of the solar system, the teacher modeled for the students how to label planets. During a study of the circulatory system, a teacher modeled how to label the parts of the heart and identify the function of each part.

## Descriptor 3: Modeling by the teacher to demonstrate his or her performance expectations

The ability to model the use of new information and the teacher's expectations for student performance is one of the most important descriptors for this indicator. Effective modeling is not merely explaining or telling students about the strategy or new learning or about how to do it. Modeling requires thoughtful planning and the inclusion of a think-aloud that will give students the experience of the strategy so that they can better understand the thought process behind each step of the new learning.

The first tier of the model is showing students what the strategy would look like from a student's perspective and presenting the strategy as if the teacher is a student doing the strategy. The second tier of the model is the teacher's thought process (metacognition) as he/she goes through the strategy. During this think-aloud or metacognition, the teacher is asking critical questions of students about why certain steps or critical pieces are being included and why they are important to include. By explaining the strategy and questioning students about their understanding of it, teachers can best anticipate and meet the needs of their students.

An effective teacher must be able to model desired outcomes. In order to model effectively, the teacher must be able to do the following:

- Know exactly what the expected outcome is
- Identify the critical elements of the desired outcome
- Create clearly defined steps so learners can achieve the desired outcome
- Provide examples for how the completed project/assignment should look

## EXAMPLE: KNOW EXACTLY WHAT THE EXPECTED OUTCOME IS

A teacher explained to the students that the learning objective was for them to be able to identify the physical characteristics of two characters from a novel and compare and contrast their characteristics. She told the students they would be expected to create an illustration of two characters from a novel the class was reading and then complete a Venn Diagram to compare their characteristics. She chose two different characters to model her expectations and the thought process she went through in deciding how to draw the characters. She explained various ways the students could approach the project and provided clear criteria through the use of a rubric for how the finished project would be evaluated. She led the students to apply the rubric to her work as an additional way to ensure they understood her expectations for their work. She then modeled how she took the characteristics of the two drawings and used a Venn Diagram to organize the similarities and differences in the drawings. Students were able to clearly understand the expected outcome for the lesson and the expectations for their work.

## EXAMPLE: IDENTIFY THE CRITICAL ELEMENTS OF THE DESIRED OUTCOME

As the teacher modeled her work of the steps in the example above, she identified the elements or requirements for the student work. Using the rubric for the assignments, she identified each required element of the illustration and Venn Diagram on her examples. This provided students a clear understanding of what needed to be included in each assignment and how the elements would be evaluated.

## EXAMPLE: CREATE CLEARLY DEFINED STEPS SO LEARNERS CAN ACHIEVE THE DESIRED OUTCOME

When modeling the expectations for the assignment in the example above, the teacher clearly explained the order in which the students would need to complete the steps required for the assignment. First, they would need to select two important characters, with criteria for how to select these. Then students would need to identify specific characteristics of these characters that would be incorporated into their illustrations. The explanation would continue through each step. To support visual learners, the teacher may display a written list of the steps on the board or chart paper.

## EXAMPLE: PROVIDE EXAMPLES FOR HOW THE COMPLETED PROJECT/ASSIGNMENT SHOULD LOOK

As an integral component of modeling, the teacher should provide students with a model example of how an exemplary project or assignment should look upon completion in order to give students a tangible exemplar to strive for. The trigonometry teacher has given students an assignment to create three-dimensional models of various polyhedra and geodesic structures while adhering to specific criteria for assembly. The teacher provides examples of correctly assembled polyhedra that are available for students to view and examine that meet the requirements specified in the rubric for these structures.

## Descriptors 4–7: Concise information, logical sequencing and segmenting, all essential information, no irrelevant, confusing, or non-essential information

These descriptors relate to a teacher's knowledge of the content he/she is teaching and his/her ability to clearly explain the content to students in a logical manner. For this to occur, a teacher must first clearly define the learning objective for the lesson and then maintain the focus of the lesson on this objective, which may require teachers to redirect students' comments. The sequencing of the lesson relates to the sub-objectives that are taught within a lesson. Sub-objectives should be taught or reviewed in an appropriate sequence for the grade level and ability of the students. The segmenting of the lesson relates to the pacing of the lesson. An effective teacher will provide sufficient time for the introduction of the lesson, the instruction within the lesson, the student activities, and closure. Although these may be embedded within each other during a given lesson, the segmenting of the lesson allows sufficient time for each to take place so that students can have opportunities to master the learning objective. Therefore, these descriptors are closely connected to the descriptor, "the teacher displays accurate content knowledge of all the subjects he or she teaches," under Teacher Content Knowledge, and the descriptor, "pacing is appropriate, and sometimes provides opportunities for students who progress at different learning rates," under Lesson Structure and Pacing.

"All essential information" refers to everything necessary for students to accomplish or master what is being taught during the lesson. An example of irrelevant, confusing or non-essential information may be a teacher providing instruction focused on the events leading up to D-Day, interrupting the flow of the instruction to talk about his/her grandfather's experience after he returned from Vietnam. Although the information may be interesting, it is not relevant to the learning objective; therefore, it is irrelevant and non-essential. Confusing information may include the teacher including the causes of the Vietnam War and making no connections to the events leading up to D-Day.

### SUGGESTED REFLECTION QUESTIONS ON PRESENTING INSTRUCTIONAL CONTENT

- How do you decide on the types of visuals you will use during a lesson?
- Why is it important for the teacher to model his/her expectations for students?
- How do you plan for effective modeling during a lesson?
- How do students clearly know your expectations for their assignments and for what are they are to learn?
- When planning a lesson, how do you decide on the sequencing of the instruction within the lesson?
- When planning a lesson, how do you decide on the manner in which the different elements of the lesson will be segmented?
- How do you maintain focus in a lesson on the learning objective?

## Additional Resource

Donovan, M.S., Bansford, J.D. & Pellegrino, J.W. How People Learn (pdf). (1999) National Research Council, National Academy Press, pg. 13–15, 17.

*CLICK HERE* to view the "Presenting Instructional Content Training Module."

# LESSON STRUCTURE AND PACING

This indicator blends time and form as it applies to instruction. It addresses the effective segmenting of the lesson so that sufficient time is allocated to all parts of the lesson to best support student learning. Therefore, this indicator connects closely to the descriptor, "logical sequencing and segmenting," under Presenting Instructional Content.

## Exemplary Descriptors for Lesson Structure and Pacing

1. All lessons start promptly.
2. The lesson's structure is coherent, with a beginning, middle, end, and time for reflection.
3. Pacing is brisk and provides many opportunities for individual students who progress at different learning rates.
4. Routines for distributing materials are seamless.
5. No instructional time is lost during transitions.

## Descriptors Focused on Time/Pacing

The rubric indicator focuses on the following issues associated with instructional time:

1. Prompt start
2. Different learning rates
3. Seamless routines
4. Smooth transition

Starting promptly, building smooth transitions, and developing seamless routines can be done with practice and careful planning. The greatest challenge presented in this indicator is the ability to provide enough time so that all students of varying rates of learning can complete each learning task. Therefore, it is important that a teacher has knowledge of the various learning needs of his/her students.

When reviewing evidence from a lesson for these descriptors, the third descriptor, "pacing is brisk," refers to the efficient use of instructional time during the lesson, not to the speed of the lesson. Was appropriate time devoted to each element of the lesson? Did the lesson continue to flow or was there time wasted in which students were not focused or engaged in the learning? If the pacing is brisk, all students remain focused and engaged in learning throughout the lesson. Students do not experience "down time" while waiting on other students to complete assignments or on instruction that they have already mastered. Therefore, this descriptor connects to a teacher's use of student feedback to monitor and adjust instruction under Academic Feedback to ensure that the pacing of the lesson is brisk and meets the needs of all students.

EXAMPLE:

A teacher begins a lesson on the causes of the Revolutionary War with an explanation of the learning objective and a preview of the lesson (clear beginning). He then provides direct instruction by modeling how to complete a graphic organizer on the causes and effects of the war. Students are led to finish the organizer on their own as they read the text or other source of information. Students who are below grade level in reading continue to receive direct instruction from the teacher and assistance in completing the graphic organizer. Students who are on grade level or above complete the assignment independently and are provided additional activities to enhance their understanding of the causes (pacing provides opportunities for students who progress at different learning rates). Before students are dismissed, the teacher brings the class together again, reviews the objective and has students identify the causes and effects they included on their graphic organizers (closure). Students complete an exit ticket before leaving class in which they reflect on which cause of the war they believe had the greatest impact (time for reflection).

### SUGGESTED REFLECTION QUESTIONS ON LESSON STRUCTURE AND PACING

- How do you decide on the manner in which you will segment the different parts of a lesson?
- How do you plan for effective closure within a lesson?
- How do you plan for the pacing of a lesson that provides opportunities for students to learn that progress at different rates?
- How do you ensure that instructional time is used efficiently throughout a lesson so that all students remain actively engaged in learning?

### Additional Resource

Fisher, D., & Frey, N. (2011). *The Purposeful Classroom: How to Structure Lessons with Learning Goals in Mind*. Alexandria: ASCD.

*CLICK HERE* to view the "Lesson Structure and Pacing Training Module."

## ACTIVITIES AND MATERIALS

This indicator addresses the variety and appropriateness of activities and materials that a teacher chooses to implement during a lesson. By using a variety of materials and activities, teachers are able to address various learning styles and intelligences. Therefore, the criteria used by teachers in choosing materials and activities should be those that clearly support the lesson objectives and are related to the needs of the students. Therefore, this indicator is closely related to Standards and Objectives and Teacher Knowledge of Students. In order to plan appropriate activities and materials, a teacher must have knowledge of the needs and interests of the students.

### Exemplary Descriptors for Activities and Materials

Activities and materials include all of the following:

1. Support the lesson objectives;
2. Are challenging;
3. Sustain students' attention;
4. Elicit a variety of thinking;
5. Provide time for reflection;
6. Are relevant to students' lives;
7. Provide opportunities for student-to-student interaction;
8. Induce student curiosity and suspense;
9. Provide students with choices;
10. Incorporate multimedia and technology; and
11. Incorporate resources beyond the school curriculum texts.
12. In addition, sometimes activities are game-like, involve simulations, require creating products, and demand self-direction and self-monitoring.

The descriptors for Activities and Materials can be classified into three main categories. While these should not be scored together necessarily, it may be helpful for teachers and evaluators to compartmentalize them this way for a thorough understanding of this indicator.

### 1. Content-Related Descriptors

1. Support the lesson objectives
2. Are challenging
3. Elicit a variety of thinking
4. Provide time for reflection
5. Are relevant to students' lives

### 2. Student-Centered Descriptors

1. Sustain students' attention
2. Provide opportunities for student-to-student interaction
3. Induce student curiosity and suspense
4. Provide students with choices

### 3. Materials Descriptors

1. Incorporate multimedia and technology
2. Incorporate resources beyond the school curriculum texts
3. In addition, sometimes activities are game-like, involve simulations, etc.

When applying this indicator to a lesson, it is critical that evidence for the first descriptor exists. Therefore, this descriptor connects directly to the descriptors under Standards and Objectives. A teacher may incorporate a variety of activities and materials within a lesson, but if their use is not purposeful in supporting students in meeting the learning objective, then the purpose for their use may not be clear or appropriate.

As a teacher develops activities and materials that are challenging, it is important that they are challenging for all students as opposed to just a few. Therefore this descriptor relates closely to Teacher Knowledge of Students.

The descriptor, "incorporate resources beyond the school curriculum texts," relates to the use of materials beyond a textbook. A teacher may use manipulatives that are provided by the curriculum tool kits. These would still be considered resources beyond the school curriculum *text*. This may also include the use of photographs, novels, picture books, personal artifacts, etc.

The last descriptor under the exemplary category includes the word "sometimes." Therefore, the expectation would not be for all of these to be included all of the time.

When beginning to develop these skills, teachers may ask the questions below as they observe a lesson or after they teach a lesson themselves:

1. **Students' attention**: How will I maintain all students' attention during the lesson? (list)
2. **Student-to-student interaction**: How will I allow for meaningful student-to-student interaction? (list)
3. **Student curiosity**: How will I deliberately set the conditions for students to demonstrate curiosity?
4. **Choices**: How will I provide students with significant choices related to the content?
5. **Creating**: How will children create and self-monitor their own learning?

After answering these questions, teachers should always ask what impact each of these will have on student achievement and what will be the evidence for this.

## EXAMPLE 1: DESIGNING A VARIETY OF ACTIVITIES

A teacher assessed students and realized that they were experiencing difficulty in making inferences. Not only was this a critical reading comprehension skill, but it was also a skill tested on the standardized test. Her objective was: "By the end of this lesson, you will be able to identify details in text and use your own experiences to develop an appropriate inference." Next, she looked at the descriptors related to content when she began to design her lesson. She designed her lesson with several activities:

- Students were to work in pairs to identify details from the text that connected to the inference question asked.
- Each student would think of an experience or prior knowledge they had that connected to the text and then pair/share this with a partner.
- Each student would complete a graphic organizer with this information.
- Each student would write the inference and include a reflection on how the process had been supportive in making an appropriate inference.

After the activities were designed, the teacher used select descriptors to be certain that students were involved in the referenced activities:

1. Support: The activities supported the objective for students to make an inference.
2. Thinking: She determined that when students are asked to infer, they are thinking at a higher level. Questions she was sure to ask were: "How did you develop your inference? Why was it appropriate?"
3. Reflection: There was time for reflection in the lesson when the students were told to reflect on how the process had supported them.
4. Relevant: By using their own experiences and/or background knowledge, the lesson became relevant to the students since they had opportunities to make connections to the text.
5. Interaction: Students also had opportunities for student-to-student interaction when they paired/shared.
6. Curiosity: Student curiosity and suspense would be provided as students would continue reading text or conducting research to learn if their inference was correct.
7. Choices: Students were provided choices for the connections they would make to the text and the supporting details they would identify that connected to the inference question.

## EXAMPLE 2: PROVIDING STUDENTS WITH CHOICES

One teacher reflected upon each lesson after school by using the questions above. She noted that consistently she could not think of many instances when students made significant choices. The following week she added two opportunities for students to make significant content-related choices: 1) Students could develop a summary using any media; and 2) Students were able to choose whether to write prose or poetry for an assignment. During her reflection, she admitted that she saw some enthusiasm expressed by several of her students who were otherwise passive. In analyzing the student work, she found that several students who normally performed on a lower level were able to show mastery of the skill when provided choices for how they would meet the objective. She then began developing other ways to provide students with choices in future lessons. She found students were able to provide evidence of mastery in a way that supported their own strengths or intelligence.

### SUGGESTED REFLECTION QUESTIONS ON ACTIVITIES AND MATERIALS

- How do you decide on the types of materials you will use during a lesson?
- How do you decide on the types of activities you will use during a lesson?
- How do you develop activities that are aligned to the learning objective?
- Why is it important to provide opportunities for students to interact with other students during a lesson?
- Why is it important to plan activities that are challenging for students?
- Why is it important for students to reflect during the lesson?

## Additional Resources


- de Freitas, S. I. (2006). Using games and simulations for supporting learning. *Learning, Media and Technology*, 31(4), 343–358.
- Pahl, K., & Roswell, J. (2010). *Artifactual literacies: Every object tells a story*. New York: Teachers College Press.


*CLICK HERE* to view the "Activities and Materials Training Module."

# QUESTIONING

Questioning is an art form that reveals a great deal about a teacher's effectiveness. The rubric descriptors provide a basic framework for the types of questions to ask within a lesson and how teachers should lead students in responding to questions.

## Exemplary Descriptors for Questioning

1. Teacher questions are varied and high quality, providing a balanced mix of question types:
   - Knowledge and comprehension;
   - Application and analysis; and
   - Creation and evaluation.
2. Questions are consistently purposeful and coherent.
3. A high frequency of questions is asked.
4. Questions are consistently sequenced with attention to the instructional goals.
5. Questions regularly require active responses.
6. Wait time is consistently provided.
7. The teacher calls on volunteers and non-volunteers, and a balance of students based on ability and gender.
8. Students generate questions that lead to further inquiry and self-directed learning.

The descriptors for Questioning can be classified into two main categories:

## 1. Procedural Questioning Descriptors

Several of the descriptors are focused on simple procedural operations that are easy to develop. These descriptors are:

1. A high frequency of questions is asked.
2. Wait time is consistently provided.
3. The teacher calls on volunteers and non-volunteers, and a balance of students based on ability and gender.

EXAMPLE:

It may benefit teachers trying to include these descriptors in a lesson to write students' names on Popsicle sticks or strips of paper and pull a name to respond to questions asked. Teachers may also assign numbers to students and use a deck of playing cards to call on students by their numbers. Students may also choose classmates to call upon. These types of methods help a teacher avoid repeatedly calling on the same students or calling only on volunteers who may have their hands raised. Teachers may also have students respond to a partner before answering a question aloud for the whole class. This method can provide a way to hold each student accountable for formulating a response and sharing their answer with someone else. When providing wait time for students, it is important for the teacher to label this for students so that he/she may use the opportunity to teach students how to provide wait time for one another.

## 2. Content-Related Descriptors

Four descriptors listed for questioning are related to the intricate use of a variety of questions to support student learning. These indicators are:

1. Teacher questions are varied and high quality, providing a balanced mix of question types:
   - » Knowledge and comprehension;
   - » Application and analysis; and
   - » Creation and evaluation.
2. Questions are consistently purposeful and coherent.
3. Questions are consistently sequenced with attention to the instructional goals.
4. Students generate questions that lead to further inquiry and self-directed learning.

When a teacher effectively utilizes questions that are purposeful and coherent, then students' responses may be utilized as a formative assessment in determining which students have mastered the learning objective (Standards and Objectives).

For support in generating questions, refer to Bloom's Taxonomy. It is important to note how the use of higher-order questions will impact the evidence for the descriptors under Thinking.

Questions that support the instructional goals are an integral part of student learning. An observer in the classroom should be able to close their eyes and just listen to the questions and have a clear idea of what the objective for the day is. This type of purposeful and aligned questioning needs to be planned before every lesson.

The effective teacher does not limit the use of questions in a lesson to only teacher-generated questions, but guides students in generating questions that support their own learning. As students are led to generate their own questions, it is also important for them to have knowledge of the different question types. These can be modeled for them through the teacher's questions and through a purposeful teaching of Bloom's Taxonomy.

EXAMPLE:

When a teacher introduces a lesson, students may be led to complete a "KWL chart." By doing this, each student has the opportunity to generate questions that he/she wants answered as the content is being presented. Students may also generate questions about a topic they are researching. For example, students may be writing biographies on significant figures of the Civil Rights Movement. The teacher provides specific information that must be included in the biography but also allows students to generate questions they would like answered about the individual. Both sets of questions would guide the student's research. By providing opportunities for students to generate questions, teachers also develop learning experiences where inquiry is valued (Motivating Students) and provide students with choices (Activities and Materials).

### SUGGESTED REFLECTION QUESTIONS ON QUESTIONING

- How do you decide on the types and frequency of questions you ask during a lesson?
- Why is it important for teachers to ask higher-order questions during a lesson?
- How do you provide opportunities for all students to respond to your questions?
- How do you provide for wait time during a lesson?
- Why is it important to provide wait time?

### Additional Resources


- Armendariz, F., & Umbreit, J. (1999). Using active responding to reduce disruptive behavior in a general education classroom. *Journal of Positive Behavior Interventions,* 1(3), 152–158.
- Pagliaro, M. Menna. (2011). *Exemplary classroom questioning: practices to promote thinking and learning.* Lanham, Md.: Rowman & Littlefield Education.


*CLICK HERE* to view the "Questioning Training Module."

## ACADEMIC FEEDBACK

This indicator focuses on how teachers respond to students' comments and questions. The descriptors address the quality of the feedback in supporting student learning as opposed to feedback that informs students only of the accurateness of their responses. Additionally, these descriptors address how a teacher uses student feedback to make adjustments in instruction.

### Exemplary Descriptors for Academic Feedback

1. Oral and written feedback is consistently academically focused, frequent, and high quality.
2. Feedback is frequently given during guided practice and homework review.
3. The teacher circulates to prompt student thinking, assess each student's progress, and provide individual feedback.
4. Feedback from students is regularly used to monitor and adjust instruction.
5. Teacher engages students in giving specific and high-quality feedback to one another.

### Feedback Descriptors Focused on Quality

The checklist below provides information that helps teachers develop the ability to provide high-quality feedback. The rubric references "high-quality" feedback in two descriptors (1 and 5). Without consensus on what high-quality feedback is, the rubric cannot be scored accurately. There are many instructional leaders who feel that a classroom observer should be able to "guess" what the objective for the lesson is by simply listening to a teacher's feedback during a lesson. Such precision must be developed using the criteria below.

### Checklist for Determining Quality of Feedback:

- Feedback relates to the lesson objective or sub-objective.
- Feedback causes students to think.
- Feedback is specific.

- Feedback is timely.
- Feedback is varied to meet the unique needs of the students and classroom.

Descriptor 1 references the use of oral and written feedback. However, evidence for this descriptor may be present if the teacher consistently provides high-quality oral feedback as opposed to oral and written.

### EXAMPLE 1:

The objective of a lesson was: "Boys and girls, today you will learn about one way to form a paragraph. We formulate a topic sentence and at least three supporting sentences. Then we end the paragraph with a summary statement." She provided a graphic organizer after they collectively developed a topic sentence. While children wrote the supporting details independently, she provided feedback. The following feedback was recorded:

- "Marie, these are very nice sentences because they include strong details."
- "Henry, your first detail is a complete sentence. That's just great. Look at your second detail. What can we add to make a complete sentence?"
- "Louise, if you would like more inspiration, let's look at the story for paragraph details. Good. It's right there. I think you will find some great material for writing details."
- "Jamie, you have three details that will make a great paragraph. What will make a good summary statement?"

It is also important for teachers to model for students how to provide each other with high-quality academic feedback.

### EXAMPLE 2:

Following the same lesson objective as provided in the above example, after the students have completed their writing, the teacher pairs them for the purpose of conferencing on each other's writing. To ensure that students know her expectations for the conferences, she pairs with a student and models the questions and type of feedback she would provide to the student. Within this model, she explains that it is important for students to clearly explain why an area of the writing is strong and why another needs to be strengthened. She does this by providing high-quality feedback that is focused on the lesson objective of writing a topic sentence, supporting details, and a summary statement. Along with this model, the teacher may also include written feedback on the student's writing that is focused on the objective. For example, the teacher may provide starter phrases to guide the process such as "the topic sentence is strong because (fill in the blank)." (The teacher will model and provide examples of feedback that may be used. These examples may be on the board/chart for reference.) Students will also need to understand the criteria for successful work. This will also serve as a guide for providing appropriate feedback. The examples and criteria will ensure that the feedback is purposeful and focused on the work, not the "peer/student." Students will not automatically understand how to provide high-quality feedback to peers. Modeling what this looks and sounds like is crucial as students begin to experience this as a part of everyday instruction.

## Additional Resources


- Brookhart, Susan (2008). Feedback That Fits. *Educational Leadership*, 65, 54–59.
- Brookhart, Susan (2008). How to Give Effective Feedback to Your Students. Alexandria, VA: Association for Supervision and Curriculum Development.
- Shute, V. J. (2008). Focus on formative feedback. *Review of Educational Research*, 78(1), 153–189.


*CLICK HERE* to view the "Academic Feedback Training Module."

# GROUPING STUDENTS

This indicator deals with the instructional arrangements of the students during a given lesson. It focuses on how the students will be grouped for the instruction and activities of the lesson and how they will be held accountable for the work they are expected to complete.

## Exemplary Descriptors for Grouping Students

1. The instructional grouping arrangements (either whole class, small groups, pairs, or individual; heterogeneous or homogeneous ability) consistently maximize student understanding and learning efficiency.
2. All students in groups know their roles, responsibilities, and group work expectations.
3. All students participating in groups are held accountable for group work and individual work.
4. Instructional group composition is varied (e.g., race, gender, ability, and age) to best accomplish the goals of the lesson.
5. Instructional groups facilitate opportunities for students to set goals, reflect on, and evaluate their learning.

## Structuring Learning Groups

Indicators 1, 2, 3 and 4 focus on structuring learning groups. For teachers learning how to implement grouping that enhances learning, these descriptors are a good place to start when planning.

When placing children into groups, the teacher must be able to assure that every student is actively engaged. This can be done by clearly defining the roles and responsibilities.

### EXAMPLE: ROLES AND RESPONSIBILITIES

During an observation, a teacher placed students into learning groups. Each group is expected to illustrate the results of the experiment and present recorded data. She assigned four roles to groups of four students. The roles of "time manager" and "encourager" had no relevant responsibilities, nor were they held accountable for the content. When she walked around, about half the students were not engaged in the activity.

As the teacher, a question to consider when planning grouping activities could be: *can a student hide*? In other words, the purpose of grouping within a lesson is to provide opportunities for students to process the content. If grouping activities/structures are not set up so that all students are held accountable for the content, how will mastery of the objective be accomplished? Roles and responsibilities are not to be confused with "jobs." Jobs in a classroom are important, but are more of a procedural routine than opportunities for providing equal time for every student to process the content being taught and for every student to be held accountable for the task assigned. Materials Manager, Encourager, Recorder, and Time Keeper are jobs that ensure that procedures are in place.

The next time this teacher tried grouping, she looked at the learning objective for the lesson, identified all of the components needed for successful mastery and developed the group roles based on these components. By focusing on the learning objective, she was able to develop meaningful roles and divide the "work load" evenly. In addition, the teacher modeled the expectations for each role and provided a visual identifying the responsibilities for each individual role. There are four members in each group and the following structure guided the roles and responsibilities, assuring that all students are accountable for the content. Students were numbered 1, 2, 3, 4 and then the experiment was divided into steps or pieces.

Student number 1 thinks aloud to complete the first piece and records the data. At this point, the group may take about 1 to 2 minutes to share reflection/thoughts, with each student sharing about the same amount of time (number 2 shares, then number 3 and finally 4). Moving on to the next step, number 2 takes the lead, thinking aloud and recording the information. Again, the group will reflect on what was done, each sharing about the same amount of time. This process

### EXAMPLE: ROLES AND RESPONSIBILITIES - *Continued*

continues until all of the experiment is complete. What occurs is that each student plays an equal role in getting the experiment complete and all are held accountable for the content. This time when the teacher circulated among the groups she noted full participation.

## Questions to Ask When Designing Accountability

- What outcome do I expect students to accomplish by the end of each group session?
- How will I provide quality feedback on progress? By group? By individual?
- How will I record this information in a grade book and/or student record?
- How will I use this information as a formative assessment?
- Is this work expectation appropriate for small groups? Whole group? Individual?
- Are all students held accountable for the work or can a student "hide"?
- How will I ensure equal participation and accountability for all students?

### EXAMPLE: GROUP WORK EXPECTATIONS AND GROUPS AND INDIVIDUALS ARE HELD ACCOUNTABLE

A teacher implemented group learning using centers in her classroom. She often did this, but complained about the noise. When her classroom was observed, it was evident how she could increase proficiency. Children moved from one center to another when the bell rang. There was no expectation for what the students were to accomplish at the centers. At once, she realized how important it was to have clear expectations and accountability for what students did in groups independently. By answering the questions above, she was able to construct reasonable outcomes for each center. She also provided feedback on student performance as well. A chart was also placed at each center. This chart provided ongoing feedback to students about what they needed to accomplish. The teacher was also able to provide valuable information to the parents as well.

### EXAMPLE: INSTRUCTIONAL GROUPS FACILITATE OPPORTUNITIES FOR STUDENTS TO SET GOALS, REFLECT ON AND EVALUATE THEIR LEARNING.

Before conducting an experiment, students are asked to individually develop a hypothesis, then, as a team, determine which hypothesis will help guide the experiment. Students will also work to set a goal or end result for their hypothesis. This will be done by using a structure where number 1 suggests an outcome and all team members write it down, number 2 suggests an outcome and all team members write it down, etc. This continues until the teacher sees that all groups have four to five thoughts written down. At the end of the lesson, the students will reflect on/review their hypothesis and outcomes to determine next steps. This will be done individually, and then reviewed as a team with students taking turns presenting their reflection to the group. The group may choose one reflection and plan for "next steps" from the team to present to the class.

There must be a rationale for why students are grouped together. There are a variety of grouping patterns, including:

- Whole group (common when a new concept, skill or theme is introduced)
- Heterogeneously grouped by ability (common when students are processing or practicing content for mastery). In this structure, the group is balanced as much as possible, having a high student, a middle high student, a middle low student and a low student. It is also important to consider discipline, special needs, ethnicity, gender and communication skills when forming groups. Due to the thought that goes into this process, these students may stay together for a period of time (for example, five to seven weeks) before new teams are formed.

- Homogeneously grouped by ability (common when pulling together a small group to work on a specific skill in which students have demonstrated a weakness, or bringing together higher-level students who need to be challenged)
- By demographic balance
- By interest
- By ability to focus
- By ability to communicate
- By language acquisition levels

Regardless of how the grouping arrangements are developed, the grouping should *maximize* the learning for all students. The ability of a teacher to group students in this manner is directly connected to his/her knowledge of the students and their individual needs, interests and abilities.

### SUGGESTED REFLECTION QUESTIONS ON GROUPING

- How do you decide on the instructional grouping of students during a lesson?
- Why is it important to think about how you group students? That being said, what are things you consider when forming groups (or partners) and why?
- How do you hold groups and individuals accountable for work completed within a group?
- How do you decide on the roles individuals will have when working in groups?
- How do you model or communicate your expectations to students for their own work and that of the group?
- How do you assess the performance of groups and individuals when it is completed in a group setting?

### Additional Resources

- Kagan, Spencer & Kagan, Miguel. Kagan Cooperative Learning. San Clemente, CA: Kagan Publishing, 2009.
- Wild, Monique D., Amanda S. Mayeaux, and Kathryn P. Edmonds. TeamWork: Setting the Standard for Collaborative Teaching, Grades 5-9. Stenhouse and NMSA, 2008.

*CLICK HERE* to view the "Grouping Students Training Module."

## TEACHER CONTENT KNOWLEDGE

This indicator addresses the teacher's knowledge of the content he/she is teaching, as well as their ability to implement strategies to support student learning. Also addressed in this indicator is the teacher's ability to connect the content being taught to other ideas and concepts.

### Exemplary Descriptors for Teacher Content Knowledge

1. Teacher displays accurate content knowledge of all the subjects he or she teaches.
2. Teacher regularly implements a variety of subject-specific instructional strategies to enhance student content knowledge.
3. The teacher regularly highlights key concepts and ideas, and uses them as bases to connect other powerful ideas.
4. Limited content is taught in sufficient depth to allow for the development of understanding.

## EXAMPLE 1: TEACHER REGULARLY IMPLEMENTS A VARIETY OF SUBJECT-SPECIFIC INSTRUCTIONAL STRATEGIES TO ENHANCE STUDENT CONTENT KNOWLEDGE

A teacher introduces response journals and models how to respond to open-ended questions, make connections to background knowledge, share feelings, justify opinions, etc.

Students then read and create their own responses in their notebooks or journals. The teacher then asks students to share with the class and/or collects the journals, reads each student's journal entry and gives feedback. The teacher and students discuss how they can use this strategy on their own and how it facilitates understanding and critical thinking.

## EXAMPLE 2: TEACHER REGULARLY IMPLEMENTS A VARIETY OF SUBJECT-SPECIFIC INSTRUCTIONAL STRATEGIES TO ENHANCE STUDENT CONTENT KNOWLEDGE

A teacher implements the FOIL method as a mnemonic device for teaching a lesson on the multiplication of binomials. The teacher describes the FOIL method to students as the acronym used to remember how to multiply the four terms of the product. The teacher explains that the "F" in FOIL stands for "first" and that this represents the multiplication of the first terms of each binomial. The "O" in FOIL stands for "outside" and this represents the multiplication of the first term of the first binomial and the second term of the second binomial. The "I" in FOIL stands for the multiplication of the "inside" terms, the second term of the first binomial and the first term of the second binomial. The "L" in FOIL stands for the multiplication of the "last" terms of each binomial. The teacher and the students review the strategy and how they can use this method generally when multiplying algebraic expressions, thereby enhancing their mathematical content knowledge.

## EXAMPLE 3: TEACHER HIGHLIGHTS KEY CONCEPTS AND CONNECTS TO OTHER POWERFUL IDEAS

A teacher is conducting a lesson on immigration in the 1860s and relates immigration from that time period to present day. News articles about immigrants and refugees are presented during class. Students select someone they know who has immigrated to the United States to interview. Comparisons are made between immigrants of the 1860s and immigrants of today (reasons for immigrating, countries of origin, experiences, etc.). By connecting immigration of the 1860s to immigration of the present day and having students interview immigrants, and debate the impact of immigrants in their community, the teacher has highlighted key concepts and connected them to more powerful ideas.

## EXAMPLE 4: TEACHER HIGHLIGHTS KEY CONCEPTS AND CONNECTS TO OTHER POWERFUL IDEAS

Groups of students are studying the circulatory and respiratory systems. During their study of how the two systems function and support each other, they also study diseases of the two systems. The teacher has students utilize the information they have gained to develop plans for a healthy lifestyle that could help prevent heart attacks, lung cancer, etc. Students present their plans to other students and to the school administration. They also use the plans to develop a healthy menu for the school cafeteria.

By leading students to connect to these other ideas and concepts, a teacher provides evidence of his/her knowledge of the content being taught and ability to utilize a variety of subject-specific instructional strategies to teach the content. Students are involved in this process. Teachers may make connections while teaching, but the content becomes more internalized when students are able to take the concept and connect it to other powerful ideas, making it meaningful/purposeful.

### SUGGESTED REFLECTION QUESTIONS ON TEACHER CONTENT KNOWLEDGE

- How do you prepare yourself to teach (insert the specific topic taught)?
- How do you develop or select instructional strategies to teach (insert the specific topic being taught)?
- How do you decide on the ways in which you will connect the content being taught to more powerful ideas?
- Why is it important to provide opportunities for students to highlight key concepts and connect to other powerful ideas?

### Additional Resources

- Ball, D. L., Thames, M. H., & Phelps, G. (2008). Content knowledge for teaching: What makes it special? *Journal of Teacher Education*, 59(5), 389–407.
- Phelps, G. Just knowing how to read isn't enough! Assessing knowledge for teaching reading (2009). *Educational Assessment, Evaluation, and Accountability*, 21, 137–154.

*CLICK HERE* to view the "Teacher Content Knowledge Training Module."

## TEACHER KNOWLEDGE OF STUDENTS

This indicator deals with how well a teacher knows his/her students and their learning styles and interests. Therefore, it is closely connected to the indicator Motivating Students.

### Exemplary Descriptors for Teacher Knowledge of Students

1. Teacher practices display an understanding of each student's anticipated learning difficulties.
2. Teacher practices regularly incorporate student interests and cultural heritage.
3. Teacher regularly provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught.

Descriptors 1 and 3 address a teacher's ability to meet students' learning needs. These descriptors connect closely to the descriptor "pacing is brisk," and provide many opportunities for individual students who progress at different learning rates under Lesson Structure and Pacing. Descriptor 2 deals with a teacher's ability to connect the content being taught to the interests and background of the students. Therefore, these descriptors relate closely to the descriptor "The teacher consistently organizes the content so that is personally meaningful and relevant to students" under Motivating Students.

Differentiated instruction may include activities to address auditory, visual and kinesthetic learning styles or it may include providing students with choices in assignments that relate to the multiple intelligences. It may also mean that teachers provide students with extended time to complete assignments or abbreviate assignments based on student need.

## EXAMPLE:

The teacher is introducing two-digit multiplication set in simple word problems. The lesson begins with the teacher posing the question, "What is the meaning of multiplication?" Students record their thoughts on dry-erase boards. The teacher calls "show me" and all students hold up their boards. Responses are discussed before moving into the lesson. Before presenting the lesson, the teacher puts this problem on the board: 6 x 34. The teacher then asks the students, "What would you do to solve this problem?"

Knowing that students struggle with this concept, the teacher opened the lesson with the questions above to assess understanding as well as provide opportunities for students to experience various methods of addressing the problem. Students are given time to work through the problem with their shoulder partner, recording the work on a dry-erase board. Each pair shares their work with the other pair in the team (small group) and the team decides on one method of working the problem to present to the class. (Teams are formed, mixed by ability to maximize peer support and/or mastery.) The teacher chooses one student from each team to present their method of solving the problem. Based on student need, the teacher uses manipulatives and builds models (cubes/base 10 strips, drawings) to show the process of multiplication visually.

Students are provided problems, set in real-life scenarios, for continued guided and independent practice. These problems are solved using the manipulatives and talking through the process with a partner. Students complete two or three problems independently, knowing that the manipulatives are available if needed.

## SUGGESTED REFLECTION QUESTIONS ON TEACHER KNOWLEDGE OF STUDENTS

- How do you identify the learning styles of your students and incorporate these into your lessons?
- Why is it important to consider multiple learning styles when presenting instruction?
- How do you identify the interests of your students and incorporate these into your lessons?
- How do you provide differentiated instructional methods within your lessons?

### Resource

McTighe, J., & Brown, J. L. (2005). Differentiated instruction and educational standards: Is detente possible? *Theory into Practice*, 44(3), 234–244.

*CLICK HERE* to view the "Teacher Knowledge of Students Training Module."

## THINKING

Thinking is something that can and should apply to every observation of a teacher. To assess thinking, certified TAP evaluators are not looking for each thinking behavior to occur in every lesson, but instead are looking for the occurrence of all behaviors over the course of multiple observations and evaluations during the school year. This may mean that one lesson has two types of thinking during an observation visit. On another visit the teacher uses a different type, and so on. It is important to note that this indicator states over the course of multiple *observations*, not over the course of multiple *evaluations*. Therefore, the multiple observations would be the regular support provided by leadership team members in the form of team teaching and observing. When the teacher is formally evaluated, the types of thinking observed in previous lessons would impact the score assigned to this indicator. Although, if thinking has been taught at one point in the year and has not been referenced or used since that time, the evaluator considers that information when assigning a score. If thinking has been thoroughly taught, there will be evidence of that type of thinking being referenced or students utilizing that process in the classroom. It is important to note that for students to apply the type of thinking referenced, the teacher must have taught the thinking students need to apply.

Before we explore the different types of thinking, it is important to have a basic understanding of how a teacher should go about teaching these thinking skills. Research shows that there are four main ways that a teacher can "teach" thinking, and these are illustrated below:[1]

### MODELING

» Emulating others is a basic way of learning.
» Model what you expect. Do not be a "do as I say, not as I do" educator.

### QUESTIONING

» Higher-level questioning
» Learners must be presented with problems and questions, the answers to which are not apparent.

### STRUCTURING

» Clear expectations
» Thinking happens throughout the school day, across content areas, and over extended periods of time.
» Opportunities for interaction
» Address all learning styles

### RESPONDING

» Wait time
» Accepting without judgment
» Clarify when you don't understand
» Academic Feedback
» Empathizing

1. A. Costa (Ed.), *Developing minds: A resource book for teaching thinking* (Rev. ed., Vol. 1). Alexandria, VA: ASCD.

As you think about what research says about teaching thinking, consider what indicators and/or descriptors are on the TAP Instruction Rubric that align with these expectations. For example: "wait time" is in the Questioning indicator and "modeling" is in Presenting Instructional Content. By purposefully implementing the TAP Instruction Rubric and reflecting upon the specific indicators that align with the research, teachers can effectively teach thinking.

## Exemplary Descriptors for Thinking

Over the course of multiple observations, the teacher consistently and thoroughly teaches all four types of thinking:

1. Analytical thinking where students analyze, compare and contrast, and evaluate and explain information;
2. Practical thinking where students use, apply, and implement what they learn in real-world scenarios;
3. Creative thinking where students create, design, imagine, and suppose; and
4. Research-based thinking where students explore and review a variety of ideas, models, and solutions to problems.

The teacher regularly provides opportunities where students:

5. Generate a variety of ideas and alternatives;
6. Analyze problems from multiple perspectives and viewpoints; and
7. Monitor their thinking to ensure that they understand what they are learning, are attending to critical information, and are aware of the learning strategies that they are using and why.

Descriptors 1–4 discuss the four types of thinking that TAP teachers are expected to implement regularly and consistently. These thinking types were compiled based on 20 years of research by the most prominent psychologists in America.

## Descriptor 1: Analytical thinking where students analyze, compare and contrast, and evaluate and explain information.

Most teachers focus only on analytical thinking in their classrooms. This type of thinking demands that students analyze, evaluate and explain phenomena. Analyzing, evaluating and explaining information is a skill that applies to all disciplines and is critical for an informed and educated society.

### EXAMPLES: ANALYTICAL THINKING

**Language Arts** - In language arts, a class is reading Charlotte's Web. To teach analytical thinking, the teacher will "unlock" his/her thought process. The teacher will not only label his/her thinking, but teach the questions that he/she asks him/herself when thinking through the task.

For example, the students will compare and contrast Wilbur's personality traits with those of Charlotte. Using analytical thinking, the first thing I ask myself is 1) What do I know about each character? The teacher may use a Venn diagram or Thinking Map to document thinking. The next question to ask myself is 2) Looking at my thinking (lists, thinking map or Venn), what do I see that is the same? 3) What is different? Teachers ask the question and think aloud the process for answering the question (think aloud).

If students have already been taught research-based thinking for fiction text, students may use those questions to go back to the text and find specific character traits or evidence from the text to support their thinking. Questions students may use to guide that research-based thinking are 1) In what part of the book do I remember reading about Wilbur/Charlotte (beginning, middle and end)? 2) What event was happening in that part of the text? 3) What was happening right before or right after?

**Math** - Students evaluate different methods for solving word problems and explain the method chosen.

### EXAMPLES: ANALYTICAL THINKING - *Continued*

**Art** - Students are studying a specific artist's work. They are asked to observe a painting and identify one thing in the painting or element of the painting that could be removed that would not alter the artist's intent. Students may also be asked to explain what the painting reveals about the artists' attitude towards life, friends, nature, etc.

Understanding that teachers must teach the questions that are necessary to guide student thinking is crucial if we are going to develop independent thinkers. Providing the model of how those questions are answered in your head in order to arrive at an answer or solution will foster thinking processes.

## Descriptor 2: Practical thinking where students use, apply, and implement what they learn in real-world scenarios.

Many students often do not see the connections between what they learn in school and how they can use this knowledge in the real world. Teachers who integrate practical thinking into their teaching are able to design learning activities where students are forced to use and apply concepts and ideas that they learn. In this way, this descriptor connects to the descriptor "the teacher consistently organizes the content so that it is personally meaningful and relevant to students" under Motivating Students.

### EXAMPLES: PRACTICAL THINKING

**Language Arts** - Persuasive Writing - Students are fed up with the cafeteria food and have decided to do something about it. First, they research the requirements for a healthy lunch. Next, they design a menu for two weeks. Finally, they create the shopping list and pricing list to ensure that the lunches they are requesting are affordable. After working through each of these issues, the students develop a persuasive paper and present their proposal to the school administration.

**Math** - A class is working on measurement. The teacher informs students that they will be building tree and plant boxes throughout the school. These planters will be various shapes and sizes and will require students not only to measure and cut different pieces of wood to build them, but also to estimate the sizes of the correct plants and bushes to put in them.

## Descriptor 3: Creative thinking where students create, design, imagine, and suppose.

Children have wonderful imaginations and love to create, design and invent things. In school, however, they are often told to follow strict rules, adhere to criteria and provide the one correct answer, not necessarily the most creative one. By teaching students to create, design and imagine, teachers prepare students for the flexible and creative thinking they will need to exercise later in life.

It is important to provide the questions necessary to guide thinking and teach students how by thoroughly modeling the process. Teaching creative thinking is more than showing students an example and students recreating what they see.

### EXAMPLES: CREATE AND DESIGN

**Language Arts** - Students create visual images of what may be occurring in a story or poem that lacks pictures by applying what they previously know about figurative language or the author's purpose. They may also imagine a character's appearance or the elements of a setting. Again, students are applying previous knowledge or experiences to create a visual even if it is in their head.

**Math** - Students apply knowledge they have learned during a unit on measurement and geometry to design a new playground for the school.

**Physical Education** - Students create a football or basketball play during a physical education class by applying what they have learned about other plays and rules of the games.

**Music** - Students create a song or develop new words for an existing melody based on their knowledge of notes or lyrics and the message they want to convey through the song.

## Descriptor 4: Research-based thinking where students explore and review a variety of ideas, models, and solutions to problems.

In the midst of the information age, students need to know not only how to research to find information, but also how to review a variety of ideas and come to solutions that are well-supported and make sense. As educators, we have to teach students how to locate information to support their thinking. Again, it is about what you ask yourself in your head and how you work through the question to arrive at a solution or plan. Research-based thinking is more than projects that are assigned.

### EXAMPLES: RESEARCH-BASED THINKING

**Language Arts** - Students read multiple versions of Cinderella stories. Using evidence from each version that provides support for what a character did and said, students identify a character trait that is well-supported with evidence from multiple readings.

**Social Sciences** - During a study of the Jim Crow Laws, students also conduct a study of Civil Rights laws. They then compare and contrast the two different groups of laws, identifying strengths and weaknesses. After comparing and contrasting the laws, they debate the need for present laws to ensure that all citizens have equal rights, and create the wording for these laws.

## Descriptor 5: The teacher regularly provides opportunities where students generate a variety of ideas and alternatives.

One element of sound thinking and creativity is the ability to generate many ideas and consider many alternatives and possibilities. This type of thinking is rarely employed in classrooms, but there are some simple ways for students to generate various ideas and consider alternatives in nearly every subject.

### EXAMPLE: GENERATE IDEAS

Before beginning a unit on deserts, a teacher asks students to independently list on a sheet of paper all the desert plants, animals and attributes of the desert that they can identify.

### EXAMPLE: GENERATE ALTERNATIVES

When solving a fraction problem, a math teacher asks students to generate different ways to solve the problem and different ways to represent their answers.

### EXAMPLE: GENERATE IDEAS AND ALTERNATIVES

A science teacher has students conduct experiments about which variables lead to maximum plant growth. One group tests different types of light, one tests different types of liquids, one tests different types of soil and one combines what students hypothesize to be the best of each. In this example, students not only generate ideas about which variables to test, but also consider many alternative explanations.

## Descriptor 6: The teacher regularly provides opportunities where students analyze problems from multiple perspectives and viewpoints.

This descriptor, much like Descriptor 5, applies to many disciplines. As children get older, if they do not learn to consider other peoples' points of view and are not provided with opportunities to look at problems from several perspectives, their thinking is severely restricted. Getting students to consider multiple perspectives provides them opportunities to learn how those different from themselves may view problems and solutions.

### EXAMPLES: MULTIPLE PERSPECTIVES AND VIEWPOINTS

**Social Sciences** - A class studies the Civil War by reading letters from soldiers from the North and South.

**Art** - An art class studies predominant symbols in Western art and Eastern art and compares and contrasts the two art forms.

**Physical Education** - A physical education and math class work together to conduct a survey on children's favorite sports, then analyze the data by grade level, gender and race. They also discuss the factors affecting the data to further develop their understanding of the similarities and differences between grade levels, gender and race.

## Descriptor 7: Monitor their thinking to ensure that they understand what they are learning, are attending to critical information, and are aware of the learning strategies that they are using and why.

Research has shown that monitoring and thinking about one's thinking leads to better academic performance, behavior and on-task engagement. There are many ways in which teachers can be explicit about reminding children what learning strategy to use, when to use it and how students can begin to use it on their own.

## EXAMPLE: MONITORING THINKING

When reading, a teacher stops at critical points in the passage and reminds students that good readers summarize what they have read. She models how to summarize by modeling her own thinking and later calls on students to engage in this behavior.

Over the course of the year, the teacher models her thinking out loud for students. As the teacher reads, she says, "I've read a lot here. I better stop to summarize so I can remember and use what I am learning."

The teacher makes her thinking explicit in the same way when she clarifies words she does not understand. She reminds students as they read that good readers clarify words that they do not know or understand. As she reads, she stops and says to herself, "I don't understand this word, let me look for context clues, let me ask a partner, let me go to the dictionary, or let me make a note of it and return to it later."

## SUGGESTED REFLECTION QUESTIONS ON THINKING

See "Suggested Reflection Questions on Problem Solving," the next indicator.

### Additional Resource

A. Costa (Ed.), *Developing minds: A resource book for teaching thinking (Rev. ed., Vol. 1). Alexandria, VA: ASCD.*

*CLICK HERE* to view the "Thinking Training Module_Beginner."

*CLICK HERE* to view the "Thinking Training Module_Expert."

# PROBLEM SOLVING

Developing multiple skills in problem solving enriches the learner's ability to manage complex tasks and higher levels of learning. By providing opportunities for students to practice many different approaches to solving problems, the teacher empowers the student with an important life skill.

## Exemplary Descriptors for Problem Solving

Over the course of multiple observations the teacher implements activities that teach and reinforce six or more of the following problem-solving types:

1. Abstraction
2. Categorization
3. Drawing Conclusions/Justifying Solutions
4. Predicting Outcomes
5. Observing and Experimenting
6. Improving Solutions
7. Identifying Relevant/Irrelevant Information
8. Generating Ideas
9. Creating and Designing

For a teacher to receive an exemplary score in problem solving, he/she must implement activities that teach and reinforce six or more of the problem-solving types over the course of multiple observations. It is important to note that this indicator states over the course of multiple *observation*s, not over the course of multiple *evaluations*. Therefore, the multiple observations would be the regular support provided by leadership team members in the form of team teaching and observing. When the teacher is formally evaluated, the types of problem-solving activities observed in previous lessons would impact the score assigned to this indicator.

## Descriptor 1: Abstraction

Abstraction is the process of leaving out of consideration one or more properties of a complex object so as to attend to others. Abstraction is also applied when students take the key components or ideas occurring across given examples and use those ideas to solve a new problem. Abstraction can also be viewed as the opposite of concrete thinking.

### EXAMPLES: ABSTRACTION

**Language Arts** - After reading *Rumplestiltskin, Hansel and Gretel* and *Little Red Riding Hood*, students will create a list of four qualities that define "fairytaleness." They select one of the qualities and develop their own fairy tale incorporating this quality. Students may also explain how fairy tales would be different without this one quality.

**Math** - Students solve math problems using mental math as opposed to using concrete objects. (Students must think abstractly in order to solve the problem.)

**Art** - Students study a variety of paintings by Impressionist artists or by a single artist. Students identify the characteristics of Impressionism, or of a single artist's work that identifies that type of painting or artist. Students select one of the characteristics and create a painting with this characteristic as the single focus.

## Descriptor 2: Categorization

Students analyze information, classify it and sort it into meaningful categories.

### EXAMPLES: CATEGORIZATION

**Language Arts** - Students develop categories in which to sort vocabulary words. The categories may be common meanings, spelling patterns, parts of speech, etc.

**Math** - Students are studying polygons. They first define the essential characteristics of a polygon, and then sort a list of figures into examples and non-examples of polygons. Essential characteristics they identify are closed, plane figure, straight sides, more than two sides, two-dimensional and line segments.

**Science** - Students place an assortment of animal pictures into appropriate animal groups, such as mammal, reptile, amphibian, etc. While doing this, they may verbally explain to the teacher or to their peers why they categorized the pictures in the manner in which they did.

## Descriptor 3: Drawing Conclusions/Justifying Solutions

Students draw conclusions based on data presented to them in many forms, viewpoints, perspectives and quality.

De Bono (1994)[2] states that there are three levels of conclusions at which the mind can arrive:

1. A specific answer, idea or opinion;
2. A full harvesting of all that has been achieved, including, for example, a listing of ideas considered; and
3. An objective look at the "thinking" that has been used.

### EXAMPLE 1: DRAWING CONCLUSIONS

Examples of each of De Bono's three levels are represented below:

**Language Arts**

1. After reading and discussing the events leading up to the Boston Tea Party, students will write a paragraph expressing which one event had the greatest impact on causing this insurrection.
2. Students will debate and then decide which one event had the greatest impact on causing this insurrection. They will then prepare a written summary with careful notes of all major points.
3. Students examine the viewpoints of various characters in a novel or story they are reading. Based on these viewpoints and students' own experiences, they draw conclusions as to why characters acted as they did during the story.

After hearing debate and deciding which one event had the greatest impact on causing this insurrection, students will write a reflective paragraph as to the process they went through in making their final decision.

### EXAMPLE 2: DRAWING CONCLUSIONS

**Math** - Student teams shop for the best buy on candy at the local grocery. Students gather prices, size/weight of packages, and desirability of the candy. Each team computes price per ounce/gram and where each falls on a 1–10 desirability scale. They then analyze their data and determine which candy is the best buy for their team and provide evidence for their choice. This activity also requires students to justify a solution.

**Math** - Students have studied a variety of geometric shapes. They apply their knowledge of these shapes to various types of architecture and draw conclusions as two why the architect selected the geometric shapes utilized.

2. De Bono, Edward. (1994). *De Bono's Thinking Course*. New York, NY: Facts on File.

## Descriptor 4: Predicting Outcomes

Students make predictions, and then test the validity of those predictions.

### EXAMPLES: PREDICTING

**Language Arts** - Students are reading *A Rat's Tale*, by Tor Seidler, about two young rats from different socio-economic levels whose true love must endure all kinds of adventures and challenges. When Montague decides to save the wharf, students predict and record in their reading journals some possible scenes that may unfold in the story and whether Montague will be successful.

**Math** - When students are presented with a new concept, such as finding the area of a closed figure, students are asked to predict the formula they may use based on their knowledge of perimeter, etc.

## Descriptor 5: Observing and Experimenting

Children observe, record, code and measure. Children develop hypotheses, gather instruments, and then collect and analyze data.

### EXAMPLES: OBSERVING AND EXPERIMENTING

**Science/Math** - After a study of yearly weather patterns, students will keep daily weather records for one month, noting the date, type of weather, temperature and amount of precipitation. They will create their own rain gauges to measure the precipitation. At the end of the month, they will determine the median and mean for temperature and precipitation. Using this data and their knowledge of yearly weather patterns, they will hypothesize whether the medians and means for the next month will be the same, higher or lower. At the end of the second month, students will again analyze their data, compare it to the previous month, and either confirm or refute their hypotheses.

**Language Arts** - During a unit on figurative language, students review a poem in order to identify similes and metaphors. They also describe the visual images the similes or metaphors provide them as the reader and use these images to explain the poet's purpose for use of the figurative language.

**Math** - During a unit on measurement, students are given the task of rearranging their classroom so space is used in the most efficient and effective manner possible, and meets the needs of the students and teacher. Students measure the perimeter and area of the classroom. They also measure objects and furniture that will be placed in the classroom. Based on their analysis of the measurements, and the needs of the students and teacher, they design a new arrangement for their classroom.

## Descriptor 6: Improving Solutions

Children are given a solution to a problem and asked to suggest methods for improving it.

### EXAMPLES: IMPROVING SOLUTIONS

**Language Arts** - Students have read a series of *Nate the Great* mysteries. There is a discussion of weak and strong endings. Pairs of students choose one to reread together that they feel has a weak ending. Together they rewrite the ending to give a better explanation that solves the mystery.

**Social Studies** - Students studying World War II may choose a specific battle and develop ways it could have been more effectively planned by the losing side to change the outcome.

### EXAMPLES: IMPROVING SOLUTIONS - *Continued*

**Math** - Students are provided various ways to solve a multiplication word problem. They analyze each method and then select the method that is most efficient to utilize.

**Physical Education** - During a unit on basketball, students watch videos of various plays and develop ways to make them more successful.

## Descriptor 7: Identifying Relevant/Irrelevant Information

Students are given relevant and irrelevant information needed to solve a problem. They identify relevant information and use that information to solve a problem.

### EXAMPLES: IDENTIFYING RELEVANT/ IRRELEVANT INFORMATION

**Language Arts** - Students reread the fairytale *Goldilocks*. They are then asked to fill in a "T-chart" with evidence from the story that is relevant or irrelevant to whether or not Goldilocks is a criminal and should be arrested. They then render their verdict.

**Math** - When solving word problems in math, students identify information that is necessary and unnecessary to use in developing their solution.

## Descriptor 8: Generating Ideas

Children are given ill-defined problems and taught to look for analogies, to brainstorm, and generate idea lists, and create representations to come up with viable solutions.

### EXAMPLES: GENERATING IDEAS

**Science/Social Studies** - Students are in small groups and are presented with the following information after the study of the geography of the Southwest U.S. and the water cycle in science: "It is the year 2050. The Colorado River, which in the past has been a major source of water to Southern California, has dried up. How can we replace this critical source of water?"

Students will generate as many possible solutions as they can, order them from most effective to least, and provide reasoning for deciding which would be their first and last choices.

**Language Arts** - Students are working on a descriptive writing assignment. They brainstorm ideas or descriptive words to use in their writing.

**Math** - Students are provided several models for solving word problems. As they apply these models, they identify the best model or plan that works for them and for the word problem type.

**Science/Health** - During a study of diseases that affect the respiratory and circulatory systems, students brainstorm ideas for informing adults in their school of the importance of a healthy lifestyle.

## Descriptor 9: Creating and Designing

Children are asked to create or design a product, experiment or problem for another student to solve or evaluate (e.g. video, cartoon strip, presentation, software application, etc.).

### EXAMPLES: CREATING AND DESIGNING

**Language Arts** - Students read *The Legend of Jimmy Spoon* by Kristina Gregory. Since this book lacks a map, students will create one showing the locations Jimmy visits with his adopted Shoshone tribe. They can begin with a generic map that includes Utah, Idaho, Montana and Wyoming to trace Jimmy's travels throughout the book.

**Math** - Students create tutorials in PowerPoint to teach younger students basic information about the continents. Presentations must be at their partner's reading level and include a mini-quiz at the end.

## The Link between Thinking and Problem Solving

These last two indicators, Thinking and Problem Solving, are closely connected to each other. In fact, effective problem solving is impossible without the proper thinking technique behind it. One simple way to remember this is that thinking is the process and problem solving is the product. Analytical thinking is one of the thinking processes that is needed to effectively categorize. For example, students would need to know how to compare and contrast (one type of analytical thinking) in order to create a Venn diagram (classify and sort into categories).

The strong link between these two indicators has a profound effect on teachers and evaluators alike. Instead of simply counting the number of activities that students work on during a lesson, an experienced evaluator would check to see if the thinking that is necessary for the students to be successful at the activity has been thoroughly taught to the students. This is one of the reasons why the Problem Solving indicator begins with the language: "The teacher implements activities that teach and reinforce…"

### SUGGESTED REFLECTION QUESTIONS ON THINKING AND PROBLEM SOLVING

- How do you plan for activities and/or assignments that teach students different types of thinking or problem solving?
- Reflect on the specific activities and/or assignments utilized within the lesson and then identify the type of thinking and/or problem solving each taught. This type of reflection will provide a means for assessing a teacher's understanding of analytical, practical and research-based thinking and the types of problem solving referenced under this indicator.
- How have you been supporting students' ability to think and problem solve with your instruction?
- What types of thinking and problem solving have you thoroughly taught to your students?

## Additional Resources


- Eberly, B. & Stanish, B. (1996). CPS for Kids: A Resource Book for Teaching Creative Problem-Solving to Children. Waco, TX: Prufrock Press.
- Kuhn, D., & Pease, M. (2008). What needs to develop in the development of inquiry skills? *Cognition & Instruction*, 26(4), 512–559.


*CLICK HERE* to view the "Problem Solving Training Module."

## » TEACHER RESPONSIBILITIES SURVEYS

As previously mentioned, the details of the fourth domain, *Responsibilities*, are flexible based on the expectations for the teachers in each project. However, below are recommended responsibilities surveys for master, mentor and career teachers.

The responsibilities surveys should be introduced at the beginning of the year to all teachers. It is recommended that TAP schools come back to these surveys at least one more time before the end of the year to make sure all teachers understand their own expectations, and the expectations of the master and mentor teachers who support them.

### Teacher Responsibilities Surveys: Master Teacher

| | Performance Standard | Exemplary (5) | Proficient (3) | Unsatisfactory (1) |
|---|---|---|---|---|
| Staff Development | 1. The master teacher leads the design and delivery of research-based professional development activities for his or her cluster group. | Regularly | Sometimes | Rarely |
| | 2. The master teacher consistently presents new learning in cluster that is supported with field-tested evidence of increased student achievement. | Regularly | Sometimes | Rarely |
| | 3. The master teacher models new learning in cluster meetings and in classrooms throughout the year demonstrating how to effectively implement the skill developed in cluster meetings. | Regularly | Sometimes | Rarely |
| | 4. The master teacher is a resource, providing access to materials and research-based instructional methods to his or her cluster group members. | Regularly | Sometimes | Rarely |
| | 5. The master teacher works closely with cluster team members to plan instruction and assessments during cluster development time. | Regularly | Sometimes | Rarely |
| | 6. The master teacher guides and reviews the cluster members' growth plans. | Regularly | Sometimes | Rarely |

**Note: Career teachers are to respond to Items #1-13. Mentor teachers and administrators who are completing this survey should respond to Items #1-22.**

| Teacher Responsibilities Surveys: Master Teacher - *Continued* | | | | |
|---|---|---|---|---|
| | **Performance Standard** | **Exemplary (5)** | **Proficient (3)** | **Unsatisfactory (1)** |
| **Instructional Supervision** | 7. The master teacher provides specific evidence, feedback, and suggestions during coaching identifying areas of reinforcement and refinement. | Regularly | Sometimes | Rarely |
| | 8. The master teacher advances the career and mentor teacher's knowledge of state and district content standards and the TAP Rubrics. | Regularly | Sometimes | Rarely |
| **Mentoring** | 9. The master teacher observes and guides the mentor teacher's professional relationships and responsibilities to career teachers. | Regularly | Sometimes | Rarely |
| | 10. The master teacher guides, supports, and monitors the growth plans of career and mentor teachers. | Regularly | Sometimes | Rarely |
| | 11. The master teacher identifies resources for career and mentor teachers that enhance instructional planning, assessment design, and classroom management. | Regularly | Sometimes | Rarely |
| | 12. The master teacher provides ongoing follow-up and support (e.g. demonstration lessons, team teaching, observations with feedback) to career and mentor teachers. | Regularly | Sometimes | Rarely |
| **Community Involvement** | 13. The master teacher actively supports school activities and events. | Regularly | Sometimes | Rarely |
| **Note: The remaining items, #14-22, are to be completed by mentor teachers and administrators only.** | | | | |
| **School Responsibilities** | 14. The master teacher works with other leadership team members in developing appropriate school and cluster plans to target student academic and teacher instructional needs. | Regularly | Sometimes | Rarely |
| | 15. The master teacher leads and supports the analysis of school and student achievement data to identify strengths and weaknesses and make suggestions for improvement. | Regularly | Sometimes | Rarely |

## Teacher Responsibilities Surveys: Master Teacher - *Continued*

| | Performance Standard | Exemplary (5) | Proficient (3) | Unsatisfactory (1) |
|---|---|---|---|---|
| School Responsibilities cont. | 16. The master teacher communicates and reflects the visions and decisions of the TAP Leadership Team. | Regularly | Sometimes | Rarely |
| | 17. The master teacher assists the administrators in inducting new teachers into the TAP school environment and processes. | Regularly | Sometimes | Rarely |
| Growing and Developing Professionally | 18. The master teacher develops and works on his/her Individual Growth Plan (IGP), which includes new learning based on school goals, self-assessment, and feedback from observations. | Regularly | Sometimes | Rarely |
| | 19. The master teacher includes activities on his/her IGP to enhance content knowledge or pedagogical skills in order to increase his/her proficiency. | Regularly | Sometimes | Rarely |
| Reflecting on Teaching | 20. The master teacher thoughtfully assesses the effectiveness of his/her instruction, as evidenced in cluster by the new learning modeled and the student work presented from his/her field tests. | Regularly | Sometimes | Rarely |
| | 21. The master teacher considers the varied strengths and weaknesses and personal/cultural differences of adult learners through communications and actions that promote effective teaching with all cluster members. | Regularly | Sometimes | Rarely |
| | 22. The master teacher plans, offers, and implements specific alternative actions to improve teaching. | Regularly | Sometimes | Rarely |

**Comments (optional, and not part of the score):**

| Teacher Responsibilities Surveys: Mentor Teacher | | | | |
|---|---|---|---|---|
| | **Performance Standard** | **Exemplary (5)** | **Proficient (3)** | **Unsatisfactory (1)** |
| **Staff Development** | 1. The mentor teacher assists the design and delivery of professional development activities for his/her cluster group as needed. | Regularly | Sometimes | Rarely |
| | 2. The mentor teacher provides follow-up (e.g. observations, team teaching, and/or demonstration lessons) that supports/models how to use the ideas and activities learned in cluster. | Regularly | Sometimes | Rarely |
| | 3. The mentor teacher is a resource, providing access to materials and research-based instructional methods to his/her cluster group and/or mentee. | Regularly | Sometimes | Rarely |
| | 4. The mentor teacher works closely with cluster team members to plan instruction and assessments during cluster development time. | Regularly | Sometimes | Rarely |
| **Instructional Supervision** | 5. The mentor teacher advances the career teacher's knowledge of state and district content standards and the TAP Rubrics. | Regularly | Sometimes | Rarely |
| | 6. The mentor teacher's feedback during coaching specifically defines the areas of reinforcement and refinement. | Regularly | Sometimes | Rarely |

**Note: Career teachers are to respond to only Items #1-11. Master teachers and administrators who are completing this survey should respond to Items #1-21.**

## Teacher Responsibilities Surveys: Mentor Teacher - *Continued*

| | Performance Standard | Exemplary (5) | Proficient (3) | Unsatisfactory (1) |
|---|---|---|---|---|
| Mentoring | 7. The mentor teacher provides opportunities/support for the career teacher/mentee through team planning and team teaching. | Regularly | Sometimes | Rarely |
| | 8. The mentor teacher serves as a resource for curriculum, assessment, instructional, and classroom management strategies and resources. | Regularly | Sometimes | Rarely |
| | 9. The mentor teacher guides and coaches career teachers/mentees in the development of their growth plans. | Regularly | Sometimes | Rarely |
| | 10. The mentor teacher observes and coaches mentees and/or career teachers to improve their instruction and align it with the TAP Rubrics. | Regularly | Sometimes | Rarely |
| Community Involvement | 11. The mentor teacher actively supports school activities and events. | Regularly | Sometimes | Rarely |
| | **Note: The remaining items, #12-21, cannot be answered by career teachers. They are to be completed only by master teachers and administrators who work with the mentor teacher.** | | | |
| School Responsibilities | 12. The mentor teacher participates and supports the analysis of school achievement data to isolate school strengths and weaknesses in order to make suggestions for improvement. | Regularly | Sometimes | Rarely |
| | 13. The mentor teacher accepts leadership responsibilities and/or assists peers in contributing to a safe and orderly school environment. | Regularly | Sometimes | Rarely |
| | 14. The mentor teacher participates in the setting of school and cluster goals. | Regularly | Sometimes | Rarely |
| | 15. The mentor teacher communicates and reflects the visions and decisions of the TAP Leadership Team. | Regularly | Sometimes | Rarely |
| | 16. The mentor teacher supports the master teacher during development time in cluster meetings by providing individual support to career teachers. | Regularly | Sometimes | Rarely |

## Teacher Responsibilities Surveys: Mentor Teacher - *Continued*

| | Performance Standard | Exemplary (5) | Proficient (3) | Unsatisfactory (1) |
|---|---|---|---|---|
| Growing and Developing Professionally | 17. The mentor teacher develops a yearly plan/growth plan for new learning based on analyses of school improvement plans and goals, self-assessment, and input from master teacher and principal observations. | Regularly | Sometimes | Rarely |
| | 18. The mentor teacher selects targeted content knowledge and pedagogical skills to enhance and improve his/her knowledge. | Regularly | Sometimes | Rarely |
| Reflecting on Teaching | 19. The mentor teacher makes thoughtful and accurate assessments of his/her lessons' effectiveness and the extent to which they achieved their goals. | Regularly | Sometimes | Rarely |
| | 20. The mentor teacher considers strengths and weaknesses, as well as personal and cultural differences, of adult learners as evidenced in his/her communications and actions that promote effective teaching with all cluster members. | Regularly | Sometimes | Rarely |
| | 21. The mentor teacher provides specific actions to improve his/her teaching. | Regularly | Sometimes | Rarely |

**Comments (optional, and not part of the score):**

## Teacher Responsibilities Surveys: Career Teacher

| | Performance Standard | Exemplary (5) | Proficient (3) | Unsatisfactory (1) |
|---|---|---|---|---|
| Growing and Developing Professionally | 1. The career teacher is prompt, prepared, and participates in cluster meetings, bringing student artifacts (student work) when requested. | Regularly | Sometimes | Rarely |
| | 2. The career teacher appropriately attempts to implement new learning in the classroom following presentation in cluster. | Regularly | Sometimes | Rarely |
| | 3. The career teacher develops and works on a yearly plan for new learning based on analyses of school improvement plans and new goals, self-assessment, and input from the master/mentor teacher and principal observations. | Regularly | Sometimes | Rarely |
| | 4. The career teacher selects specific activities, content knowledge, or pedagogical skills to enhance and improve his/her proficiency. | Regularly | Sometimes | Rarely |
| Reflecting on Teaching | 5. The career teacher makes thoughtful and accurate assessments of his/her lessons' effectiveness as evidenced by the self-reflection after each observation. | Regularly | Sometimes | Rarely |
| | 6. The career teacher offers specific actions to improve his/her teaching. | Regularly | Sometimes | Rarely |
| | 7. The career teacher accepts responsibilities contributing to school improvement. | Regularly | Sometimes | Rarely |
| | 8. The career teacher utilizes student achievement data to address strengths and weaknesses of students and guide instructional decisions. | Regularly | Sometimes | Rarely |

**Comments (optional, and not part of the score):**

# COACHING BEFORE AND AFTER EVALUATIONS

TAP schools cannot expect to simply "evaluate" themselves to greatness. While the cluster time each week is focused in part on the instructional areas that the leadership team identifies as needing support, there is also a key ingredient that is also a part of supporting teacher learning: the pre- and post-conferences. Within the TAP process, there are ample opportunities before and after evaluations to provide coaching and feedback to the observed teacher. The following pages will discuss the pre- and the post-conference, and what part they play in improving teacher quality on TAP campuses.

## » THE PRE-CONFERENCE

An important point to remember is that the pre-conference is an opportunity to build a rapport with the teacher. The TAP evaluation process is not a "gotcha"; it is designed to provide support and encourage reflection and professional growth.

The TAP pre-conferences should take place one to two school days prior to announced formal observations. The purpose of the pre-conference is two-fold. First, this conference provides the observer an opportunity to ask questions and begin collecting evidence for the upcoming lesson. Second, the pre-conference allows the observer to begin the coaching process and address any issues that may negatively impact the lesson. The pre-conference may last 10–20 minutes or longer if needed, and also allows the teacher time to ask clarifying questions about the TAP Teaching Standards.

The following are examples of questions that the observer may plan to ask in a pre-conference, keeping in mind the goals mentioned above.

### General Questions

- Tell me about the lesson I will observe.
- What do you expect students to know and be able to do at the end of the lesson?
- What kind of background do the students need to have for this lesson?
- Tell me about any challenges or specific areas of the rubric that you are currently working to strengthen.

### Standards/Objectives

- How will you check for student mastery in the lesson?
- How will the learning objective be communicated to students?
- How does this lesson relate to the content standard?
- How do you plan to connect the lesson to previous learning?

### Motivating Students

- How will you make the lesson relevant to students?

### Presenting Instructional Content

- Talk about the visuals that will be used in the lesson to maximize student learning.
- How will you model performance expectations for students?
- How will internal summaries be used to strengthen understanding for students?

### Lesson Structure and Pacing

- Talk about the lesson structure (beginning, middle, end).
- Talk about classroom procedures.
- How is the lesson structured for students that may progress at different learning rates?

### Activities and Materials

- How do the activities relate to the objective?
- How will you provide time during the lesson for student reflection?

### Questioning

- How will you question students during the lesson to ensure questioning at various levels of Bloom's Taxonomy?
- How will you call on students to respond during the lesson?

### Academic Feedback

» Talk about the feedback that will be provided to students during the lesson.

### Grouping Students

» Talk about the grouping that will be used in the lesson to maximize student learning.

### Teacher Content Knowledge

» Talk about the strategies that will be used during the lesson to maximize student understanding.

### Teacher Knowledge of Students

» Talk about any anticipated learning difficulties that may occur during the lesson.

### Thinking/Problem Solving

» What type(s) of thinking will be evident in the lesson?

» How will students apply this thinking during the lesson?

### Closure

» Is there anything I can help you with before the lesson?

» Is there anything else you would like me to know before the lesson?

*CLICK HERE* to view the "Coaching Training Module."

*CLICK HERE* to view a sample pre-conference. Once you arrive on the "Lessons by Grade Level: 5th Grade" page, select the video titled, "5th grade Math Quadrilateral Lesson Pre-conference."

## » THE POST-CONFERENCE

While the TAP Rubric is used to evaluate teachers' lesson planning and instruction, the rubric's primary purpose is to provide the basis of coaching and other support teachers receive for their own professional growth. This support should be provided in numerous ways by members of the leadership team, including the modeling of specific indicators in cluster and in teachers' classrooms and the post-conference.

The purpose of the post-conference is to provide teachers the opportunity to self-reflect on their lesson with guidance and support from the leadership team member who conducted the evaluation. This guidance should be provided through the use of leading questions by the evaluator, along with the identification of an area of reinforcement (relative strength of the lesson) and an area of refinement (relative area of improvement). Therefore, the focus of the post-conference is on two indicators or descriptors from the rubric (one for the reinforcement and one for the refinement), as opposed to multiple areas. By focusing on just two areas, teachers have the opportunity to segment their own learning with support from a master or mentor teacher. Examples of coaching questions corresponding to each indicator on the rubric can be found in the purple boxes in the section, "Explanation of TAP's Teaching Skills, Knowledge and Responsibilities Performance Standards."

## » HINTS AND QUESTIONS FOR CHOOSING REINFORCEMENT AND REFINEMENT OBJECTIVES

When choosing areas of reinforcement and refinement from the TAP Rubric, members of the leadership team should ask themselves several guiding questions to ensure that a teacher's professional growth will have the maximum impact on the achievement of his/her own students.

1. Which areas on the rubric received the highest scores (reinforcements) and the lowest scores (refinements)?
2. Which of these areas would have the greatest impact on student achievement?
3. Which of these areas would have the greatest impact on other areas of the rubric?
4. In which area will the teacher have the most potential for growth? For example, with new teachers it might be better to focus on developing objectives and sub-objectives instead of improving a teacher's ability to teach problem solving.
5. Make sure that the reinforcement is not directly related to the refinement. It is important that teachers see their area of strength as separate from their area needing improvement.
6. Choose a refinement area for which you have sufficient and specific evidence from the lesson to support why the teacher needs to work in this area.
7. Select refinement topics with which you have personal knowledge and teaching experience. There is nothing worse than telling a teacher they need to alter their practice and then not being able to provide specific examples for how this can be done.
8. Understand the teacher's capacity when identifying an area of refinement. In other words, where will you get the biggest bang for your buck?
9. Remember—a reinforcement should be only to reinforce the teacher. Do not hedge this part of the post-conference with qualifying statements such as "it could have been even better if," or "next time you could also do…" Teachers need to hear what they are effective at, and have it be left at that.

When developing the post-conference plan, consider identifying the area of refinement first. This will ensure that the reinforcement and refinement do not overlap.

**Steps to follow when selecting areas of reinforcement and refinement:**

1. Brainstorm three to four indicators that stand out as possible areas of refinement or reinforcement.

*For example, Questioning, Grouping, Activities and Materials*

2. Identify the specific descriptor within each indicator identified. (This is still part of the brainstorming phase.)

*For example,*

- *Questioning - wait time*
- *Grouping - most students participating in groups are held accountable for group work and individual work*
- *Activities and Materials - elicit a variety of thinking*

3. Look for similarities or trends between the indicators/descriptors identified.
   - Ask yourself which, if any, of the descriptors impact the others identified?
   - Knowing the teacher, which of these, if given a model, would have the greatest impact on the teacher's instruction?
   - What other indicators will be impacted if this indicator/descriptor is targeted? This actually provides rationale and anticipated results.

4. Identify the indicator and descriptor that will be the identified area of refinement or reinforcement.

# » POST-CONFERENCE PLAN

It is important to note that a post-conference does not begin with a presentation of the scores, but with coaching questions that lead to the identification of the areas of reinforcement and refinement through reflection. At the end of the first sample is a full post-conference with all of these elements included. It is suggested that all handbook users read the text of the sample post-conference and then watch the sample. *Note: all samples are for training purposes only and are included as coaching tools, not necessarily 'perfect' samples.

## Conference Introduction/Greeting

- **Greeting/Set the tone.** This time should be used to put the teacher at ease.
- **Establish the length of the conference (approximately 40 minutes).** Assure the teacher that you respect his/her time and have set a limit for the conference.
- **Review conference process.** Review the format for the conference with the teacher so he/she knows what to expect.
  *Example: Good afternoon. It was great for me to get to visit your classroom today and observe your lesson. Our purpose in meeting today is for professional growth. We will spend time discussing your lesson with a focus on your instruction and how the students were involved with the lesson. The ultimate goal will be to develop ideas on how to enhance student achievement.*
- **Ask a general impression question (e.g., "How do you think the lesson went?").** This allows the teacher to begin the post-conference by self-reflecting on his/her lesson.

## Reinforcement Plan

- **Reinforcement objective: Use specific language from the rubric to develop the objective.**
  *Example: By the end of the conference, the teacher will be able to explain how she plans for the types and frequency of questions that she asks during a lesson. This objective include specific language from the indicator Questioning.*

- **Self-reflection question:** Prompt the teacher to talk about what you want to reinforce. Utilize a question that includes specific language from the rubric, which can lead the teacher to reflect on the indicator you have identified as his/her area of reinforcement as it relates to the lesson
  *Example: When you plan a lesson, how do you decide on the type and frequency of questions that you will ask?*

- **Identify specific examples from the script about what teacher did relatively well.** It is critical that the leadership team member leading the post-conference provides specific examples for the lesson of when the teacher incorporated descriptors from the indicator being reinforced.
  *Example: You asked a variety of questions throughout the lesson to check for student understanding. You asked numerous questions on the knowledge and comprehension level that led students to review previous learning as they identified the elements of a pictograph and defined mean, mode, median and range. You also asked them to define vocabulary within the lesson's aim, which allowed you to restate the aim using their response. As you progressed through the lesson, you continually asked students to explain how they arrived at their answers and to explain their classmates' responses. This type of questioning moves students to a deeper understanding of the content being taught as they must justify their thinking. You also asked questions that required students to evaluate the purpose and advantages of using a pictograph.*

» **Recommend action to continue practice.** Encourage the teacher to continue including descriptors from the reinforced indicator in his/her future lessons.
*Example: Continue to incorporate a variety of questions in your lessons that are purposeful and coherent and require students to think beyond the knowledge and comprehension level. This type of questioning can lead students to a deeper understanding of the content and provide opportunities for them to internalize the learning. Provide some rationale by communicating other areas of the rubric that are impacted.*

» **Elicit feedback to explain why the skill is critical to student learning.** Use questioning to lead the teacher to reflect on the importance of including this indicator in his/her lessons and how the teacher can continue to strengthen this area.
*Example: How can you model your questions in such a way as to lead students in developing questions themselves? Why is it important for students to generate questions? How can this lead to more self-directed learning that positively impacts student achievement?*

## Refinement Plan

» **Refinement objective:** Use specific language from the rubric to develop the objective.
*Example: By the end of the conference, the teacher will be able to explain how she plans for the pacing of a lesson that provides sufficient time for each segment and provides for a clear closure. This objective includes specific language from the indicator Lesson Structure and Pacing.*

» **Self-reflection question:** Ask a specific question to prompt the teacher to talk about what you want him or her to improve. Utilize a question that includes specific language from the rubric, which can lead the teacher to reflect on the indicator you have identified as his/her area of refinement as it relates to the lesson.
*Example: When developing lessons, how do you decide on the pacing of the lesson so sufficient time is allocated for each segment?*

» **Identify specific examples from the script about what to refine, with a model of concrete suggestions for how to improve.** It is critical that the leadership team member leading the post-conference provides specific examples from the lesson to support the indicator being refined. This is the most important element of the plan because it models a strong example and labels why it is a strong example. This provides support for the teacher as they apply the model to future lessons.
*Example: You began the lesson with an explanation of the lesson's aim and an overview of the lesson. Modeling for students how to analyze a pictograph followed and then students were to work in groups to read a pictograph and complete questions on a worksheet. You mentioned earlier that you wanted students to be able to work in groups and then report their findings. However, there was not sufficient time for this to occur during the lesson. As you modeled how to analyze a pictograph, students could have worked with their group members to answer your questions prior to your providing the answer, then they could have reported to the class their findings. This would have still allowed you to model, but would have also allowed students to work together to analyze the pictograph. Students who may not have required this review could have worked independently in a group to analyze their own pictograph while the rest of the class participated in your modeling. This would have also allowed you to differentiate the pacing of the lesson to provide for students who progress at different learning rates. This lesson could also have been segmented into two different lessons. Your modeling with class participation could have been one lesson and then the group activity could have been the next day's lesson. This type of segmenting would also have provided sufficient time for more students to master the lesson's objective and for you to provide a clear closure based on the lesson's aim, along with your evaluation question.*

» **Guided practice:** This is an opportunity for the teacher to talk through the model provided. It provides an opportunity for the observer to check for understanding and plan for additional support if necessary. This is also an opportunity to provide rationale or communicate other indicators that will be positively impacted. *Example: Think about a lesson that you will teach in the next few days. How will this model fit into your lesson?*

## Closure

» **Closing statement and/or question; then share the performance ratings.**
*Example: As you think about what we discussed today, how will what you learned impact the lessons you plan and teach in the future? What are the good things you heard today, relative to instruction and your classroom?*

*CLICK HERE* to view a sample post-conference. Once you arrive on the "Lessons by Grade Level: 5th Grade" page, select the video titled, "5th grade Math Quadrilateral Post-Conference."

# APPENDIX

## » POST-CONFERENCE PLAN SAMPLE

### INTRODUCTION/GREETING

***Greeting/Set the tone.***

*Hello, Mrs. Jones. How are things going? I hope everything is fine. The school year is going by so quickly, isn't it? Do you have any big plans for the weekend? Thanks for the opportunity to sit and discuss this process with you.*

***Establish the length of the conference.***

*Today we will meet for approximately 40 minutes.*

***Review the Conference Process.***

*The purpose of this meeting today is professional growth.*

*We have four things we will accomplish in this 40 minute post-conference:*

- *First, I'm interested in hearing you talk about the lesson I observed.*
- *We will then discuss a major strength (area of reinforcement).*
- *Next, we will discuss an area of improvement (refinement).*
- *Finally, I will share with you my ratings (according to the evaluation rubric) as well as your self-evaluation scores.*

*Do you have any questions about the process of today's conference?*

***Ask a general impression question.***

*How do you feel about the lesson? How do you think it went, overall?*

### REINFORCEMENT PLAN

***Reinforcement Objective***

*By the end of the conference, Mrs. Jones will reflect upon and explain how her enhanced Teacher Content Knowledge enables her to highlight key concepts and ideas and use them as bases to connect to other powerful ideas.*

***Self-Reflection Questions (minimum 2):***

*Why is it important for teachers to constantly enhance and utilize their content knowledge in everyday teaching to highlight key concepts and ideas and use them as bases to connect to other powerful ideas?*

*How did you, in the lesson observed, use your teacher content knowledge to highlight key concepts and ideas and use them as bases to connect to other powerful ideas?*

### *Identify specific examples (minimum 3) from your scripting notes that identify what the teacher did relative well.*

One of the things you did well in this lesson was highlight key concepts and ideas in regards to area, perimeter, and circumference and used them as bases to connect other powerful ideas between the relationships of areas of squares, rectangles and circles.

In the lesson:

1. *You started by sharing the story of a square and having students "add on" ideas to your story. For example, you stated a square has "four side lengths and all right angles." Students then added "if you add all my angles, they equal 360 degrees; I have two sets of parallel lines, etc. . You then used your teacher content knowledge to further prompt students to add components of area such as "do I have area, how do I know my area, etc". You then connected the key concepts related to squares to circles as you asked students to write their own story about a circle (as you had done for square) and charted group responses.*
2. *You used your teacher content knowledge to connect the perimeter of a rectangle with the circumference of a circle. You connected the dimensions and measurements of rectangles to the dimensions of circles and how they related to their respective areas. For example, you stated, last week we used length and width to find area of rectangles. Since those measurements were not present in the circle, you led them through finding the other measurements of a circle they could find such as radius, diameter, and circumference. You also made the connection, "just like a rectangle has a perimeter…a circle has a measurement all the way around outside and we call it circumference."*
3. *In lieu of just giving a formula, you used your teacher content knowledge to connect the pi (mystery number) component within the area formula in a circle to the knowledge of it being a "Greek letter to represent a constant" by leading students through a discovery activity where they determined that pi would always result in a number which is approximately 3.14. They were also able to make the connections as to where the symbol came from and why it was used in this formula. You further connected to this number being irrational as you showed the pages of numbers where pi is a number that goes "on and on" and doesn't stop.*
4. *Lastly, you used your teacher content knowledge to connect the units "square units" when finding area to the powerful ideas that area is the number of squares that will fit without overlapping in an enclosed space. You also made connections between reading a tape measure and writing decimals as they related to the ten lines between each number on the tape and decimals written at the tenths place.*

### *Recommend action to continue reinforced practice.*

*I encourage you to continue using your teacher content knowledge to highlight key concepts and ideas to use as bases to connect to other powerful ideas. This area of strength appears to be making a difference in your classroom and will also impact Presenting Instructional Content, since the powerful connections assist in clearly and concisely communicating the new content. Also, Standards and Objectives is positively impacted when connections are made between previous learning and new content.*

### *Elicit feedback to explain why this teaching skill/practice is critical to student learning.*

*How would you explain to someone why highlighting key concepts and ideas and using them as bases to connect to other powerful ideas are so important in determining student success?*

*Any other reasons why you feel highlighting key concepts and ideas and using them as bases to connect other powerful ideas is important for other teachers to adopt into their current teaching practices?*

## REFINEMENT PLAN

### *Refinement Objective*

*By the next observation, Mrs. Jones will develop and implement a plan which will strengthen the Grouping within her lesson by implementing accountability Kagan structures which ensures all students participating in groups are held accountable for group work and individual work.*

***Self-Reflection Questions (minimum 2):***

*Why is it so important to plan and teach lessons which ensure all students participating in groups are held accountable for group and individual work?*

*How, in the lesson observed, did you hold all students participating in groups accountable for group and individual work?*

***Identify specific examples (minimum 3) from your scripting notes that reference and/or point to what you want to refine.***

*In the lesson observed:*

1. *You asked students to write a story in groups about a circle. You stated, "Tell me all you know about a circle. One recorder." There were no accountability structures in place or assigned roles or responsibilities to ensure all students were held accountable for sharing what they knew about a circle.*
2. *During the measuring activity, you asked each table to measure the circular objects for their table. You asked one student to come to the front of the room and get supplies. Additionally, you asked "a person" from each group to record group responses on the overhead. While some students may have had "jobs;" however, again, there were no accountability structures in place or assigned roles or responsibilities to ensure **all** students were held accountable for measuring and recording their measurements.*
3. *Lastly, you gave students a worksheet and called certain students to come to the board and work out the problems. You told the other students to "check your answers and units" against the student work on the board. While some students did get to work problems on the board, this did not hold every child accountable for working the problems and checking their answers.*

***Provide a model (e.g. clear example of what to refine and how) including concrete suggestions.***

*Rationale: In order to teach lessons that strengthen Grouping, it is important to plan for and implement grouping structures which ensures all students participating in groups are held accountable for group work and individual work. When placing children into groups, the teacher must be able to assure that every student is actively engaged so that the grouping will actually enhance the learning for all students. This can be done by clearly defining the roles and responsibilities or implementing grouping structures (like Kagan) which ensure accountability for all. This process will ensure there are no "hogs and logs."*

*Let's discuss the importance of holding all students participating in groups accountable and how you could have improved the grouping indicator, especially in holding all students participating in groups accountable within the lesson observed.*

1. *During the circle story activity, you could have implemented the Kagan structure Think-Write-Round Robin. For example, give all students one minute of think time and then one minute of write time to record all their individual ideas related to a circle individually. Then students could share their ideas via round robin and the student with the birthday closest to that day's date could have recorded. All other students should check off any ideas shared that were on their list as well. This Round Robin process will continue until all varying responses are shared and recorded. This Kagan structure would have ensured accountability by all, as well as provided student interaction in sharing and posting of ideas.*
2. *Similarly, you could have implemented a pairing structure during the measuring activity where Partner A measures and Partner B checks and gives feedback to ensure more accurate measuring skills and hold all participants accountable.*
3. *Lastly, a Rally Coach activity could have been used at the end when students were solving the area problems. Partner A (tallest) would write the formula and substitute numerical values. Partner B would check and give feedback and then calculate and give answer with units. Partner A would then check the calculations and units and give necessary "coaching" or feedback. Participants could then swap roles for the next problem. You could have had an overhead with answers and problems worked for the groups to refer to check when finished.*

*(Impact) By implementing these suggestions, Activities and Materials will be strengthened as students will now have an opportunity for student to student interaction, which will ultimately impact student achievement. Academic Feedback will strengthen as you engage students in giving high quality feedback to one another in the Rally Coach. Standards and Objectives will be strengthened as you hold each member accountable you will be able to gather evidence that most students are demonstrating mastery of the objective. Management of Student Behavior will also be impacted as more students will be on task as a result of being held accountable.*

***Guided Practice***

*Think about a lesson you will teach within the next couple of days, how will this model of applying Kagan structures to ensure accountability to your Grouping activities apply?*

*When can I schedule to come and watch you place this plan into action in your classroom?*

*Will you need additional planning assistance prior to this next observation to review your plan and ideas some more?*

***Closing statement and/or question. Then share the performance ratings.***

*How will what we have discussed today impact your Grouping and how you hold all students participating in groups accountable for group and individual work?*
*What is one positive that you will walk away with today?*
*Do you have any other questions or comments? Let's discuss your scores.*
*As we prepare to discuss your scores, would you please open your IGP so that we can further reflect on your professional growth and support since your last observation?*

# » RESEARCH THAT SUPPORTS THE TAP RUBRIC

The following pages include a summary of relevant recent research that supports each of the indicators on the TAP Rubric.

**TABLE 1. RECENT STUDIES SUPPORTING THE INSTRUCTION DOMAIN**

| Indicator | Exemplary Descriptor | Research |
|---|---|---|
| **Standards and Objectives** | » All learning objectives and state content standards are explicitly communicated.<br>» Sub-objectives are aligned and logically sequenced to the lesson's major objective.<br>» Learning objectives are: (a) consistently connected to what students have previously learned, (b) know from life experiences, and (c) integrated with other disciplines.<br>» Expectations for student performance are clear, demanding, and high.<br>» State standards are displayed and referenced throughout the lesson.<br>» There is evidence that most students demonstrate mastery of the objective. | Applebee, A. N., Adler, M., & Flihan, S. (2007)<br>Jussim, L., Robustelli, S. L., & Cain, T. R. (2009)<br>Meece, J. L., Anderman, E. M., & Anderman, L. H. (2006)<br>Penuel, W., Fishman, B. J., Gallagher, L. P., Korbak, C., & Lopez-Prado, B. (2009)<br>Rivet, A. E., & Krajcik, J. S. (2008)<br>Schartz, Y., Weizman,m A., Fortus, D., Krajcik, J., & Reiser, B. (2008)<br>Schmidt, W. H., Wang, H. C., & McKnight, C. C. (2005)<br>Seidel, T., Rimmele, R., & Prenzel, M. (2005) |
| **Motivating Students** | » The teacher consistently organizes the content so that it is personally meaningful and relevant to students.<br>» The teacher consistently develops learning experiences where inquiry, curiosity, and exploration are valued.<br>» The teacher regularly reinforces and rewards effort. | Deci, E. L., Koestner, R., & Ryan, R. M. (1999)<br>Eccles, J. S., & Wigfield, A. (2002)<br>Hidi, S., & Harackiewicz, J. M. (2000)<br>James, M. C., & Scharmann, L. C. (2007)<br>Stipek, D. (2002) |
| **Presenting Instructional Content** | Presentation of content always includes:<br>» visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson;<br>» examples, illustrations, analogies, and labels for new concepts and ideas;<br>» modeling by the teacher to demonstrate his or her performance expectations;<br>» concise communication;<br>» logical sequencing and segmenting;<br>» all essential information and;<br>» no irrelevant, confusing, or nonessential information. | Cook, M. P. (2006)<br>Glen, N. J., & Dotger, S. (2009)<br>Harp, S. F., & Maslich, A. A. (2005)<br>Herman, J. L., Klein, D. C. D., & Abedi, J. (2000)<br>Low, G. (2008)<br>Nesbit, J. C., & Adesope, O. O. (2006)<br>Richland, L.E., Zut, O., & Holyoak, K. J. (2007)<br>Schartz, Y., Weizman, A., Fortus, D., Krajcik, J., & Reiser, B. (2008)<br>Webb, N. M., & Mastergeorge, A. (2003) |
| **Lesson Structure and Pacing** | » All lessons start promptly.<br>» The lesson's structure is coherent, with a beginning, middle, end, and time for reflection.<br>» Pacing is brisk and provides many opportunities for individual students who progress at different learning rates.<br>» Routines for distributing materials are seamless.<br>» No instructional time is lost during transitions. | Corno, L. (2008).<br>Davis, E. A. (2003)<br>Konrad, M. Helf, S., & Joseph, L. M. (2011)<br>Schartz, Y., Weizman,m A., Fortus, D., Krajcik, J., & Reiser, B. (2008) |

**TABLE 1. RECENT STUDIES SUPPORTING THE INSTRUCTION DOMAIN** - *continued*

| Indicator | Exemplary Descriptor | Research |
|---|---|---|
| **Activities and Materials** | Activities and materials include all of the following:<br>» support the lesson objectives;<br>» are challenging;<br>» sustain students' attention;<br>» elicit a variety of thinking;<br>» provide time for reflection;<br>» are relevant to students' lives;<br>» provide opportunities for student-to-student interaction;<br>» induce student curiosity and suspense;<br>» provide students with choices;<br>» incorporate multimedia and technology and;<br>» incorporate resources beyond the school curriculum texts (e.g., teacher-made materials, manipulatives, resources from museums, cultural centers, etc.).<br>» In addition, sometimes activities are game-like, involve simulations, require creating products, and demand self-direction and self-monitoring. | Brophy, J. (2008)<br>Cornelius-White, J. (2007)<br>Davis, E. A. (2003)<br>de Freitas, S. I. (2006)<br>Dignath, C., & Buttner, G. (2008)<br>Fredricks, J. A., Blumenfeld. P. C., & Paris, A. H. (2004)<br>Harp, S. F., & Maslich, A. A. (2005)<br>Hmelo-Silver, C. E. (2004)<br>Pahl, K., & Roswell, J. (2010)<br>Porter, A. C. (2002)<br>Matsumura, L. C., Garnier, H., Pascal, J., & Valdes, R. (2002)<br>McNeil, N., & Jarvin, L. (2007)<br>Mishra, P., & Koehler, M. J. (2006)<br>Moje, E., Ciechanowski, K., Kramer, K., Ellis, L., Carrillo, R., & Collazo, T. (2004)<br>Mouratidis, A., & Michou, A. (2011)<br>Webb, N. M., Franke, M. L., Ing, M., Chan, A., De, T., Freund, D., & Battey, D. (2008)<br>Zimmerman, B. J. (2008) |
| **Questioning** | » Teacher questions are varied and high quality, providing a balanced mix of question types:<br>» knowledge and comprehension;<br>» application and analysis;<br>» and creation and evaluation.<br>» Questions are consistently purposeful and coherent.<br>» A high frequency of questions is asked.<br>» Questions are consistently sequenced with attention to the instructional goals.<br>» Questions regularly require active responses (e.g., whole-class signaling, choral responses, written and shared responses, or group and individual answers).<br>» Wait time (3-5 seconds) is consistently provided.<br>» The teacher calls on volunteers and non-volunteers, and a balance of students based on ability and sex.<br>» Students generate questions that lead to further inquiry and self-directed learning. | Altermatt, E. R., Jovanovic, J., & Perry, M. (1998)<br>Armendariz, F., & Umbreit, J. (1999)<br>Boyd, M & Rubin, D. (2006)<br>Chin, C. (2007)<br>Erdogan, I., & Campbell, T. (2008)<br>Gillies, R. M. (2011)<br>Kazemi, E., & Stipek, D. (2001)<br>Kelly, S. (2007)<br>Lambert, M. C., Cartledge, G., Heward, W. L., & Lo, Y. (2006)<br>Lustick, D. (2010)<br>Nystrand, M., Wu, L. L., Gamoran, A., Zeiser, S., & Long, D. A. (2003)<br>Staples, M. (2007)<br>Stitcher, J. P., Lewis, T. J., Whittaker, T. A., Richter, M., Johnson, N. W., & Trussell, R. P. (2008)<br>Turner, J., & Patrick, H. (2004) |

## TABLE 1. RECENT STUDIES SUPPORTING THE INSTRUCTION DOMAIN - *continued*

| Indicator | Exemplary Descriptor | Research |
|---|---|---|
| **Academic Feedback** | » Oral and written feedback is consistently academically focused, frequent, and high quality.<br>» Feedback is frequently given during guided practice and homework review.<br>» The teacher circulates to prompt student thinking, assess each student's progress, and provide individual feedback.<br>» Feedback from students is regularly used to monitor and adjust instruction.<br>» Teacher engages students in giving specific and high quality feedback to one another. | Hattie, J., & Gan, M. (2010)<br>Matsumura, L. C., Patthey-Chavez, G. G., Valdes, R., & Garnier, H. (2002)<br>Shute, V. J. (2008)<br>Topping, K. J. (2009) |
| **Grouping Students** | » The instructional grouping arrangements (either whole class, small groups, pairs, or individual; heterogeneous or homogeneous ability) consistently maximize student understanding and learning efficiency.<br>» All students in groups know their roles, responsibilities, and group work expectations.<br>» All students participating in groups are held accountable for group work and individual work.<br>» Instructional group composition is varied (e.g., race, gender, ability, and age) to best accomplish the goals of the lesson.<br>» Instructional groups facilitate opportunities for students to set goals, reflect on, and evaluate their learning. | Gillies, R. M., & Haynes, M. (2010)<br>Johnson, D. W., Johnson, R. T., & Roseth, C. (2010)<br>Webb, N. (2008)<br>Webb, N. M., Franke, M. L., De, T. Chan, A. G., Freung, D., Shein, P., & Melkonian, D. K. (2009) |
| **Teacher Content Knowledge** | » Teacher displays extensive content knowledge of all the subjects she or he teaches.<br>» Teacher regularly implements a variety of subject specific instructional strategies to enhance student content knowledge.<br>» Teacher regularly highlights key concepts and ideas and uses them as bases to connect other powerful ideas.<br>» Limited content is taught in sufficient depth to allow for the development of understanding. | Ball, D. L., Thames, M. H., & Phelps, G. (2008)<br>Hill, H. C., Rowan, B., & Ball, D. L. (2005)<br>Murdock, J. (2008)<br>Taber, K. (2008) |
| **Teacher Knowledge of Students** | » Teacher practices display understanding of each student's anticipated learning difficulties.<br>» Teacher practices regularly incorporate student interests and cultural heritage.<br>» Teacher regularly provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught. | Hill, H. C., Ball, D. L., & Schilling, S. G. (2008)<br>Pacheco, M., & Gutierrez, K. (2009)<br>McTighe, J., & Brown, J. L. (2005)<br>Tomlinson, C. A, Brighton, C., Hertberg, H., Callahan, C. M., Moon, T. R., Brimijoin, K., Conover, L. A., & Reynolds, T. (2003) |

**TABLE 1. RECENT STUDIES SUPPORTING THE INSTRUCTION DOMAIN** - *continued*

| Indicator | Exemplary Descriptor | Research |
|---|---|---|
| **Thinking** | Over the course of multiple observations, the teacher consistently and thoroughly teaches all four types of thinking:<br>» analytical thinking, where students analyze, compare and contrast, and evaluate and explain information;<br>» practical thinking, where students use, apply, and implement what they learn in real-life scenarios;<br>» creative thinking, where students create, design, imagine, and suppose and;<br>» research-based thinking, where students explore and review a variety of ideas, models, and solutions to problems.<br>The teacher regularly provides opportunities where students:<br>generate a variety of ideas and alternatives;<br>» analyze problems from multiple perspectives and viewpoints and;<br>» monitor their thinking to ensure they understand what they are learning, are attending to critical information, and are aware of the learning strategies that they are using and why. | Beghetto, R. A. (2006)<br>Beyer, B. K. (2008)<br>Carroll, M. (2008)<br>Clark, A., Anderson, R. C., Kuo, L., Kim, I., Archodidou, A., & Nguyen-Jahiel, K. (2003)<br>Fuchs, L. S., Fuchs, D., Prentice, K., Burch, M., Hamlett, C. L., Owen, R., Hosp. M., & Jancek, D. (2003)<br>Kaufman, J. C., & Beghetto, R. A. (2009)<br>Marshall, J. C., & Horton, R. M. (2011)<br>Merrill, M. D. (2002)<br>Rittle-Johnson, B., & Star, J. R. (2007)<br>Schraw, G., Crippen, K. J., & Hartley, K. (2006)<br>White, B., & Frederiksen, J. (2005)<br>Zimmerman, C. (2007) |
| **Problem Solving** | Over the course of multiple observations the teacher implements activities that teach and reinforce 6 or more of the following problem-solving types.<br>» Abstraction<br>» Categorization<br>» Drawing Conclusions/Justifying Solutions<br>» Predicting Outcomes<br>» Observing and Experimenting<br>» Improving Solutions<br>» Identifying Relevant/Irrelevant Information<br>» Generating Ideas<br>» Creating and Designing | Cho, K., & Jonassen, D. H. (2002)<br>Jonassen, D. H. (2000)<br>Julien, H., & Barker, S. (2009)<br>King, A. (2008)<br>Kuhn, D., & Pease, M. (2008)<br>Levering, K., & Kurtz, K. J. (2010)<br>Moreno, R., Ozogul, G., & Reisslein, M. (2011)<br>Nicolaidou, I., Kyza, E. A., Terzian, F., Hadjichambis, A., Kafouris, D. (2011)<br>Sandoval, W. A., & Cam, A. (2011)<br>Schwarz, C. V., Reiser, B. J., Davis, E. A., Kenyon, L., Acher, A., Fortus, D., Schwartz, Y., Hug, B., & Kracjik, J. (2009)<br>Zimmerman, C. (2007) |

## TABLE 2. RECENT STUDIES SUPPORTING THE DESIGNING AND PLANNING INSTRUCTION DOMAIN

| Indicator | Exemplary Descriptor | Research |
|---|---|---|
| **Instructional Plans** | Instructional plans include:<br>» measurable and explicit goals aligned to state content standards;<br>» activities, materials, and assessments that:<br>» are aligned to state standards.<br>» are sequenced from basic to complex.<br>» build on prior student knowledge, are relevant to students' lives, and integrate other disciplines.<br>» provide appropriate time for student work, student reflection, and lesson and unit closure;<br>» evidence that plan is appropriate for the age, knowledge, and interests of all learners and;<br>» evidence that the plan provides regular opportunities to accommodate individual student needs. | Applebee, A. N., Adler, M. Flihan, S. (2007)<br>Anghileri, J. (2006)<br>Ayala, C. C., Shavelson, R. J., Ruiz-Primo, M. A., Brandon, P. R., Yin, Y., Furtak, E. M., Young, D. B., & Tomita, M. K. (2008)<br>Cizek, G. J. (2009)<br>Hosp, J. L., & Ardoin, S. P. (2008)<br>Ginsberg, M. B. (2005)<br>Martone, A., & Sireci, S. G. (2009)<br>McNeill, K. L. Lizotte, D.J., Krajcik, J., & Marx, R.W. (2006)<br>Timperley, H. S., & Parr, J. M. (2009)<br>Tsai, Y., Kunter, M., Ludtke, O., Trautwein, U., & Ryan, R. M. (2008)<br>Webb, N. L. (2007)<br>Zohar, A. (2012) |
| **Student Work** | Assignments require students to:<br>» organize, interpret, analyze, synthesize, and evaluate information rather than reproduce it;<br>» draw conclusions, make generalizations, and produce arguments that are supported through extended writing and;<br>» connect what they are learning to experiences, observations, feelings, or situations significant in their daily lives, both inside and outside of school. | Belland, B. R., Glazewski, K. D., Richardson, J. C. (2008)<br>Marks, H. M. (2000)<br>Marshall, J. C., & Horton, R. M. (2011)<br>McDermott, M. A., & Hand, B. (2010)<br>Purcell-Gates, V., Duke, N. K., & Martineau, J. A. (2007) |
| **Assessment** | Assessment Plans:<br>» are aligned with state content standards;<br>» have clear measurement criteria;<br>» measure student performance in more than three ways (e.g., in the form of a project, experiment, presentation, essay, short answer, or multiple-choice test);<br>» require extended written tasks;<br>» are portfolio-based with clear illustrations of student progress toward state content standards and;<br>» include descriptions of how assessment results will be used to inform future instruction. | Furtak, M. E., & Ruiz-Primo, M. A. (2008)<br>Gearhart, M., & Osmundson, E. (2009)<br>Hiebert, J., Morris, A. K., Berk, D., & Jansen, A. (2007)<br>Shepard, L. A. (2001)<br>Tillema, H., & Smith, K. (2007) |

## TABLE 3. RECENT STUDIES SUPPORTING THE LEARNING ENVIRONMENT DOMAIN

| Indicator | Exemplary Descriptor | Research |
|---|---|---|
| **Expectations** | » Teacher sets high and demanding academic expectations for every student.<br>» Teacher encourages students to learn from mistakes.<br>» Teacher creates learning opportunities where all students can experience success.<br>» Students take initiative and follow through with their own work.<br>» Teacher optimizes instructional time, teaches more material, and demands better performance from every student. | Henningsen, M., & Stein, M. K. (1997)<br>Kulkinski, M. R., & Weinstein, R. S. (2000)<br>Matsumura, L. C., Slater, S. C., & Crosson, A. (2008)<br>Patrick, H., Anderman, L. H., Ryan, A. M., Edelin, K. C., & Midgley, C. (2001)<br>Ponitz, C. C., Rimm-Kaufman, S. E., & Brock, L. L. (2009)<br>Stepanek, J. (2000)<br>Zimmerman, B. J. (1998) |
| **Managing Student Behavior** | » Students are consistently well-behaved and on task.<br>» Teacher and students establish clear rules for learning and behavior.<br>» The teacher uses several techniques, such as social approval, contingent activities, and consequences, to maintain appropriate student behavior.<br>» The teacher overlooks inconsequential behavior.<br>» The teacher deals with students who have caused disruptions rather than the entire class.<br>» The teacher attends to disruptions quickly and firmly. | Allday, R. A. (2011)<br>Bear, G. G. (1998)<br>Hoy, A. W., & Weinstein, C. S. (2006)<br>Kern, L., & Clemens, N. H. (2007)<br>Koth, C. W., Bradshaw, C. P., & Leaf, P. J. (2008)<br>Matjasko, J. L. (2011)<br>Osher, D., Bear, G. G., Sprague, J. R., & Doyle, W. (2010)<br>Simonsen, B., Fairbanks, S., Briesch, A., Myers, D., & Sugai, G. (2008)<br>Solomon, D., Battistich, V., Kim, D., & Watson, M. (1997)<br>Stage, S. A., & Quiroz, D. R. (1997)<br>Sutherland, K. S., Lewis-Palmer, T., Stitcher, J., & Morgan, P. L. (2008) |
| **Environment** | » The classroom: welcomes all members and guests.<br>» The classroom: is organized and understandable to all students.<br>» The classroom: supplies, equipment, and resources are easily and readily accessible.<br>» The classroom: displays student work that frequently changes.<br>» The classroom: is arranged to promote individual and group learning. | Barowy, W., & Smith, J. E. (2008)<br>Cohen, E. G. (1994)<br>Evans, G. W., Yoo, M. J., & Sipple, J. (2010)<br>Killeen, J. P., Evans, G. W., & Danko, S. (2003)<br>Kumar, R., O'Malley, P. M., & Johnston, L. D. (2008)<br>Martin, S. H. (2002)<br>Maxwell, L. E., & Chmeilewski, E. (2008)<br>Milkie, M. A., & Warner, C. H. (2011)<br>Read, M. A. (2010)<br>Simonsen, B., Fairbanks, S., Briesch, A., Myers, D., Sugai, G. (2008) |
| **Respectful Culture** | » Teacher-student interactions demonstrate caring and respect for one another.<br>» Students exhibit caring and respect for one another.<br>» Teacher seeks out and is receptive to the interests and opinions of all students.<br>» Positive relationships and interdependence characterize the classroom. | Crosnoe, R. Johnson, M. K., & Elder, G. H. (2004)<br>Hallinan, M. T. (2008)<br>Hamm, J. V., Farmer, T. W., Dadisman, K., Gravelle, M., & Murray, A. R. (2011)<br>Kulkinski, M. R., & Weinstein, R. S. (2000)<br>O'Connor, E. E., Dearing, E., & Collins, B. A. (2011)<br>Patrick, H., Anderman, L. H., Ryan, A. M., Edelin, K. C., & Midgley, C. (2001)<br>Muller, C. (2001)<br>Shann, M. H. (1999) |

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