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# T4S<sup>®</sup>

## **Teach for Success Program for the Creighton School District**

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## Introduction to the Creighton Teach for Success Program

Today's schools need to accommodate the learning needs of an increasingly diverse student population as they also implement state academic standards. To successfully deliver a rigorous standards-based curriculum to all students, teachers must consistently employ research-based teaching practices, and to increase their effectiveness in doing so, administrators and teachers need to be able to collaboratively discuss and examine the practice of teaching. Yet such communication can be difficult in the absence of a common language for talking about what goes on in the classroom. The Creighton Teach for Success Program (CT4S) is a professional development program designed to enable administrators, academic coaches, and teachers to observe and discuss instruction objectively, so as to improve teaching practices and increase student achievement.

CT4S helps program participants learn and discuss a set of specific instructional strategies needed to plan, deliver, and assess standards-based instruction. These are strategies that have been proven to be effective for supporting student learning. In addition, CT4S offers schools and districts skills, tools, and a process that staff can use to observe and analyze the quality of instruction in all classrooms, so they can understand and plan how to meet the professional development needs of classroom teachers. While CT4S emphasizes practices that enhance overall instruction, it does not address teachers' content knowledge, content-specific pedagogy (i.e., pedagogical content knowledge), or knowledge of academic standards.

The importance of an effective classroom teacher, long recognized intuitively, has been confirmed by multiple studies examining the connection between teacher quality and student learning. Sanders and Rivers most clearly illustrated — and quantified — that link in their 1996 study examining the difference in achievement levels between students who had a sequence of highly effective teachers and those who had a sequence of less effective teachers, with effectiveness determined by the test scores of teachers' prior students. At the outset of the study, they measured no difference between the achievement levels of the two groups of second graders. Yet those who then were assigned for third, fourth, and fifth grade to teachers in the top quintile of effectiveness performed 50 percentile points higher on average at the end of that period than students who had been assigned for the same period to teachers in the lowest quintile of effectiveness.

How do highly effective teachers like those in the Sanders and Rivers study become so skilled? A range of research has identified various factors related to teacher effectiveness, among them, teacher qualifications, such as education, certification, and experience; teacher characteristics, such as attitudes, beliefs, race, and gender; and teacher practices, such as planning, instructional delivery, classroom management, and interaction with students (Goe, 2007). Principals working with a given group of teachers can do little to change the qualifications of those classroom educators in the short term. While some teacher characteristics, such as attitudes and beliefs, can evolve, it is in the third category of teacher practice that professional development can have the most immediate influence. And it is here that CT4S focuses, by offering a process through which teachers learn and plan how and when to use specific research-based strategies in order to effect positive academic outcomes.

The multi-step process that CT4S outlines reflects the findings of the Learning First Alliance (2000) that learning a new behavior and effectively transferring it to the classroom requires: a) learning the skills and understanding the theory and rationale for the new behavior; b) observing a model in action; c) practicing the new behavior in a safe atmosphere; and d) implementing the new behavior in the classroom with support and coaching. CT4S provides a structure and guidance for administrators and others who work with classroom teachers to support teachers as they engage in this process.

The CT4S program categorizes the featured strategies or *elements* into three sections. Within a given section, each element is further defined by specific teacher actions called *attributes*. Some attributes are linked to more than one element and, thus, may appear in more than one section, although perhaps worded differently. This is because certain teacher actions in the classroom, such as providing student feedback, may serve different purposes depending on the teacher's intent. For the 2008-2009 school year, the CT4S has the following three sections:

### ***Section I. Instructional Practices to Support All Learners***

This section focuses on specific practices that a teacher uses to best facilitate the transfer of knowledge and skills to all students. This section draws on the work of Marzano, 2007; Echevarria et al., 2004; Algozzine et al., 1997; Rosenshine and Stevens, 1986; and Hunter, 1982.

### ***Section II. Student Engagement***

This section focuses on what a teacher does to actively engage all students in learning and to the use of selected student engagement techniques. This section draws on the work of Marzano, 2007, Marzano et al., 2003; Gentile, 1988; Rosenshine and Stevens, 1986; and Hunter, 1976.

### ***Section III. Assessment Practices***

This section focuses on types of classroom assessments and on a teacher's actions while assessing students day to day. This section draws on the work of Fisher and Frey, 2007; Guskey, 2003; and McTighe and Ferrara, 2000.

Each of the three sections:

- offers a brief overview of the literature that supports the section's inclusion in the CT4S,
- identifies teaching strategies, or elements,
- describes specific teacher behaviors, or attributes, for each element,
- provides a review of literature supporting these actions, and
- offers actual classroom examples that exemplify the instructional practices.

The CT4S program will be modified and adjusted yearly as needed to meet the needs of the district.

## Section I. Instructional Practices to Support All Learners

States have identified the standards all students are to learn, and teachers must educate an increasingly diverse population according to these standards. Chandra Hawley has identified the following diversity factors that impact classrooms: a wide range of students with varying linguistic abilities, socioeconomic backgrounds, and living situations, and an increased number of students with various disabilities spending more time in the mainstream classroom (as cited in Jones, 2004, p. 12). It is not enough for teachers to understand what to teach. Today's teachers must understand pedagogy, master the skill of delivery, and maximize the use of specific strategies to ensure all students will reach these standards.

Teachers can implement strategies during instruction to address the needs of diverse learners; however, to maximize the effectiveness of utilizing any strategy, they need to purposefully plan in advance so their lessons incorporate advantageous practices. For instance, knowing the value of student discussion related to learning, a teacher may design a lesson to include activities where the students discuss what they know about the new learning with their peers in order to make their own connections. Students need opportunities to question and discuss what they are learning so that they may transfer what has been learned to other situations (Jones, 2004) and, according to Tomlinson (2000), for students to really learn, they must "...make sense out of information rather than have information being imposed upon them" (p. 19).

The teacher must be able to utilize specific strategies that will best facilitate the transfer of knowledge and skills to all students. CT4S offers specific and varied techniques to help students understand the relevance of instruction and take an active role in their learning. Some of these specific strategies are to present smaller amounts of material at any time, clearly explain and model the learning, and guide student practice to build proficiency before having students work independently. Using these specific strategies leads to more effective instructional delivery, increases student confidence with the content, and helps to address the needs of diverse learners (Chamot & O'Malley, 1994).

The CT4S program has identified specific instructional practices that reflect research findings and provide students with clear direction, guidance through instruction, and substantive practice with content. The four elements are:

- Communicate Selected Standards or Objectives to All Students
- Emphasize Key Vocabulary
- Provide Verbal Scaffolding to Assist and Support Student Use of Academic Language
- Provide Instructional Scaffolding to Assist and Support Student Understanding

## **Communicate Selected Standards or Objectives to All Students**

### *The Teacher Demonstrates All of the Following Attributes*

- Aligns the learning to district curriculum or curriculum maps and to the correct level of understanding required by the standards or objectives
- Displays standards or objectives in student-friendly language to inform students of what they need to know and be able to do
- Explicitly states or refers to the standards or objectives during the lesson

Effective standards-based instructional practice requires the teacher to select or design lessons that are at the appropriate level of rigor for the standards and that will prepare students to demonstrate deep understanding of key facts and concepts (Jamentz, 2002, p. 18). In their most general definition, objectives provide a description of what the student will be able to do at the end of the lesson (Gentile 1988, p. 13). Hunter (1982) points out that students will usually extend more effort and consequently increase their learning if they know what it is they will be learning.

### **Classroom Examples**

**Example 1:** The teacher says, “This afternoon we are going to continue working on understanding the relationships among numbers by determining the mean, median, and mode of a set of numbers.” The teacher points to the objective written on the board and states, “We have learned how to determine the mean and median. Today, you will determine and explain to your partner the process for determining the mode of a set of numbers.”

**Example 2:** On the board the teacher has written the objective from the reading lesson and says, “Everyone read the objective with me.” Along with the teacher, all students say, “I can read two-syllable words using the closed syllable pattern.”

## **Emphasize Key Vocabulary**

### *The Teacher Demonstrates All of the Following Attributes*

- Displays or highlights the vocabulary word(s) from the lesson
- Explicitly introduces or reviews key vocabulary by defining, demonstrating, and/or showing how each term is used within the context of the learning
- Engages students to do three of the following with the key vocabulary being emphasized: listen to, look at, say, read, demonstrate, or write during the learning

According to Blachowicz and Fisher (2004), vocabulary instruction goes beyond increasing students’ ability to comprehend; it provides them with an enhanced vehicle so they can communicate more fully. Given Berliner’s and Marzano’s finding that learning requires multiple exposures to and complex interaction with knowledge (Berliner, 1986; and Marzano, 2003, p. 112), teachers need to ensure that students have more than one-shot exposure to vocabulary words if they are to understand and use them. The teacher who emphasizes key vocabulary

provides repeated and varied experiences with academic words to help students understand the learning (Echevarria, Vogt, & Short, 2002).

### **Classroom Examples**

**Example 1:** The teacher says, “There is one vocabulary word you need to know before you start your experiment today. I have written it on the board. The word is *traits*. Look and say it with me.” All students chorally say the word, *traits*. The teacher continues, “The definition of *traits* is inherited characteristics. Write the word *traits* and its definition in your notes.” After the students have written the word *trait* and its definition in their notes, the teacher says, “Now I want you to share with your partner the definition of *traits*. I want you to share your definitions this way. The definition of *trait* is. OK share with your partner.”

**Example 2:** The teacher says, “On the board I have written four words from the story we are reading and our definitions for those words. Everyone look at the first word on the board. The word is *forget*. Everyone read and say the word and its definition with me.” All students chorally respond. The teacher then says, “Show me our signal for the word *forget*.” All students make the hand motion for the word *forget*. Now turn to your partner and use the word *forget* in a sentence.”

### **Provide Verbal Scaffolding to Assist and Support Student Use of Academic Language**

*The Teacher Demonstrates Any or All of the Following Attributes*

- Orally assists students to correctly pronounce academic language
- Directs or tells students to include the academic language in their spoken responses or conversations

Verbal scaffolding is assisting and supporting student use of academic language. It takes the form of oral responses from the teacher that facilitates the students’ movement to higher levels of academic language proficiency (Echevarria, Vogt, & Short, 2004).

### **Classroom Examples**

**Example 1:** After listening to the students echo a word, the teacher says, “I didn’t hear the ending of the word. Listen to me say the word again. The word is *gather*. Make sure you say the ending of the word /er/. Now say it with me.” All students respond chorally.

**Example 2:** After defining and giving several examples of an ecosystem, the teacher says, “Turn to your partner and each of you give a different example of an ecosystem. I want you to use a complete sentence by saying ‘ \_\_\_\_ is an ecosystem.’”

### **Provide Instructional Scaffolding to Assist and Support Student Understanding**

*The Teacher Demonstrates Any or All of the First Four Attributes*

- Explicitly explains and models the learning
- Provides teacher-led practice on the learning

- Provides examples of the learning at various performance levels
- Provides small group instruction

Instructional scaffolding is a process in which students receive support until they can apply the new skill or strategy independently (Rosenshine & Meister, 1992). Scaffolding is a term associated with the notion of Zone of Proximal Development, which is the difference between what a student can do with direct assistance and what he or she can do without help (Vygotsky, 1978). Lange explains instructional scaffolding as the development of instructional plans to lead students from what they already know to a deep understanding of new material. The teacher provides support for the students at every step of the learning process (as cited in Lipscomb, Swanson, & West, 2004, p. 6).

### **Classroom Examples**

**Example 1:** The teacher writes the word *tiger* on the board and says, “Everyone watch and listen. There are four sounds in this word. Listen as I say each sound.” She enunciates the four sounds and points to each letter or letter pair, then continues to say, “Now I will blend all of the sounds together to create a word.” The teacher runs her fingers under the word to blend all of the sounds together and then pronounces the word *tiger*.

**Example 2:** After looking at all of the students’ answers to a set of math problems, the teacher says, “I need to see the following students at the table in the back of the room and please bring your mathematics journal. The rest of the class, start on your assignment.” Once all of the identified students are at the table, she says, “Let’s do the first problems of your assignment together and then I will check to see if you can do the third one on your own.”

## Section II. Student Engagement

As Danielson notes, “Learning is not a spectator sport” (Danielson, 1996, p. 95). Students need to be active participants in their learning and teachers need to insist on their involvement. Based on her observation of many classrooms, Kinsella elaborates, “Too often, students are relegated to a passive role, listening and observing to glean the main lesson points while the teacher strives to help them comprehend by using visual aids and a listener-friendly delivery” (Kinsella, 1997, p. 51). T4S emphasizes that student engagement — the continuous involvement of students in the academic learning that the teacher plans and facilitates — is the teacher’s responsibility. The teacher must direct all students to stay engaged throughout all lessons, activities, and occasions when they’re being asked questions, and ensure that they do so.

Research has documented the relationship between student engagement and achievement. In defining student engagement, Fred Newman (1989) points out that “...engagement is the student’s psychological investment in learning, comprehending, and mastering knowledge or skills” (p. 34). Waxman and Walberg add, “One can think of student engagement as a cognitive phenomenon essentially having to do with the extent to which students are mentally involved with the issues and problems of academic study” (Waxman & Walberg, 1991, p. 274). As Algozzine elaborates, “Research shows that there is a direct relationship between the amount of time students are actively engaged in learning and their achievement levels. The extent to which students profit from instruction is directly related to the degree to which they are actively engaged in the learning” (Algozzine et al., 1997, p. 230). Strong, Silver, and Robinson observe that students who are engaged persist, despite challenges and obstacles, and take visible delight in accomplishing their work (Strong, Silver, & Robinson, 1995, p. 8). Voke notes, “Research shows that engaged students experience greater satisfaction with school experiences, which may in turn lead to greater school completion and student attendance rates, as well as lower incidences of acting-out behaviors” (Voke, 2002, p. 1). In classrooms where students are highly engaged, student participation is a requirement, not an invitation.

Engagement or a lack of it involves and affects both students and teachers. According to Danielson (1996), “Successful instruction requires the active and invested participation of all parties” (p. 95). “Lack of engagement is easy to spot, manifesting itself as students doodling on their notebooks, passing notes, or gazing out the window” (Danielson, 1996, p. 95). Teachers also suffer when students are disengaged. As Intrator notes, “Nothing deflates a teacher more than bored students” (Intrator, 2004, p. 20). He characterizes classrooms as “dynamic settings that launch dreams and delight minds, or arid places that diminish hope and deplete energy” (Intrator, 2004, p. 21). To create a “dynamic setting” and engage all students throughout the academic learning, the classroom teacher must maintain a high level of accountability and structure. Many teachers are not able to deliver content and engage all students at the same time in the content without planning lessons *in advance*. Commenting on the types of tasks that lead to learning, Marzano asserts that learning requires engagement in tasks that are structured and are sufficiently similar to allow for effective transfer of knowledge (Marzano, 2003, pp. 85–87). He finds that students are more likely to learn when teachers plan and include the following techniques: identifying similarities and differences, summarizing, note taking, using nonlinguistic representations, and developing advance organizers (Marzano, 2001).

This section of CT4S advocates the actions identified below to promote student engagement and the strategies recommended by Marzano and supported by others because they exemplify the core concept of student engagement. The elements in this section are: Ensure Student Engagement Throughout the Learning and Use Selected Student Engagement Techniques.

### **Ensure Student Engagement Throughout the Learning**

*The Teacher Demonstrates All of the Following Attributes*

- Directs student(s) to be engaged in the academic learning
- Directs all of the students to participate in the academic learning at the same time\*
- Makes student engagement mandatory by ensuring that all of the students are engaged throughout the academic learning \*

\* When using the T4S program as an observational tool, the observers are looking for 85 percent or more of the students to be engaged at the same time and throughout the academic learning.

The teacher can direct students to be involved by engaging them in the following activities:

- Responding orally through conversing, summarizing, sharing similarities and differences, or responding chorally as a whole group
- Producing something on paper or a white board through note taking, completing an advance organizer, completing or drawing a nonlinguistic representation, writing a summary, or explaining in writing the similarities or differences of a topic
- Signaling through a common gesture or displaying the white board or response card
- Demonstrating a response through movement
- Mentally processing information and sharing that processing through a choral or written response or conversing with another student

### **Use Selected Student Engagement Techniques**

*The Teacher Demonstrates Any or All of the Following Techniques*

- *Identifying similarities or differences:* Directs students to compare, classify, or create metaphors or analogies.

According to Marzano, having students identify how items, events, processes, or concepts are similar or different deepens their understanding of the learning (Marzano, 2001, p. 1). Markman and Genter explain, “Similarity comparisons are a basic component of cognition. When looking for similarities, students attend to the matching relational structure in a pair of items or topics” (Markman & Gentner, 1993, p. 431).

- *Summarizing*: Directs students to determine and communicate the key points of text or a presentation.

In summarizing, students evaluate the information and decide what information to use, delete, or substitute. Wormelli explains summarization as “restating the essence of text or an experience in as few words as possible or in a new, yet efficient manner” (Wormeli, 2004, p. 1). Anderson and Hidi observe, “The summary writer must decide what to include, what to eliminate, how to rework or reorganize information, and how to ensure that the summary is true to the original’s meaning” (Anderson & Hidi, 1988/1989, p. 26). Commenting on the cognitive rigor of the summarizing process, Marzano says, “To effectively delete, substitute, and keep information, students must analyze information at a fairly deep level” (Marzano, 2001, p. 31).

- *Note Taking*: Directs students to record information that is being provided, read, or discussed.

Analyzing the tasks involved in note taking, Marzano says, “To take effective notes, a student must make a determination as to what is most important, and then state that information in a parsimonious form” (Marzano, 2001, p. 43). Ladas observes, “Note taking facilitates information processing by actively engaging the learner” (Ladas, 1980, p. 44). Therefore, students need to process as well as record information rather than just copy what the teacher has written on the board or overhead projector.

- *Using Nonlinguistic Representation*: Directs students to construct a visual or picture of the learning.

Marzano contends that a powerful aspect of learning includes generating mental pictures to go along with information, as well as creating graphic representations for that information (Marzano et al., 2001). Paivio asserts that learners are “...[i]ncreasingly likely to store an item as an image, and recall is enhanced because the image is somehow more memorable than the verbal code” (Paivio, 1979, p. 207). When knowledge is presented in both verbal and nonlinguistic form “...[r]ecall increases with concreteness because the items are increasingly likely to be stored in both the verbal and the nonverbal code” (Paivio, 1979, p. 207).

- *Developing an Advance Organizer*: Prepares a structured format prior to the learning and directs students to add necessary facts and details to it as she provides, reads, or discusses information.

The learner can use an advance organizer to organize and interpret new incoming information (Mayer, 2003). Explaining the value of this practice, Marzano explains, “Advance organizers take the surprise out of what is to come, help students retrieve what they already know about a topic, and focus them on the new information” (Marzano, 2001, p. 279). Ausubel elaborates, “The advantage of deliberately constructing a special organizer for each new unit of material is that only in this way can the learner enjoy the advantages of a subsumer which both (a) gives him a general overview of the more detailed material in *advance* of his actual confrontation with it, and (b) also provides organizing elements that are inclusive of and take into account most relevantly and efficiently both the particular content contained in this material and relevant concepts in cognitive structure” (Ausubel, 1963, p. 82).

## Classroom Examples

The words in bold print are examples of the teacher directing all students to respond at the same time.

**Example 1:** While teaching the *b* sound, the teacher shows the students the letter card *Bb* and says the sound repeatedly. She then **asks all students to say with her** the sound this letter makes. During the choral response the teacher notices that five students did not respond. The teacher says, “I did not hear everyone. **Let’s do it again. Everyone look at the letter card *Bb* and tell me** the sound it makes.” All students chorally respond with the teacher while she monitors their participation. Following the choral responses the teacher says, “Thank you. That was much better. Now I am going to say some words, and if the word begins with the *b* sound, **put your hands on your head.**” The teacher says the word *bat*, and all students put their hands on their heads. She continues saying other words, and the students continue to put their hands on their heads when they hear a word that begins with the sound of *b*. The teacher gives all students a blank piece of paper and tells them to **draw a picture of something that begins with the *b* sound.** As the students are drawing, the teacher approaches them one at a time and asks them to tell her what they are drawing.

**Example 2:** The teacher says, “We are continuing our study of animals. Last week we studied reptiles. This week we are studying mammals. **Everyone think of the characteristics of mammals we discussed yesterday.**” There is silence in the classroom as the teacher waits for five seconds. He then continues by saying, “In your science journal, **create a graphic organizer that displays as many characteristics of a mammal as you can remember.**” Again the teacher pauses and monitors the students’ participation. After about a minute the teacher says, “**Share with your partner the characteristics** you wrote on your paper. Partner A share two characteristics, and partner B tell two more characteristics.” As the students are sharing, the teacher circulates, listening to the students and looking at the responses on each student’s graphic organizer. After about a minute of discussion, the teacher says, “Class, let me share with you the characteristics I heard you discussing. **I want everyone to listen** to see if you have these characteristics on your graphic organizer. If you do, **put a check by that characteristic, and if you do not, add it to your graphic organizer.**” The teacher then states, “On the back of your paper, **draw a Venn diagram. In one circle write *reptiles* and in the other write *mammals*. With your partner, discuss and write** the similarities and differences between these two types of animals we have been studying.” As students are completing the task, the teacher again walks around and monitors students’ participation and responses.

## Section III. Assessment Practices

T4S recognizes that assessment is one of a teacher’s most valuable tools. In education, it has many purposes and audiences. Teachers can use a variety of assessment methods to diagnose students’ strengths and needs, plan and adjust instruction, and provide feedback to students and parents regarding progress and achievement (McTighe & Ferrara, 2000, p. 1). Regardless of the method, assessment is crucial for teachers to teach for success. But what do assessment, testing, and evaluation mean? Popham (2003) identifies two kinds of educational tests: “The first is a teacher’s classroom test, typically designed by the teacher to measure student mastery of specific unit content. The second is externally imposed tests, those tests required by state or district authorities and designed by professional test developers to measure student mastery of the sets of objectives experts have deemed essential” (pp. vii and viii). In their book, *Assessing Learning in the Classroom*, McTighe and Ferrara (2000) offer the following clarification:

The terms assessment, testing, and evaluation are frequently used interchangeably, but they have distinct meanings. Assessment is a broad term referring to the process of gathering and synthesizing information to better understand and describe characteristics of people. Testing is one type of assessment. Tests generally utilize a paper-and-pencil format, are administered and taken within established time limits, restrict test takers’ access to resources (e.g., reference materials), and yield a limited range of acceptable responses. Evaluation involves making a judgment regarding quality, value, or worth, based on set criteria. Teachers’ questioning, reviews of student work folders, and paper-and-pencil tests are commonly used assessment methods for gathering information about student learning. Scoring a student essay and assigning report card grades are examples of evaluation (p. 2).

According to Guskey (2003), “Teachers who develop useful assessments, provide corrective instruction, and give students second chances to demonstrate success can improve their instruction and help students learn. To use assessments to improve instruction and student learning, teachers need to change their approach to assessments in three important ways” (p. 7).

**Make assessments useful for students and teachers.** Many teachers still mistakenly believe that they must keep their assessments secret. As a result, students come to regard assessments as guessing games. They view success as depending on how well they can guess what their teachers will ask on quizzes, tests, and other assessments... Classroom assessments that serve as meaningful sources of information don’t surprise students. Instead, these assessments reflect the concepts and skills the teacher has emphasized in class, along with the teacher’s clear criteria for judging students’ performances... The best classroom assessments also serve as meaningful sources of information for teachers, helping them identify what they taught well and what they need to reteach or remedy (p. 8).

**Follow assessment with corrective instruction.** If assessments provide information for both students and teachers, then they cannot mark the end of learning. Instead, assessments must be followed by high-quality, corrective instruction designed to remedy any learning errors the assessment identified (p. 9).

**Give second chances to demonstrate success.** To become an integral part of the instructional process, assessments cannot be a one-shot, do-or-die experience for students. Instead, assessments must be part of an ongoing effort to help students learn. And if teachers follow assessments with helpful corrective instruction, then students should be given a second chance to demonstrate their new level of competence and understanding (p. 10).

McTighe and Ferrera (2000) define validity, reliability, and fairness of assessments as follows:

Validity refers to the degree to which an assessment measures what it was intended to measure. Reliability refers to the dependability and consistency of assessment results. Fairness in classroom assessment refers to giving all students an equal chance to show what they know and can do (p. 7).

This section of the CT4S program focuses on one type of classroom assessments and what a classroom teacher does while assessing student learning and achievement to promote better teaching and determine the effectiveness of instruction. It does not address benchmark, common assessment systems. CT4S promotes the following element: use formative assessment to determine.

### **Use Formative Assessment to Determine the Instructional Needs of All Students**

#### *The Teacher Demonstrates All of the Following Attributes*

- Engages all students to respond to a question(s) by signaling, writing, or performing in order to check for understanding
- Reviews elicited behavior to check for all students' understanding in order to determine instructional needs
- Provides praise, recognition, assistance, or clarification as needed

Bransford defines formative assessments as "...ongoing assessments designed to make students' thinking visible to both teachers and students. They permit the teacher to grasp the students' preconceptions, understand where the students are in the developmental corridor from informal and formal thinking, and design instruction accordingly" (Bransford et al., 1999, p. 21). Such assessments help the teacher determine the immediate instructional needs of all students. Hunter adds, "Checking for understanding while teachers are teaching contributes to their knowledge of what has been learned and what needs to be retaught" (Hunter, 1982, p. 62). McTighe and Ferrara (2000) define formative assessments as "...ongoing, diagnostic assessments providing information (feedback) to guide instruction and improve student performance" (p. 33).

### **Classroom Examples**

**Example 1:** After teaching her students how to multiply a one-digit number by a two-digit number, the teacher asks them to take a quarter sheet of paper and complete the first two problems of their homework. When students are done, they hold their papers up, and the teacher collects them. She quickly sorts the students' papers according to those who answered the

problems correctly and those who did not. She directs students who got both problems correct to continue working on their homework while she works with those who did not.

**Example 2:** In a world history class, the teacher asks the students true and false questions to determine if they understand the first part of his lecture. Students hold up a red card for true or a blue card for false. After each response, the teacher informs the students if their answers are correct or incorrect and provides additional information as needed.

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