

An Assessment Continuum from Formative to Summative

It is difficult to distinguish between assignments and assessments in today's classroom because assessment is not an end of the unit event, rather it is integrated into the instruction program. Formative assessment begins even before we begin teaching with preassessment. We gather formative data throughout the unit of study, often in informal ways, to inform our teaching decisions and improve student learning. Each assessment option listed below is either discussed in this chapter or in other sections of this book. Please note page references below for information found in other chapters.



Preassessments

Checks for Understanding

Observations/Anecdotal Records

Student Questions/Comments (In-class and in Journals) See pages 81-83.

Teacher Questions & Prompts (In-class) See pages 54-62.

Assignments (including Homework)

Peer Assessment

Self Assessment

Quizzes

Tests

Performance Tasks

Preassessment Strategies

The good news is that many of the strategies we use to engage learners in active learning can be used as preassessment strategies. Even better news is that we do not have to do two exercises. We just need to pay attention to the assessment data that surfaces while we are accessing prior knowledge, surfacing misconceptions, and naive understandings.

It is wise to do the preassessment a week or two before the beginning of a unit of study. That way there is time to locate the resources we need and to adjust the learning experiences we have planned for the unit.

Active Learning Strategies as Preassessment Strategies

● Anticipation Guides	Pages 68-69
● Corners	Page 77
● Frame of Reference	Page 78
● Graffiti	Pages 79-80
● Journal Entries/Reflections*	Pages 81-84
● Line-Ups	Pages 89
● Questions: Teacher and Student	Pages 54-62
● Signal Cards	Pages 144-145
● Slates and White Boards	Page 146
● Sort Cards	Pages 93-95
● Stir the Class	page 96
● Three Column Charts	Page 100

* You can use the essential questions for the upcoming unit as the prompts for journal writing.

Additional Sources of Preassessment Data

Anecdotal Records, discussed on page 143, provide a rich source of assessment data. Other ways to gather preassessment data include having students draw their understanding of, or create a graphic organizer about, the concept before the learning experience begins. If you have students complete another drawing or graphic organizer at the conclusion of the learning experience, they will have a clear representation of their learning. More formal ways of gathering and assessing student knowledge and skill prior to learning include pretests, standardized test information, portfolio reviews, and interviews.

Checking for Understanding

This is NOT checking for understanding!

"Are there any questions?"

"Are you all with me?"

"Am I going too fast?"

"This is an adverb, isn't it?"

If the above are negative examples, what is checking for understanding? It is asking questions that can only be answered if students understand. Using Howard Gardner's definition of **understanding**, this would mean that **students are able to use knowledge and skills in new situations in appropriate ways**. While recall of significant information is an important part of learning, "checking for understanding" is not the same as checking for recall or memorization. It is essential that we be clear in our own minds what we are asking students to do. John Goodlad found in his research that two-thirds of all questions asked in classrooms were at the recall level. That is why it is essential that we build skill as designers of questions that, by their answers, really let us know whether or not the students **understand**. See pages 54-60 for information on the **design of questions and levels of thinking required by the questions and tasks we design**.

Another classroom dilemma is that one we all experienced as students. We sat in classrooms where the teacher asked many questions to the entire class and called on one student to answer. Given the number of students and the limited amount of time, the chances were pretty good that any one student was called on only once during the period. There are two big problems with that approach. One, the teacher only knows if the one student who answered the question knows or does not know the answer to, or has or does not have an informed opinion on the point being discussed. Two, the rest of the students can tune out if only volunteers are called on or if the teacher makes it a practice to call on all students one by one. After students have answered they are off the hook. Why do we, as teachers, even consider continuing this practice year after year?

There are ways to check across many students on the same concept or skill in a relatively short time. As we incorporate 10:2 Theory into our practice (See page 228), a strategy that is easy to implement is **Think-Pair-Share**. This strategy meets the needs of the introverted learner who wants time to think before talking because there is a short **"think"** time before any answers are accepted.

Checking for Understanding

The extroverted learners needs are addressed too because the student talk in "pairs" to discuss their thinking. Checking for understanding can occur during this component as you move around the room and listen in to the conversations. In the "share" component, random students can be called on to share their thinking, their partner's thinking, or any questions the two of them have.

Anecdotal Records/Observations

Clipboard cruising with computer labels, index cards, or observation checklists attached is a great way to gather informal assessment data. The advantage to computer labels is that, if you choose to do so, you can use the class list to put the name of a student on a label. That way you can track who you have observed by the blank labels and make a point of getting to students you might otherwise neglect because some students require or demand so much attention. Whichever record keeping device you use, you may choose to cluster the information on individual student data pages to be used later for instructional planning and conferencing, or you may want to group the cards, labels, etc. by level of competence demonstrated to plan differentiated lessons as needed.

Moving around the room and **listening in on small group discussions** and **checking over shoulders** to see how student work is progressing is an ongoing formative assessment strategy that requires no paperwork or grading. The trick is, of course, remembering who needed help with what or who might help someone else.

Additional Checking for Understanding Strategies

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|--------------------|---------------|
| ● Signal Cards | Pages 144-145 |
| ● Slates | Page 146 |
| ● Sort Cards | Pages 93-94 |
| ● Think-Pair-Share | Page 98 |
| ● Journal Entries | Pages 81-83 |
| ● Tickets to Leave | Page 104 |
| ● Homework | Pages 147-149 |

Many of the other active learning structures in Chapter IV can be used for checking for understanding.

Checking for Understanding with Signal Cards



Provide students with cards to signal understanding of concepts, or directions, or a sense of "I'm lost!", and you send the message that it is all right not to understand everything the first time around.

You can use as many cards as you want, but a good place to start is with red, green and yellow cards which have universal meanings. Green is **GO**, Yellow is **CAUTION**, and Red is **STOP** in both traffic signals and in soccer around the world. Students can monitor their own learning and signal:

- "Stop, I'm lost!" or "Slow down, I'm getting confused" or "Full steam ahead!"
- "We are working together productively" or "When you get a moment we'd like some help" or "We're dead in the water."

Additionally, other meanings can be assigned to the cards in order to do checking for understanding of concepts and information under study. For instance the three cards could represent:

- negative, positive, or zero
- complete, run-on, or fragments of sentences
- saturated, semi-saturated, or unsaturated
- future, present, or past tense

Whatever meanings you assign the cards, the possibilities are endless!

Gerry Zeltman, teacher of English at Rush-Henrietta High School in Henrietta, New York reports that his senior students are far more willing to admit confusion and ask questions when they have a set of cards with which to signal. Several elementary teachers suggest that library card pockets taped to the student's desk work well for keeping track of the cards.

Using Signal Cards to Check for Understanding

Read each statement aloud. Have students raise signal cards to indicate which statistical measure was used to analyze the data.

GREEN = mean, RED = median, YELLOW = mode, WHITE = range.

1. The most frequent test score was 85%.
2. The average class score was a 75.
3. Half of all students spend more than \$500 per year for clothing.
4. The most popular spectator sport at our school is football.
5. The difference between yesterday's temperature and today's temperature is 30 degrees.
6. More mozzarella cheese than cheddar cheese or American cheese is eaten each year.
7. The average number of books read by each student over the summer was 3.
8. The basketball team scored 44 points on Friday night and 64 points on Saturday night, a difference of 20 points.
9. Out of all the peaks in the mountain range, 3212 feet is the middle peak.
10. The class selected chocolate chip cookie dough as their favorite flavor ice cream.

**Mean? Median?
Mode? Range?**



Created by a wonderful teacher somewhere!

Checking for Understanding with Slates



Students are provided with **slates, white boards or pads of recycled handouts** cut into fourths on which to record their thinking during a lesson and given the appropriate writing tool.

At appropriate times students can "show" their thinking by holding up their slates for teacher review or the teacher can circulate around the room to check to see who understands or can use what information.

Johnson (1982) requires his high school math students to have their "think pads" (recycled worksheets cut into quarters and stapled together as small pads of paper) and pencils ready for use throughout the entire instructional period. During his math classes, he asks students to "Write the factors of 36," and then circulates around the classroom to see who has written what. It is clear that he finds out much more about who can factor 36 than he would if he stood in the front of the room and asked, "Who can tell me the factors of 36?"

This kind of checking can be done frequently throughout the explanation of any multi-step process. Asking for student response after almost each teacher statement provides an opportunity to identify where and with whom the learning breaks down. While most often used in elementary classrooms, teachers of physics are also strong advocates for this active learning tool.

Checking for understanding in this way, before students do homework or other independent practice, helps ensure that the students are not practicing errors or experiencing frustration during their independent work.

As a variation, you can engage students in helping with the checking process by assigning the same problem to all students. As a student finishes, she signals for the teacher to check her work. If it is correct, this student and others who follow can join the teacher in checking the work of others. This shortens the process and gives all students a chance to successfully complete the practice problem before moving on to the next step.