

# Assessment in the Classroom Certificate Series



## Part 1: Diagnostic Assessment

### Tools for Diagnostic Assessment in the Classroom

Many Classroom Assessment Techniques (CATs) can be adapted for diagnostic use. For additional CATs, see *Classroom Assessment Techniques* by Angelo and Cross or search online. This handout includes a few ideas to get your started.

It may be helpful to have help or feedback from colleague(s) when developing tools specific to your discipline. Additionally, always take the time to explain your reasons for using assessment techniques to students beforehand, and share when and how you plan to respond to their feedback. Ensure students understand that their responses on diagnostic assessments will not be included in their course grade and are instead designed to help you as an instructor.

#### ***Background Knowledge Checks***

This Classroom Assessment Technique is designed to help determine the most effective starting point for a lesson or course and the appropriate level at which to begin instruction. The technique will collect specific feedback on students' prior learning, and it can be especially helpful when used at the beginning of the semester or at any point before starting discussion of a new topic, concept or subject.

- Consider what students might already know (or think they know) about the topic, concept or subject. Try to find at least one point that most students are likely to know, and use that point to lead into other, less familiar points.
- Prepare two or three open-ended questions, a few short-answer questions, or 10-20 multiple-choice questions that will uncover students' existing knowledge of a topic, concept or subject.
- Hand out questionnaires or provide your questions on a PowerPoint slide or the board. At the next class meeting, provide the results to students and tell them how you will use that information to inform your teaching.

Adapted from: Angelo, T. A. & Cross, K. P. (1993). *Classroom Assessment Techniques*. San Francisco, CA: Jossey-Bass.

## Conferences/Interviews

Conferences or informal interviews between you and your students can be used to exchange information, share ideas, and give you a better understanding of students' capabilities at the beginning of a unit or course. Conferences might be held to gain greater understanding of students' thinking and suggest next steps, assess students' level of understanding particular concepts, or review and clarify what students already know.

Adapted from: [http://eworkshop.on.ca/edu/pdf/Mod21\\_assessment\\_strgs.pdf](http://eworkshop.on.ca/edu/pdf/Mod21_assessment_strgs.pdf).

## Graphic Organizers

Graphic organizers help you understand students' prior knowledge of a subject and may help you with follow-up assessments as well. Graphic organizers allow students to visually organize their thoughts about a subject. Potential graphic organizers include:

**KWL Charts**—Students list what they *Know* and what they *Want* to know about a topic, and later add what they have *Learned* about that topic. You can ask students to complete the first two sections of the chart before beginning a new class or unit, and then have them complete the last column of the chart at the end of the class or unit.

Adapted from:

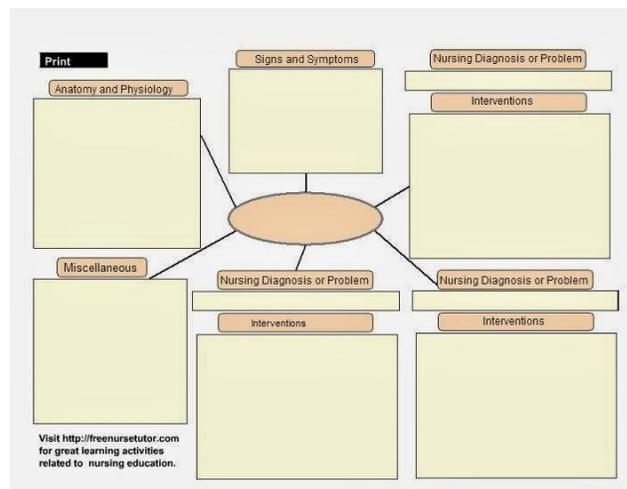
[http://www.ehow.com/list\\_7636683\\_diagnostic-assessment-tools.html](http://www.ehow.com/list_7636683_diagnostic-assessment-tools.html).

KWL Chart		
What I Know	What I Want to Know	What I have Learned

**Mind/Concept Maps**—Students place the central topic in the center of a page, and then write and connect words or short phrases that relate to the main topic. You can use these maps to assess how much students know about a particular topic. Maps can be returned to students so they can add additional information as they learn throughout the course/unit.

Adapted from: <http://www.slideshare.net/pafirth/diagnostic-assessment-ideas-12934737>,

<http://blog.ehrtutor.com/2014/01/jumping-right-back-into-school-concept.html>.



## ***Ice Breakers***

Most of us use some type of ice breaker early in our courses. These ice breakers help us begin to learn about our students and help students begin to learn about each other. You can also use ice breakers as high-level diagnostic assessment tools. Adding diagnostic assessment to your ice breaker may be as simple as asking students to identify what previous knowledge they have about the subject you are teaching, or it may be as complex as developing specific activities that revolve around diagnostic assessment of your course learning outcomes. For example, <https://docs.google.com/file/d/OBxPAzaNyA0IKWFJ4WXZRdm9fyjQ/edit?pli=1> shows a “human bingo” game based on the outcomes of a teacher education workshop.

## ***Journals***

If you assign journals throughout the semester, you can use a first journal entry to ask students what they already know about a subject or how they feel about that subject. Otherwise, follow the same format your journals will follow throughout the rest of the course so that students are not confused about different expectations from one week to the next.

Adapted from: [http://eworkshop.on.ca/edu/pdf/Mod21\\_assessment\\_strgs.pdf](http://eworkshop.on.ca/edu/pdf/Mod21_assessment_strgs.pdf).

## ***Misconception/Preconception Checks***

This technique focuses “on uncovering prior knowledge or beliefs that may hinder or block further learning.” As Angelo and Cross state, “The greatest obstacle to new learning often is not the student’s lack of prior knowledge but, rather, the existence of prior knowledge.”

- Identify some of the most problematic and common misconceptions or preconceptions students bring to your course.
- Select a few of these ideas and beliefs, preferably those that are likely to interfere most with learning in your course. Create a questionnaire to gain information about your students’ thoughts about these ideas and beliefs.
  - Multiple-choice questionnaires are easy to analyze and help ensure the anonymity of student responses.
  - Short-answer questions can provide more useful information, but they may compromise anonymity.
  - Likert-scale responses can provide information about how strongly the students hold the ideas and beliefs.
- Before using the questionnaire, think through your reaction to likely responses. Remove questions and topics you do not feel prepared to address.

Adapted from: Angelo, T. A. & Cross, K. P. (1993). *Classroom Assessment Techniques*. San Francisco, CA: Jossey-Bass.

### ***Performance Tasks***

Use a performance task to have students create, produce, perform, or present something related to knowledge you would expect students to have when they begin the unit or course. Caution should be exercised when using performance tasks at a diagnostic level; there should be support available for students who do not have the previous knowledge, skills, or abilities required to complete the assessment.

Adapted from: [http://eworkshop.on.ca/edu/pdf/Mod21\\_assessment\\_strgs.pdf](http://eworkshop.on.ca/edu/pdf/Mod21_assessment_strgs.pdf).

### ***Student Self-Assessments***

Self-assessment allows students to review and reflect on their own personal progress in terms of knowledge, skills, and abilities. Self-assessment should lead students to a greater awareness of themselves as learners. In diagnostic assessment, students can reflect on what they know about a topic and previous experiences with this topic, much like they might with a journal entry.

Adapted from: <http://www.slideshare.net/pafirth/diagnostic-assessment-ideas-12934737>.

### ***Student Surveys***

Students can complete a survey about their ideas regarding the topics you are going to cover. If you are asking for students' opinions, ensure individual survey results are not tied to particular students so that your perceptions of those students are not affected by their survey responses.