**Assessment Descriptions from Traveling Workshops Activity**

There are many types of relevant assessments. Those listed below are simply several possibilities. For more ideas, go to:

<http://serc.carleton.edu/NAGTWorkshops/assess/types.html> and

Angelo, T.A., and Cross, K.P., 1993. Classroom Assessment Techniques: A Handbook for College Teachers, 2nd edition. Jossey-Bass. San Francisco, CA, USZ

**Assessment 1: Low stakes multiple-choice questions (e.g. clickers, ConcepTests…)**

Low stakes multiple choice questions can be used in any size class. The instructor presents one or more questions during class along with several possible answers. Students in the class indicate which answer they think is correct. Hand-held clickers or networked computer systems make this easy in large classes, but colored cards work too. If many of the students do not give the correct answer, students are given time to try to persuade their neighbor that their answer is correct. The question is asked a second time to gauge class mastery. These questions provide timely feedback to both instructor and students.

More at: <http://serc.carleton.edu/NAGTWorkshops/assess/conceptests.html> and

<http://cwsei.ubc.ca/resources/clickers.htm>

<http://www.eos.ubc.ca/research/cwsei/eossei-times/EOSSEITimes_5.03MCQ.pdf>

**Assessment 2: High-Stakes Exams, including 2-Stage Exams**

High-stakes exams are a classic summative assessment technique in education. Exam question types range from multiple choice, to written essays, to demonstrations of practical skills, and everything in between. To provide immediate feedback to students on high-stakes exams, one technique is to use two-stage exams. In two-stage exams, students complete an individual exam as usual, turn it in, then immediately redo the exam in groups. Used properly, two-stage exams can improve feedback, increase learning, and correct misconceptions.

More at: <http://serc.carleton.edu/NAGTWorkshops/assess/exams.html>

<http://www.eos.ubc.ca/research/cwsei/eossei-times/EOSSEITimes_6.09-LogisticsOfTwoStageExams.pdf> and

<http://www.eos.ubc.ca/research/cwsei/eossei-times/EOSSEITimes_4.1GroupExams.pdf>

**Assessment 3: Concept Sketches**

Concept sketches are sketches or diagrams that are concisely annotated with short statements that describe the processes, concepts, and interrelationships shown in the sketch. Having students generate their own concept sketches is a powerful way for students to process concepts and convey them to others. Concept sketches can be marked with a general rubric (see below) or a sketch-specific rubric (you create).

More at: <http://d32ogoqmya1dw8.cloudfront.net/files/NAGTWorkshops/coursedesign/tutorial/concept_sketch_1.doc>

<http://d32ogoqmya1dw8.cloudfront.net/files/NAGTWorkshops/assess05/activities/Johnson_ConceptSketches.pdf> (contains a general rubric for concept sketches)

<http://reynolds.asu.edu/EG_movies/EG2e_concept_sketch.m4v> (a short video from Steve Reynolds about how to construct a concept sketch)

**Assessment 4: Documented Problem Solving**

Documented problem solving is an assessment technique that aims to help students recognize how to go about solving problems and improve their metacognition. These assessments ask students to keep track of the steps they took to solve a problem, and explain those steps in writing. The emphasis in this assessment technique is on students’ documenting the problem-solving steps, rather than on whether the students arrived at a correct answer. This technique can be used in any field where solving a problem type involves multiple steps that can be identified.

More at: <http://serc.carleton.edu/sp/library/dps/index.html>

**Assessment 5: Minute Papers**

Minute papers are quick feedback to an instructor about student understanding. Typically done at the end of a class session, an instructor can ask students to write for one minute about questions like: “What were the most important points for you in class today?”, “What questions do you have about today’s class?”, “What was the most confusing/challenging part of today’s class?” You may also choose to ask students to write about something more particular. The collection of responses (which may be anonymous) from the class give an instructor an idea of student understanding at that time.

More at: <http://serc.carleton.edu/resources/14315.html>

<http://www.flaguide.org/cat/minutepapers/minutepapers1.php>

**Assessment 6: Knowledge Surveys**

A standard Knowledge Survey consists of many questions that cover the entire content of a course. Questions cover all levels of Bloom's scale of thinking. The key feature of Knowledge Surveys is that students do NOT answer the questions. Instead, they say whether they COULD answer the question and with what degree of confidence.

More at: <http://serc.carleton.edu/NAGTWorkshops/assess/knowledgesurvey.html> and <http://serc.carleton.edu/NAGTWorkshops/assess/knowledgesurvey/KSWhat.html>

**Assessment 7: Poster Presentations**

Poster presentations are often used as a format to summarize a long-term or short-term class project. The process of preparing and presenting a poster gives students practice in synthesizing information both in visual form and orally. During a class poster session, students can peer review each others’ posters, given a rubric (to which students have access while preparing their posters).

More at: <http://serc.carleton.edu/NAGTWorkshops/assess/poster.html>

**Assessment 8: Written Reports**

Written reports are a classic assessment. Written reports may range from short in-class writing, to term papers. For long written reports, student benefit from a scaffolded process with feedback at various stages through the development of their report. Evaluation for longer written reports often involves use of a rubric (to which students have access while preparing their reports), and with which students can evaluate one another. “Calibrated Peer Review” (CPR) can be useful for giving students practice evaluating the work of others and their own work.

More at: <http://serc.carleton.edu/NAGTWorkshops/assess/writtenreports.html>

and for CPR: <http://cpr.molsci.ucla.edu/Home.aspx>