

# ASSESSING YOUR STUDENTS' LEARNING

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## ASSESSMENT VS. EVALUATION

- Assessment: Collecting information (data) on what your students have learned.
- Evaluation: Assigning value to what your students have learned (giving grades). This involves making decisions about the quality of the students' work, usually by comparing the data with explicit criteria that are known to the students in advance.

## TYPES OF ASSESSMENT (Chiappetta & Koballa Jr., 2002, p. 277)

- Diagnostic Assessment: Gathering of information on how well students understand a topic or topics before the beginning of a unit of instruction. Examples: student brainstorming, a pretest, questioning the students, interviews, journals, concept maps, drawings, solutions to open-ended problems.
- Formative Assessment: Gathering of information on how well students understand a topic or topics while the instruction is in process. This also provides information about the quality of the learning program. (See Table 2-2, page 20 of Classroom Assessment and the NSES.)
- Summative Assessment: The final phase of assessment on a topic or topics at the end of instruction, to determine the overall student learning. This is used to determine final achievement or performance and grades. (See Table 2-2, page 20 of Classroom Assessment and the NSES.)
- References: Chiappetta & Koballa Jr., 2002, p. 277; NRC, 2001.

## CHANGING EMPHASES OF ASSESSMENT

- See Table 2-1, page 19 of Classroom Assessment and the NSES.

## TRUSTWORTHINESS OF YOUR ASSESSMENT DATA

- Reliability: **Consistency** of the assessment method across time, parts, and forms. The ability of a measuring device to give the same results over time.
- Triangulation to increase reliability: The reliability of your assessment and evaluation may be increased by using several different methods to measure the same learning (e.g., an oral report, a debate, a paper, a WebQuest). This also increases the **confidence** that you have in your assessment and evaluation of the student's learning.

- Validity: The degree to which an assessment measures what it is supposed to measure. (Example: Using a chapter assessment from a textbook might not be addressing exactly what you have taught in the unit. Is the chapter assessment valid?)

### **ASSESSMENT TERMS**

- See Box 3-2, page 31 of Classroom Assessment and the NSES.

### **FRAMEWORK OF ASSESSMENT APPROACHES AND METHODS**

- (See Table 4-1, page 63 of Classroom Assessment and the NSES.)

### **REFERENCES**

- Chiappetta, E.L., & Koballa, T.R. Jr. (2002). Science Instruction in the Middle and Secondary Schools, 5<sup>th</sup> ed. Upper Saddle River, NJ: Merrill Prentice Hall.
- National Research Council. (2001). Classroom Assessment and the National Science Education Standards. Washington, DC: National Academy Press.