

Unit 4

Assessment

Introduction:

Assessment techniques are extremely important in the teaching process. Teachers must be aware of the various methods of assessment and how to use them to improve instruction. Assessment allows professional judgment in regard to student knowledge, skill and attitudes. Specific objectives should be used to determine the types of assessments used in the classroom. They may be utilized to make decisions regarding student progress in class, grading and improvement of instruction. An understanding of assessment techniques is essential for teaching excellence.

Unit Objectives:

Upon completion of Unit 4 – Assessment, new teachers will be able to:

- Discuss the purpose of assessments, to include pre-tests, formative tests, summative tests, performance tests and self-assessment
- List and describe characteristics of written and performance tests
- Describe grading systems to assess student progress
- Describe student applications / activities for technical classes

Unit Outline:

4.1 Assessment

- A. Pre-Tests
- B. Formative Tests
- C. Summative Tests
- D. Performance Tests

E. Self-Assessment

F. Test Considerations

- 1. Formal vs. informal**
- 2. Objective vs. subjective**
- 3. Validity**
- 4. Reliability**
- 5. Speed vs. Power**

G. Types of Tests / Grading

- 1. Multiple Choice**
- 2. True-False**
- 3. Completion**
- 4. Matching**
- 5. Essay**

H. Grading Systems

I. Test Preparation

J. Test Administration

K. Feedback

Activities for Unit 4 – Assessment

Upon completion of Unit 4, you should be able to complete the following:

1. Prepare test items for each of the following types of questions that could be used in your classes:
 - A. True - False
 - B. Multiple Choice
 - C. Completion
 - D. Matching
 - E. Essay

2. Prepare a Unit Test (major content area) to use for your classes—select types of test items, estimated point value of each item)

3. Prepare Performance Tests to use with the classes you teach.

4. Plan a Grading System for the courses you teach (criteria for evaluation, number of points per item, percentage of total grade for each).

5. Correctly answer questions related to this Unit on a written test.

6. Effectively apply the principles discussed in this Unit in the classroom.

REMEMBER!

ASSESSMENT SHOULD ALWAYS TIE BACK TO THE OBJECTIVES!

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Why Give Tests?



1. Judge students mastery of content
2. Measure students growth
3. Diagnose learning difficulties

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Why Give Tests?



4. Evaluate instructional effectiveness
5. Encourage study habits
6. Assign grades

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Three Types of Assessment

- Pre-test
Can be: Written, Q & A, Other
- Formative Assessment
Can be: Q& A, Class Discussion, Teacher Circulating and Checking Student Work, Quizzes, etc
- Summative Assessment
Can be: Written, Project, Check-off List

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TEST CHARACTERISTICS



1. Formal vs. Informal
2. Supply vs. Selection
3. Objectivity vs. Subjectivity
4. Validity vs. Reliability

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1. What country is currently pioneering research in the area of friction welding?

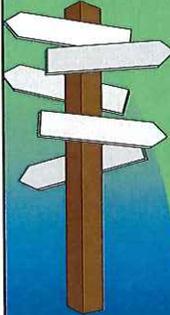
- A. Belize
- B. Pakistan
- C. Nicaragua
- D. United States

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Activity

- Describe a situation where all of the following would be present: formal, supply, subjective and valid
- Informal, selection, objective and reliable
- Pre-test, fill in the blank, based on class questions

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Multiple Choice

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Examples

- 1. The ignition in a car
 - A. Supplies voltage.
 - B. Is part of the electrical system.
 - C. Consists of a distributor points and coil.
 - D. Is likely electronic.

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The function
of the ignition in a car is
to



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2. Diesel engines will
replace gas engines
within

- A. 6 years
- B. 10 years
- C. 20 years
- D. 25 years



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According to Diesel Weekly.

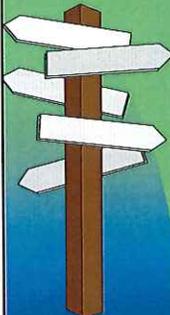
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Examples

3. Which of the following woods is not a hardwood?

- A. maple
- B. pine
- C. copper
- D. zinc

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Matching

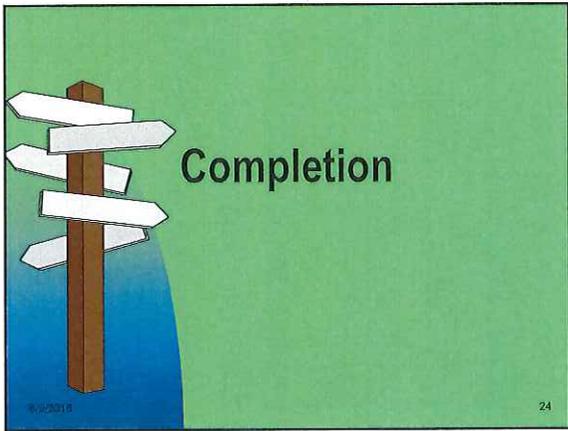
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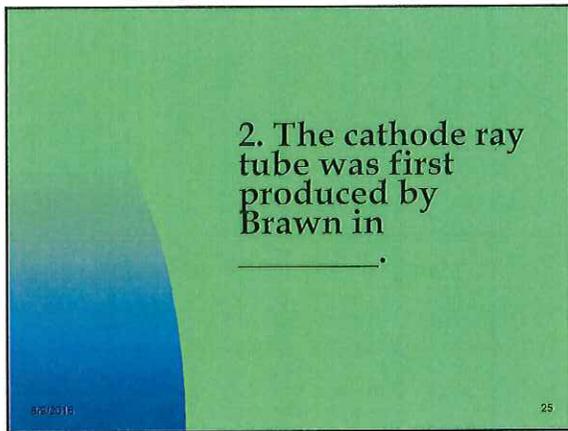
Matching

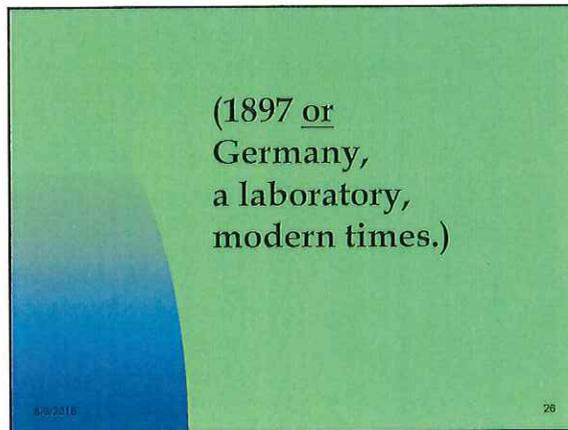
<p>___ 1. Table Saw</p> <p>___ 2. Band Saw</p> <p>___ 3. Solidify</p> <p>___ 4. Maple</p> <p>___ 5. Paduk</p>	<p>A. Hardwood domestic</p> <p>B. Liquid to become solid</p> <p>C. From British penal colony</p> <p>D. Common blade size 6" – 14"</p> <p>E. Common blade size 60" – 92"</p>
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1. _____
was the first
basketball
All-American at the
University of
Kentucky.

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True/False

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True/False

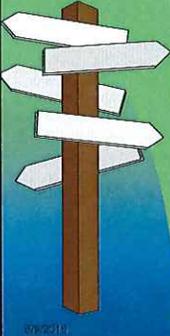
- Sam Bowie, a Pennsylvanian, was the leading scorer and rebounder for the University Kentucky in 1979.

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True/False

1. It is not unlikely that it will rain tomorrow.

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Essay

© 2016 31

Extended Response Essay

1. Discuss the stand of the AMA on socialized medicine.

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Restricted Response Essay



1. Discuss the criticisms made by the AMA against socialized medicine. Present one example to support each and one example to counter each.

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Types of Psychomotor Test Items

- Project vs Process
- Checklist vs Rating Scale

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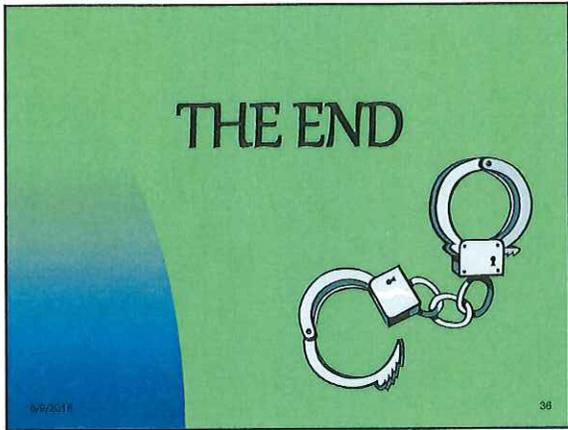
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Grading

- Communicates information about student achievement
- Report cards are official records
- Criterion referenced tests based on standards (local, state or national) match objective based instruction
- Grading creates a measurement scale that should be valid and reliable
- Computer-based programs can help with record keeping, calculating, and reporting.

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METHODS OF INSTRUCTION

NTI

Dr. Michael Watach
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LESSON OBJECTIVES

At the completion of this lesson, the teacher will achieve the following objectives with a retention rate of 70%:

- Explain the importance of teaching methods
- Discuss methods of teaching and how they are selected for teaching:
 - Lecture method
 - Discussion method
 - Demonstration method
- Identify at least 3 characteristics of an effective lecture, discussion and a demonstration method of teaching.
- Outline the procedure for presenting a discussion method, and or giving the demonstration method of teaching to an individual or small group of students.

BASIC FORMULA FOR SUCCESS

- Get to **know** your students. (where are you at the start/end of class?)
- **Believe** in your students. (don't listen to teachers who complain!)
- **Show** them that you believe in them. (your project student)
- Set **challenging measurable goals (objectives)**.
- Make the goal (objective) your priority.
- Work backwards from your goal (objective) to plan your lessons.
- Invest in your students. (teaching is about them not you)

WHAT NOT TO DO

- Don't focus on all the things that are wrong that you have no power to change.
- Don't discipline your classroom, manage it! Discipline is reactive, management is proactive.
- Don't try to "wing it". You need to have a plan.
- Don't forget that you are dealing with kids! (They are not short adults!)
- Don't listen to teachers who complain!

WHY WE DO WHAT WE DO....

- The Alex story...going no where...last chance they've got

METHODS OF TEACHING

Definition:

A vehicle to communicate the Knowledge, Skills, and attitudes essential for preparing for job entry level employment.

Methods make a difference!

TYPES OF KNOWLEDGE (DOMAINS)

- Cognitive-What rolls around in your head.
- Physical-what rolls around in your hand.
- Affective-what rolls around in your heart.

(Stolen From Brent Askins)

LESSON PLAN FORMAT

Title:

Objectives:

1. Introduction
2. Presentation (Methods)
3. Application
4. Evaluation

SELECT THE APPROPRIATE METHODS FOR TEACHING & TRAINING

- Demonstration
- Discussion
- Lecture
- Follow the leader
- Small group
- Field Trip
- Debate
- Games
- Individualized study
- Problem solving (problem based-learning)
- Guest Speakers

LECTURE METHOD

Defined as: A talk given to an audience to provide them with information.

"A lecture is one way communication"

Try to limit to 20 minutes!



WHEN TO USE A LECTURE

- Provide new information
- When resources are limited
- As one of many forms of instruction
- In response to questions
- For convenience

Telling is not teaching!

(Transition Time)

ILLUSTRATED DISCUSSION METHOD

- What is the worst thing that has happened to you so far this year teaching?
- What would you tell yourself if you could go back in time to the night before your first day of teaching?



ILLUSTRATED DISCUSSION METHOD

- What did I just do?
- Works well when the audience have a common background of experience and can add to the conversation.
- Ask questions and use visuals.

ILLUSTRATED DISCUSSION METHOD (WHEN TO USE?)

- When information can be gained from experiences of others.
- Generate thinking and problem solving.
- Keep students attention and interest
- Feedback to assess learning
- Reinforces learning with questions and instructional media
- **Helps to build on prior knowledge (Brain research)**

QUESTIONING TECHNIQUE

Used to involve students and monitor their progress

- Overhead-thrown out to the group
- Directed-Directed to an individual
- Reverse-directed back to the asker
- Relay-asked by one and answered by another person.

Inform students to raise their hands if they have a question.

PAUSE TIME

Refers to the period of silence (3-5 Seconds) after a question is asked and before a person's name is called.

- Encourages students to think
- Gets students involved



QUESTIONING TECHNIQUE

- Improve students' interest
- Stimulate student thinking
- Reveal students' attitudes
- Get students involved
- Provides emphasis and reinforcement of the main points
- Checks the effectiveness of your instruction.

Be careful not to over use it! (Dave T.)

TYPES OF MEDIA

- Books and textbooks
- Manuals
- Chalkboard
- PowerPoint
- Handouts
- Videos
- Models
- Charts
- Cool stuff from your shop or lab!

What's the hook? How are you going to reel them in?



More stories: Flying lessons, boat builders
(Transition Time)

DEMONSTRATION METHOD

A step-by-step procedure by the instructor to show the proper procedure in performing mental and physical skills.

DEMONSTRATION METHOD

- Used for skill development
- To show proper work habits and safe working practices
- Illustrate principles or theories in a dramatic way
- Proper use of tools and equipment

You are the role model!



DEMONSTRATION

The demonstration enables the trainee(s) to observe a correct procedure, work habits and safety for completing a task(s)

- Plan demonstration
- Position trainees
- Arrange tools, materials, etc.
- Explain purpose and objectives
- Go step-by-step (don't be afraid to stop and repeat or answer questions)
- Ask questions
- Emphasis safety
- Summarize key points

Provide time for practice!

KEYS TO A SUCCESSFUL DEMONSTRATION

- **Plan** the materials and equipment needed
- **Practice** to ensure correct performance. (Don't have your students do something that you have not done!)

(Co2 boat story)

AFTER THE DEMONSTRATION

Provide students the opportunity to practice learning activities as soon as possible after the demonstration!



SUPERVISE LEARNING ACTIVITIES

- Ask questions
- Circulate around the room
- Correct errors in safety, procedures, etc.
- Work one-on-one as needed
- Use your students as a resource (when appropriate) to reteach to others

This is when the real learning happens!

Tell me and I will forget.
Show me and I will remember.
Guide me and I will understand.

DEMONSTRATION METHOD SUMMARY

- Plan the demonstration
- Position the students
- Arrange tools, materials etc.
- Explain purpose and objectives
- Go Step-by-step
- Ask questions
- Emphasis Safety

Provide for practice!

LET'S TRY THIS OURSELVES!

Soldering an in-line splice
I will show you how.
One of you will re-teach to the group!

REVIEW

- Explain the importance of teaching methods and why they are so important in skills based education.
- Discuss each of the three methods of teaching covered today and how/when they are used.
 - Lecture
 - Discussion
 - Demonstration
- Identify 3 characteristics of an effective illustrated discussion and a demonstration method of teaching.
- Outline the procedure for presenting a discussion method and/or giving a demonstration method of teaching to an individual or small group.



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**A COMMON SENSE APPROACH
TO WORKING WITH STUDENTS
WITH SPECIAL NEEDS**

Debbie Seider
Office of Career and Technical
Education

OBJECTIVES

- Define the following terms:
 - IEP
 - ARC
 - Reasonable Accommodations

OBJECTIVES

- Differentiate between the following:
 - LD/SLD
 - ADHD
 - EBD
 - ELL
- Describe accommodations that can be used with students with special needs.

 **ACCOMMODATIONS**

Reasonable Accommodations - Making changes in the planning, teaching strategies, and evaluation methods used in teaching a student with special needs. This does not include a **fundamental** change in the program. This is just to level the playing field for these students.

 **ARC**

■ **ARC (Admissions and Release Committee)** - A group consisting of parents, special education teachers, regular education teachers, psychologist, principal, and others as appropriate that determine the appropriate education of a student with special needs.

 **IEP**

IEP (Individual Education Plan) - This is a legal document that is written during the ARC that outlines the goals for a student with special needs, the classes that the student is to take, and the types of accommodations that are to be made in each of the classes.

Most Commonly Seen Special Needs

- LD/SLD – Learning Disability - Students have average IQ but have difficulty with reading, writing, or math
- ADD/ADHD – Attention Deficit Disorder/ with hyperactivity – Students have difficulty focusing on one thing at a time
- EBD – Emotional Behavior Disorder – Covers a wide variety of disorders

STRATEGIES

- When teaching, use the old adage,
 - Tell them what you're going to tell them - (Introduction)
 - Tell them – (Main part of lesson)
 - Tell them what you've told them – (Summary)
- REPEAT, REPEAT, REPEAT

STRATEGIES

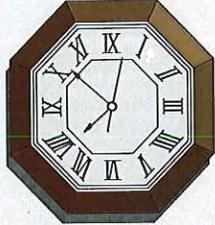
- Some students work better alone, some in pairs, and some in small groups.
- Put the textbook on tape for those students who have difficulty reading.
- Read the test aloud.

STRATEGIES

- Make frequent eye contact.
- Have a "time-out" place so that a student who needs a safety valve can have one where you still have control.
- Break down large tasks into small ones.

STRATEGIES

- Give the student extra time.
- Let the student use a calculator
- Shorten the assignment if possible.



PLACEMENT

What do I do if I think a special education student shouldn't be in my class because he/she can't do the work or it's a safety issue?



PLACEMENT

- Ask the special education teacher for help
- DOCUMENT
- Accommodations Sheet



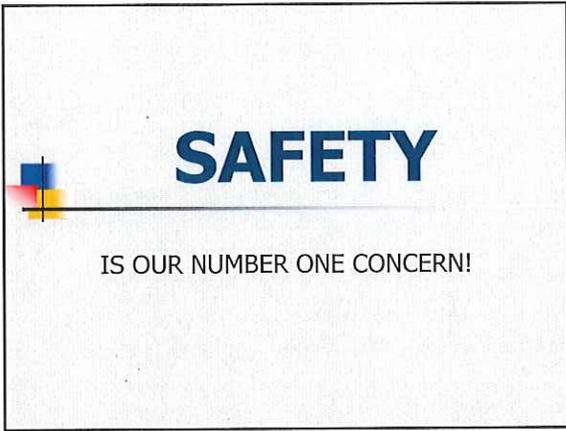
PLACEMENT

- **DOCUMENT**
- Call the parents (If under age 18)
- **DOCUMENT**
- Ask for an ARC meeting



PLACEMENT

- **DOCUMENT!!!!**



SAFETY

IS OUR NUMBER ONE CONCERN!
