How Will We Know What Our Students Know?
Building Quality Assessments

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We do not assess our students sufficiently. It is essential that we assess our students more, not less.
Workshop Goals

• Investigate the role of Formative Assessments
• Uncover what students must know and be able to do
• Identify the steps in creating effective assessments
• Become familiar with assessment vocabulary
• Analyzing assessments questions and assessment results
• Build a unit around Evidence of Learning
Formative Assessments

There is no such thing as a formative assessment

It is how we use the assessment that makes it formative - or not
Students taught by teachers who integrated assessments with instruction could achieve in six or seven months what would otherwise take a year.
Research indicates that up to 35-40% of all errors on achievement tests are ... reading errors.
Inhibiting Factors

• Tendency to assess quantity of work rather than the quality of learning

• Greater attention given to grading rather than assessing for improvement

• Emphasis on comparing students rather than tracking progress toward the standards
Differences between Assessment and Grading
Assessment and Grading

1. Are not same
   (practice vs. playing the game)

2. Not everything assessed is graded

3. Should occur continuously and involve all student

4. Help us and our students know our areas of sufficiency, proficiency and deficiency
Grading vs. Assessment

FORMATIVE ASSESSMENTS

- include graded and ungraded activities
- provide information and guidance
- offer specific evidence of learning
- help improve our practice
- offer guidance to students
Proficiency vs. Mastery

ELA/Literacy
• Fluency
• Proficiency

Mathematics
• Proficiency
• Fluency
• Mastery
Constructing Assessments

1. Break down the Standards
2. Identify the Depth of Knowledge
3. Establish the Instructional Objectives/Goals
4. Define the Evidence of Learning
5. Determine Appropriate Assessment Method
6. Select Supporting Materials
7. Determine Academic or Domain Specific Vocabulary
8. Identify Mathematical Practice Standards or ELA Anchor Standards
Quality Assessments:

- Match the expectations and complexity of thinking identified in the standard
- Use the same terms that appear in the standards as opposed to more student-friendly wording (e.g. “identify” rather than “label”)
- Align with or resemble the formatting of state assessments so that such formats will be familiar to students
Keys to Quality Assessment for Learning

• Have a clear purpose
• Have clear targets
• Have sound design
  (assessment design – the pre assessment work)
• Have effective communication of results with students
• Have student involvement to foster student ownership
• Sharing learning goals with pupils
• Involving your students in self-assessment
• Providing feedback which leads to students understanding their next steps and how to take them
• Belief that every student will improve.
Assessment Vocabulary

Evidence
Measurable
Actionable
Valid
Evidence of Learning

The task or question provides you with information on what a student knows, is struggling with, or does not know.

- Student papers / products that show growth or mastery of academic understanding / skills
- Student work samples that illustrate student learning through revision of work or repeated performance on similar concepts
- Student reflections on their learning (e.g. through logs, journals, portfolios)
- Student exhibitions
Measurable

The assessment results provide specific information on where a student is along the learning continuum.

• More than right or wrong
• Multiple data points
• Built around the expectations of the standard
Actionable

• Identifies where students are proficient, sufficient, and deficient
• Makes it clear what the teacher or student needs to do next
• Things that you need to do now
• Either independent or with guidance and direction
Valid

• Measures what it is supposed to measure

• Content of the assessment matches the instructional objectives

• Will be a measure of a student's learning rather than something else
Moving From Standards to Instruction to Assessment

**STEP 1:** Break Down the Standard into Specific Statements

**STEP 2:** Identify the Concepts and Vocabulary

**STEP 3:** Determine the Learning Targets

**STEP 4:** Establish the Depth of Knowledge Ceiling

**STEP 5:** Write Instructional Objectives

**STEP 6:** Develop Assessments Aligned to the Standards

**STEP 7:** Standards-based Instruction

**STEP 8:** Assess for Student Understanding

**STEP 9:** Evaluate Assessment Results and Provide Feedback

**STEP 10:** Adjust Instruction
Standard 4.MD.2

Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
Breaking Down MD.2

- Use the four operations
- Solve word problems involving fractions
- Solve word problems involving decimals
  - Distance
  - Intervals of time
  - Liquid volumes
  - Masses of objects
  - Money
- Express measurements
  - Larger units in terms of smaller unit
- Represent measurement quantities
  - Number line diagrams
  - Measurement scale
Identify the Concepts and Vocabulary

- Use the **four operations**
- Solve **word problems involving fractions**
- Solve word problems involving **decimals**
  - Distance
  - Intervals of time
  - Liquid volumes
  - Masses of objects
  - Money
- Express **measurements**
  - Larger **units** in terms of smaller unit
- Represent **measurement quantities**
  - Number line diagrams
  - Measurement scale
Determine the Learning Targets

- **Use** the four operations
- **Solve** word problems involving fractions
- **Solve** word problems involving **decimals**
  - Distance
  - Intervals of time
  - Liquid volumes
  - Masses of objects
  - Money
- **Express** measurements
  - Larger **units** in terms of smaller unit
- **Represent** measurement quantities
  - Number line diagrams
  - Measurement scale
Establish Depth of Knowledge Ceiling

Webb’s Depth of Knowledge
DOK in NOT About Difficulty

Who was the 22\textsuperscript{nd} president of the United States?

\textit{If you know the answer the question is an easy question.}

Who was the 24\textsuperscript{th} president of the United States?

\textit{If most of you do NOT know the answer, this question is a difficult questions.}
A Matter of Effort

What do you think about the following quotes?

“Academic excellence is not whether or not a student is smart, but whether a student is willing to work and struggle.”

“Struggling makes you feel bad and not smart. High ability students don’t need to struggle to grasp the content and low ability students will not achieve even if they struggle.”
Questioning

Essential Questions

Think Alouds

Clarification Questions

Planning Questions

Probing Questions

Productive Struggle
Question Types

- Text Features: 15%
- Context Clues: 7%
- Simple comprehension: 10%
- Main Idea, summarize, paraphrase: 15%
- Author's purpose, arguments, bias: 9%
- Logical inference, cite evidence: 15%
- Responses to the text: 23%
High Ability

- Main Idea, summarize, paraphrase, author's purpose, arguments, bias, Logical inference, cite evidence, response to text: 74%
- Text Features, Context Clues, Simple Comprehension: 26%
Low Ability

- Main Idea, summarize, paraphrase, author's purpose, arguments, bias, logical inference, cite evidence, response to text: 40%
- Text Features, Context Clues, Simple Comprehension: 60%
Identify Instructional Emphasis

- Use the four operations
- Solve word problems involving fractions
- Solve word problems involving decimals
  - Distance
  - Intervals of time
  - Liquid volumes
  - Masses of objects
  - Money
- Express measurements
  - Larger units in terms of smaller unit
- Represent measurement quantities
  - Number line diagrams
  - Measurement scale
Instructional Objectives

Student will be able to:

• Determine intervals of time through the use of addition and subtraction
• Identify relevant and non-relevant information in solving word problems
• Demonstrate their understanding of the solution of time interval problems through number line diagrams
Assessing 4.MD.2

1. Examine the five sample questions
2. Briefly discuss why the assessment questions are – or are not – “appropriate” based on the following criteria:
   - Evidence of Learning
   - Measureable
   - Actionable
   - Valid

We will look at student work in a minute
Evaluating Student Work

Student A
Alex ran 30 minutes more than John because Alex ran for 2 hours and John only ran for an hour and 15 minutes. I think that the names of the two people is something I don’t need to know.

Student B
Alex ran fifteen minutes more than John. The marathon stuff isn’t important.
Student C

I used a number line diagram to show how I answered the problem. I set the scale at 15 minutes because John ran for 1 hour and 15 minutes so that is the time that is the same for the two runners. If you subtract the time John ran from what Alex ran, you find that Alex ran 30 minutes more than John. It isn’t necessary to know that the two people are running a marathon to solve the problem.
Performance Based Tasks

- Integrate knowledge and skills across multiple claims.
- Measure capacities such as depth of understanding, research skills, and/or complex analysis with relevant evidence.
- Require student-initiated planning, management of information/data and ideas, and/or interaction with other materials.
- Reflect a real-world task and/or scenario-based problem.
- Allow for multiple approaches.
- Represent content that is relevant and meaningful to students.
- Allow for demonstration of important knowledge and skills.
- Require scoring that focuses on the essence of the Claim(s) for which the task was written.
Performance Based Tasks

• The key feature of performance tasks are their emphasis on *doing*, not merely knowing

• Performance tasks not only evaluate the product but also the process
Performance Task

• May require students to seek information from a variety of sources beyond those provided in the task itself (i.e. operate equipment, collect and analyze data)

• Students often have to identify relevant tasks and select the process or procedures to be used.

• Allow students to demonstrate their ability to select, organize, integrate, and evaluate information and ideas.
Constructing Performance Tasks

• Focus on the standards that require complex cognitive skills and student performances.

• Select or develop tasks that represent both the content and the skills that are central to the expectations of the standards.

• Develop sections that are interrelated but not necessarily interdependent.
Creating Performance Tasks

1. Start with the standard.
2. Determine DOK levels at which you want your students to operate.
3. Determine the Context (the higher the level of thinking, generally the more steps involved).
4. Carefully plan how students will demonstrate learning.
Instructional Objectives

Students will be able to:

• Make a claim supporting a specific issue
• Identify the relevant facts each viewpoint makes
• Support the claim through by organizing the information logically
• Write a concluding statement with evidence supporting the claim
Group Exercise

• List the components of the standard
• Underline the specific part(s) of the standard that will be used to determine evidence of learning
• Identify the instructional objectives
• Develop questions and tasks that provide evidence of learning, are measureable, actionable, and valid.
• Describe what will be learned through the responses
Thank You
Grazie
Danke
Ευχαριστίες
Spasibo
Далу
Köszönöm
Tack
Dank
Gracias
Merci
Natick
Obrigado
Sorry