Training for Georgia Performance Standards
Day 2: Learning to Assess and Assessing to Learn

Content Facilitator’s Guide
Mathematics Grade 8

We will lead the nation in improving student achievement.
Acknowledgements

This training program was developed by the Georgia Department of Education as part of a series of professional development opportunities to help teachers increase student achievement through the use of the Georgia Performance Standards.

To get further help with this or any other math issues, you may go to the math webpage through the GaDoe website under Curriculum and Instruction.

Use of This Guide

The module materials, including a Content Facilitator’s Guide, Participant’s Guide, PowerPoint Presentation, and supplementary materials, are available to designated trainers throughout the state of Georgia who have successfully completed a Train-the-Trainer course offered through the Georgia Department of Education.

Materials (guides, presentations, etc.) will be available electronically on http://www.georgiastandards.org under the training tab after all trainings of Day Two have occurred. Consult the trainer for availability.
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**Overview**

| **Module Rationale** | This training extends and builds upon Day One of training.  
| The **first purpose of Day One of training** was to introduce participants to the applicable standards.  
| The **second purpose of Day One of training** was to help participants understand the importance of having a curriculum map and to assist teachers in using this approach to develop units in support of the new curriculum standards. During Day One of the training, the emphasis was on the model itself—what it is, why it is important, and how it can be used so that the new GPS have a profound impact at the classroom level.  
| The **third purpose of Day One of training** was to help participants gain proficiency in identifying related standards and how standards from different strands can be integrated.  
| The **purpose of Day Two of training** is to teach Stage 2 of the Standards-Based Education Process.  
| **Module Description** | This module includes an instructor-led one-day session composed of several large and small group demonstrations, practice activities, and follow-up. The activities require the participants to jump into meaningful discussions and the follow up serves as a bridge to Day Three of training.  
| **Module Goal** | Demonstrate a deep understanding of the new Georgia Performance Standards and the Standards-Based Education approach, through thoughtful curriculum planning, development of formative and summative assessments, and the design of instruction matched to the standards and research-based best practices. This shall be measured by student performance on progress monitoring and standardized criterion-referenced tests.  
| Note that the goal will not be reached by any single day of training. It will take preparation, seven days of classroom instruction, and follow up to master this goal.  

### Day Two Objectives

By the end of Day Two of training, participants will be able to:

1. Explain why assessment is Stage 2 in the Standards-Based Education process.
2. Identify the purpose of assessment in the classroom.
3. Differentiate among different types of assessment and assessment formats.
4. Given specific standards and a purpose for assessment, determine which assessment methods would be most appropriate at various times to increase student learning.
5. Given an assessment plan for a unit, identify whether it meets best practice standards for assessment.
6. Create a balanced assessment plan for a unit, including examples of performance tasks, rubrics, and constructed response items.

### Module Sequence

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<td>➢ Table Discussion</td>
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**What should we assess?**

➢ Criteria for Good Tasks
➢ Assessment and the Unit Design Process
➢ Conceptual Understanding

**Why should we assess?**

➢ Task: Bungee Jump
➢ Accountability

**How should we assess?**

➢ Packing Parachutes
➢ Assessing for Learning vs. Grading
➢ Multiple Representations
➢ Types of Assessment
➢ Matching Assessments with Standards
➢ Analyzing Student Work
➢ Rubrics

**Putting It All Together**

➢ Designing an Assessment: Small Group Work
➢ Self-Assessment
➢ Field Assignment
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<td></td>
<td>➢ Content Facilitator's Guide (one for each leader)</td>
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<tr>
<td></td>
<td>➢ Complete set of slide transparencies (PowerPoint)</td>
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<td>➢ Participant's Guide (one per participant and one per leader)</td>
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<th><strong>Other materials needed:</strong></th>
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<td>➢ Handouts:</td>
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<tr>
<th><strong>Equipment:</strong></th>
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<td>➢ Overhead projector or computer and LCD projector</td>
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Agenda

Introduction
- Contact Information
- Bloom on Mastery
- Table Discussion
- A Rubric

What should we assess?
- Criteria for Good Tasks
- Assessment and the Unit Design Process
- Conceptual Understanding

Why should we assess?
- Task: Bungee Jump
- Accountability

How should we assess?
- Packing Parachutes
- Assessing for Learning vs. Grading
- Multiple Representations
- Types of Assessment
- Matching Assessments with Standards
- Analyzing Student Work
- Rubrics

Putting It All Together
- Designing an Assessment: Small Group Work
- Self-Assessment
- Field Assignment
## Introduction

### Overview
During the introduction, participants will discuss what they know about assessment. After a brief presentation of the day’s agenda and objectives, participants will be presented with a handout on why mastery is important and attainable.

### Objectives
- Describe how and why assessment is Stage 2 in the Standards-Based Education process.
- Identify the purposes of assessment in the classroom.

### Activities
- Read Bloom on Mastery handout and discuss
- Bungee Jump
- Table Discussion on three Essential Questions of the Day
- A Rubric
- Assess Using Your Rubric

### Materials
- Overhead projector or computer and LCD projector
- Transparencies or PowerPoint presentation
- Participant’s Guide
- Bloom on Mastery handout
- Bungee Jump Handout
- Rubric Handouts
- Chart Paper
Bloom on Mastery

Show slide, *Bloom on Mastery* (blank slide) then show the slide below, it is the last paragraph of the statement:

> Most students (perhaps over 90 percent) CAN master what we teach. Our basic instructional task is to define what we mean by mastery of a subject and to discover methods and materials to help the largest proportion of our students reach it.

Benjamin S. Bloom (1971)

To start our focus today on assessment I want you to read the handout entitle *Bloom on Mastery*. Please consider the importance of what and when he made this statement.

Discuss the observations they can make about the way we sometimes view assessment in our schools.

Overview of the Module

Show slide, *Table Discussion*.

Table Discussion

- What should we assess?
- Why should we assess?
- How should we assess?

Allow groups time to discuss the questions on the slide. Discuss in large group and explain that this is what we are going to discuss today. Place the comments on chart paper to use as reference throughout the day.
The agenda for today is located in your Participant’s Guide on page 4.

In the Introduction to Assessment section we will discuss our goals and objectives for today.

First we will look at what it is we should be assessing.

Then we will discuss why we should assess.

Finally, we will discover how we should assess.

In the last section we will put it all together to develop an assessment that will drive the instruction of a unit we will continue to build in Days 3 and 4 of our training.

Before we go further, let’s reflect on the redelivery process from Day 1.

Ask participants about the redelivery of Day 1.

On Chart Paper have each group brainstorm a list of successes, questions, and concerns.

Have a group reporter tell the rest of the groups the main points of the list.

Highlight the ones to address and work on during this session.
According to Grant Wiggins...

- What is to be assessed must be clear and explicit to all students.
- NO MORE SURPRISES!
- Rubrics must accompany all major assignments and assessments.

A rubric is a set of rules that

- Shows levels of quality
- Communicates standards
- Tells students expectations for assessment task
- Is NOT a checklist (yes or no answers)
- Includes dimensions (criteria), indicators and a rating scale.

Use this slide to discuss what a rubric is and is not.
First, let’s discuss WHAT we should assess. Let’s consider a performance task.

Let participants have time to read the slide quietly and then discuss at their tables. After they have discussed at their tables, let them share with the large group.
Next, show the slide, *A Task?*

**A TASK?**

Joe and Sue own a chain of ice cream stores. They have found that they sell an average of 1250 cones per summer day when they charge $1.00 each and 1300 cones per summer day when they charge $1.25 each.

- a. Write these two pieces of data as ordered pairs.
- b. Find the slope of the line between these ordered pairs.
- c. Use the slope and an ordered pair to write an equation of the line.
- d. Use this equation to predict the number of cones they will sell at $1.30 each.

Let participants have time to read the slide and then discuss whether it is a good task or not.

**Slide**

Show slide, *Is This a Good Task?*

**Is This a Good Task?**

Decide whether this is or is not a good task.

Justify your answer.

Discuss.
Show slide, Criteria for Good Tasks

Criteria for Good Tasks
- Involves significant mathematics
- Can be solved in a variety of ways
- Elicits a range of responses
- Requires communication
- Stimulates best performance
- Lends itself to a scoring rubric

Ask participants to discuss these criteria.

Show slide, Standards Based Education Model

Ask participants to discuss the components of the model as you look at it together.
Discuss the importance of starting with big ideas to help plan for assessment.
Next, identify the skills and knowledge that the students will need.

Here is a list of the skills and knowledge needed for this standard. Is this list complete? What else are students going to need to know for this standard, what skills and knowledge should they have already attained but will use while addressing this standard?
As we think about assessment, we must remember that we are moving our students along this concept development continuum in order to reach the appropriate depth and rigor required by the standards.

Refer to the ideas on chart paper for “WHAT should we assess?” and edit as needed.
### Why should we assess?

**Overview**

This section will provide a rational for assessments, especially performance tasks. Participants will also get information about the Georgia Testing Program.

<table>
<thead>
<tr>
<th>Objective</th>
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<tbody>
<tr>
<td>➢ Identify the purposes of assessment in the classroom.</td>
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<tr>
<td>➢ Understand how and when to use performance assessments.</td>
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<tr>
<td>➢ Given an assessment plan for a unit, identify whether it meets best practice standards for assessment.</td>
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<th>Activities</th>
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<tr>
<td>➢ Task: Bungee Jump</td>
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<td>➢ Accountability</td>
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<table>
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<tr>
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</tbody>
</table>
Show slide, Why should we assess?

Next we will discuss why we should assess. Again, let's look at a task to begin our discussion.

Show slide, The Purpose of Assessment.

The purpose of summative assessment is to prove achievement, and the purpose of formative assessment is to improve achievement.

Have the participants respond to what they think this slide means and how summative and formative assessments are alike and different. Also, discuss the roles that each plays in seeing the growth of the whole student.

Show slide, Bungee Jump

Give them time to work the problem. Share the results.
Slideshow

Show slide, *Why should we assess?*

![Why should we assess?](image)

What could you learn about students based on their performance on this task?

After each group has shared, ask the question on the slide.

**Does this activity give us any ideas about WHY we should assess?**

**Accountability**

Slideshow

Show slide, *Accountability.*

![Accountability](image)

Another reason we assess is because we are held accountable for our students' achievement.

Discuss the purposes of the Georgia Testing Program. Answer questions participants have about the CRCT, etc.
Show slide, *Testing.*

Update the participants on the resources available online for the CRCT. 
To access this website, go to [http://public.doe.k12.ga.us/index.aspx](http://public.doe.k12.ga.us/index.aspx)

The fifth tab at the top of the page is “Curriculum”. Click on the tab and look at the last section of “Divisions”. This is labeled as “Testing”. When you click on “Testing”, you will see below “About Testing” choices concerning the CRCT. Clicking on the first choice, [Criterion-Referenced Competency Tests (CRCT)](http://public.doe.k12.ga.us/index.aspx) will take you to the CRCT site.

Refer to the ideas on chart paper for “WHY” and edit as needed.
# How should we assess?

## Overview
In this section, participants will learn about different types of assessment and how to match the various forms of evaluation to the appropriate learning activities. They will analyze student work and develop rubrics for helping them understand how students think about mathematics.

## Objective
- Differentiate among different types of assessment and assessment formats.
- Given specific standards and a purpose for assessment, determine which assessment methods would be most appropriate at various times to increase student learning.
- Given an assessment plan for a unit, identify whether it meets best practice standards for assessment.

## Activities
- Parachute Discussion
- Assessing for Learning vs. Grading
- Multiple Representations
- Types of Assessment
- Matching Assessments with Standards
- Analyzing Student Work
- Rubrics

## Materials
- Overhead projector or computer and LCD projector
- Transparencies or PowerPoint presentation
- Participant's Guide
- Scissors
- Sample Rubrics
The last part of our time will be spent exploring HOW we should assess. This is the “nuts and bolts” of what we need to do to design our assessments.
What grade do you think that student 1 should receive? Why?
What grade do you think that student 2 should receive? Why?
What grade do you think that student 3 should receive? Why?

Now for a little more information concerning these grades... These students were in a class called “Packing Parachutes”. Student 1 started out strong. Why do you think his scores look this way?
Student 2 was very inconsistent with packing his parachutes. One would be perfect and the next one a total mess. Why do you think his scores were the way that they are?
Student 3 started off not even knowing what a parachute is. What do you think his scores reflect and why?

What does this tell us about the way that most teachers grade?
Now, let's put it into real life terms.

**Slide**

Show slide, *Who?*

Have them respond to this question and compare that with the grades they would have given this student---what are we really trying to assess, why, and how are big questions here.

**Slide**

Show slide, *How should we assess?*

Give participants time to discuss.
You may want to refer to the chart paper labeled “HOW?”
Assessing for Learning vs. Grading

Show slide, Assessing for Learning vs. Grading.

Discuss the differences in the two purposes for assessment.

Multiple Representations

Show slide, Multiple Representations.

How does this connect with “How we assess”?
Types of Assessment

Many of us already use a variety of assessment methods in our classrooms. We will now look at some frameworks for considering different methods of assessing students using the new Georgia Performance Standards.

While you may choose to employ any of these formats, rather than adopting any single format for training, we have adapted the various assessment frameworks for purposes of discussion today. We will arrange our classroom assessments into these four categories: Selected Response, Constructed Response, Performance Assessment, and Informal & Self-Assessment.

In the Participant’s Guide you will find descriptions of these four assessment formats.
Each type of assessment has its own advantages and disadvantages, strengths and uses. It’s especially important to note here that assessments for learning occur throughout the teaching/learning process, from the first day a unit is introduced until the day the unit of instruction is completed. Each unit, therefore, will have a number of different assessments that allow the classroom teacher to measure a student’s progress toward his/her acquisition of the requisite knowledge, skills, and understanding.

Whatever format or framework we use in thinking about assessment, a balanced assessment plan that incorporates multiple types of assessments is necessary if we hope to determine what students know, are able to do, and can understand in relation to particular standards.

But simply using a variety of types of assessments is not enough. We need to use the particular type of assessment that is most appropriate for measuring specific types of knowledge, skills, and understanding.

Matching Assessments with Standards

To assess effectively, we need to match the appropriate type or format of assessment to the kind of evidence that will provide the best indicators of the desired results we have predetermined for the standard. If the goal is for students to learn basic facts, then paper-and-pencil tests and quizzes may provide adequate and efficient measures. However, when the goal is deep understanding, we need to rely more on complex performances to determine whether the learning goals have been reached.
Show slide, *Matching Assessments with Standards*.

Knowledge/Informational targets refer to a student’s complete and detailed understanding of the information important to a topic—the content knowledge. What are some examples of Knowledge/Informational targets in the standards?

Allow time for participants to look over standards and contribute suggestions.

Skill/Process targets refer to a student’s success in performing a skill or process important to the topic. What are some examples of Skill/Process targets from the standards?

Allow time for participants to look over standards and contribute suggestions.
A number of types of “Thinking and Reasoning” skills are included in the standards; these are skills that fit within the Skill/ Process targets but involve higher level processes. What are some examples of “Thinking and Reasoning” targets from the standards?

Allow time for participants to look over standards and contribute suggestions.

Marzano has also generated a list of “Communication” targets. Again, these fit within the classification of Skills/ Processes, but directly relate to the processes of communication. What are some examples of “Communication” targets from the standards?

Allow time for participants to look over standards and contribute suggestions.
Analyzing Student Work

One of the most important HOWs of assessment is looking at student work. How we analyze the evidence they provide is critical to our success as educators. Here are some helpful suggestions as we learn to do this in a meaningful way.

Show slide, Advantages of Using a Rubric.

Advantages of Using a Rubric

- Lowers students' anxiety about what is expected of them
- Provides specific feedback about the quality of their work
- Provides a way to communicate expectations and progress
- Ensures all student work is judged by the same standard
- Disengages the “halo” effect and its reverse
- Leads students toward quality work.

Show slide, Basic Rubric Template.
Now, let’s try our hand at assessing.

**Slide**

Show slide, *Bungee Jumping*.

Let participants work as groups to create a rubric that they will use to assess the work they produced for this task.

**Slide**

Show slide, *Put that Rubric to Use*.

Allow participants to walk around and use their rubric to assess the work in the room. As they walk, ask them to think about what kind of commentary they might give for this work also.
## Putting It All Together

<table>
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<tr>
<th>Overview</th>
<th>In this section, participants will take a self-assessment about their assessment practices and set a goal for themselves or their faculty.</th>
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<tbody>
<tr>
<td>Objective</td>
<td>➢ Create a balanced assessment plan for a unit, including examples of performance tasks, rubrics, and constructed response items.</td>
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</table>
| Activities        | ➢ Self-Assessment  
➤ Field Assignment  
➤ Overhead projector or computer and LCD projector  
➤ Transparencies or PowerPoint presentation  
➤ Participant's Guide  
➤ Chart Paper  
➤ Markers  
➤ Tape |
**Self-Assessment**

Show slide, *Self-Assessment*.

Direct participants to the self-assessment in their guide. Give them time to complete the questionnaire and tally their results. Discuss the questions at the end.

**Field Assignment**

Show slide, *Field Assignment*.

- Redeliver Day 2.
- Use what you have learned today to create an assessment you will use with your students. Collect work samples to share with the group.
- Bring a copy of the assessment and student work samples of your task to Day 3.
- Bring resources to help you plan for instruction.
Review of Training Dates

Days of Training

• Implementation Year One
  – Day One: Standards, Content, and Curriculum Mapping
  – Day Two: Assessment
  – Days Three and Four: Classroom Implementation
• Implementation Year Two
  – Day Five: Differentiation
  – Day Six: Examining Student Work
  – Day Seven: On-line Survey

Next time, we will see each other for two days in a row!
It will take us two days to work on lesson plans and unit designs. This will be MUCH easier if you are able to bring plenty of resources.

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