

**Training for Georgia
Performance Standards**

Days 3 and 4: Classroom Implementation

***Facilitator's Guide
Grade 8 Mathematics***

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.

For more information on this or other GPS training, you may go to the math webpage through the Georgia Department of Education website under Curriculum and Instruction or use the direct link http://www.gadoe.org/ci_services.aspx?PageReq=CIServMath .

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.

Table of Contents

Acknowledgements	2
Use of This Guide	2
Table of Contents	3
Overview	4
Goal and Objectives.....	4
Module Sequence	5
Module Materials and Preparation	6
Introduction	7
Review of Stages One and Two	9
Overview of the Training.....	10
Describing the Standards-Based Mathematics Classroom	
Math Lab Raided Activity	13
Heartbeat Activity	14
A Staircase Task.....	14
What We Should See in a Lesson.....	15
Roles of Teachers and Students.....	16
What to Do	17
Video Links	19
Facilitating the Standards-Based Mathematics Classroom	
Water Pump Task.....	21
Create Environment that Fosters Student Involvement and Cooperation.....	22
Positive Expectations	23
Routines and Procedures.....	25
Participatory Learning	27
Designing Lessons to Support the Standards-Based Mathematics Classroom	
Crossing the River Task	31
Creating and/or Finding and Revising Lessons.....	32
Action Plan for Redelivery	34



<p><i>Module Goal</i></p>	<p>Demonstrate a deep understanding of the new Georgia Performance Standards and the standards-based education approach, through thoughtful determination of learning goals for specific units of instruction, development of a balanced assessment plan that includes formative and summative assessments, and the design of instruction that will provide students with the knowledge, skills, and understandings necessary to achieve the learning goals. This goal shall be measured by student performance on progress monitoring and on standardized criterion-referenced tests.</p> <p>Note that the goal will not be reached by any single day of training. It will take preparation and follow up to master this goal.</p>
<p><i>Objectives</i></p>	<p>By the end of day four of training, participants will be able to:</p> <ol style="list-style-type: none"> 1. Identify methods to create an environment that fosters student involvement and cooperation in all classroom activities. 2. Describe what a standards-based mathematics classroom looks like and how to choose appropriate instructional strategies. 3. Design lessons that will support the acquisition of content within the eighth grade framework and help students master the standards.

Module Sequence	<p>This is a two-day course, with approximately 11 hours of instructional time.</p> <p>Prior Preparation—Participants</p> <ul style="list-style-type: none">➤ Gather resources to bring to the training that would help with designing lessons. <p>Introduction</p> <ul style="list-style-type: none">➤ Review of Stages One and Two➤ Overview of the Training <p>Describing the Standards-Based Mathematics Classroom</p> <ul style="list-style-type: none">➤ “Math Lab Raided” Activity➤ Heartbeat Activity➤ A Staircase Task➤ What We Should See in a Lesson➤ Strategies <p>Facilitating the Standard-Based Mathematics Classroom</p> <ul style="list-style-type: none">➤ Water Pump Task➤ Quote Activity➤ Student Involvement and Cooperation <p>Designing Lessons to Support the Standards-Based Mathematics Classroom</p> <ul style="list-style-type: none">➤ Crossing the River➤ The Big Picture➤ Putting it All Together➤ Creating and/or finding and revising lessons <p>Action Plan for Redelivery</p>
------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Module Materials	<p>Content Facilitator's Kit contents:</p> <ul style="list-style-type: none"> ➤ Content Facilitator's Guide (one for each leader) ➤ Complete set of slides (PowerPoint) ➤ Participant's Guide (one per participant and one per leader)
Other materials needed	<ul style="list-style-type: none"> ➤ Name tags ➤ Chart paper ➤ A number of colored markers for chart paper ➤ Sticky notes ➤ Masking tape to post chart paper ➤ Scissors ➤ Highlighter markers, one per participants ➤ TI-83⁺ Calculators ➤ Cuisenaire Rods ➤ Graph Paper ➤ Pencils ➤ Cellophane Tape ➤ Construction Paper ➤ Extra copies of a lesson plan template ➤ Copies of the eighth grade curriculum map ➤ Access to DOE videos and webcasts
	<p>Equipment:</p> <ul style="list-style-type: none"> ➤ Computer and LCD projector ➤ Speakers for computer
Preparation	<p>Each participant should bring the following to Days 3 and 4:</p> <ol style="list-style-type: none"> A. Notebooks from Days 1 and 2 of training B. Copy of culminating task (Bungee Jumping) from Day 2 of training C. Materials to develop lessons D. Copies of daily templates used in their school/district/system

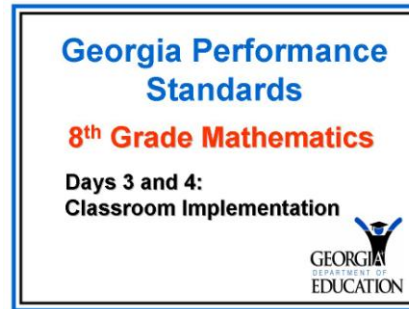
Introduction

Overview	In the introduction, the participants review key points from stages one and two in the standards-based education process. Then, the group discusses the overview of Days 3 and 4.
Objectives	<ul style="list-style-type: none"> ➤ Identify methods to create an environment that fosters student involvement and cooperation in all classroom activities. ➤ Describe what a standards-based mathematics classroom looks like and how to choose appropriate instructional strategies. ➤ Design lessons that will support the acquisition of content within the eighth grade framework and help students master the standards.
Activities	<ul style="list-style-type: none"> ➤ Review of Stages One and Two ➤ Overview of the Training
Materials	<ul style="list-style-type: none"> ➤ Overhead projector or computer and LCD projector ➤ Transparencies or PowerPoint presentation ➤ Participant's Guide ➤ Parking Lot flipchart (create before class)

Introduction

Show slide.

Slide:
*GPS Classroom
Implementation*



Welcome participants to Days 3 and 4 of GPS training.

Although we have introduced ourselves at the Days 1 and 2 training, there may be new participants. Also, a different person may be presenting at the location. Therefore, we should share our contact information.

- Have the participants introduce themselves and attach nametags to help everyone become better acquainted.
- Reviewing the Group Norms will lead to fewer interruptions, especially concerning cell phone usage.
- Share information concerning the GCTM Summer Academy, Georgia Math Conference, Middle School Math Tournament, and NCTM National Conference (Atlanta, GA).
- Allow the participants to share any additional announcements that they may have such as good websites, tasks, etc.

Reflections on Redelivery

Ask participants about Redelivery. Be aware that some participants combined Days 1 and 2 during professional development time, and others have not yet redelivered.

- Have each group brainstorm a list of successes, questions and concerns OR compile a whole group list.
- Consider any concerns that need to be addressed throughout these two days of training.

Encourage the participants to reflect on how far they have come since Day 1 of training.

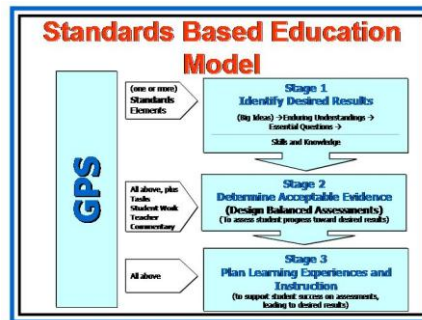
Let them know that they deserve a pat on the back because with each day of training, we have moved closer to the goal of implementing the GPS in order to improve student achievement.

Point out that with each day of training, anxieties are lessened and more confidence is gained. Let them know that it is normal to still have difficult moments because change can sometimes take us out of our comfort zone. They should not become discouraged because they are moving in the right direction and worth while change takes time.

Review of Stages One and Two

Slide:
*Standards Based
Education Model*

Show slide:



Review of Stages One and Two

In our previous workshops, we worked extensively on understanding and applying Stages 1 and 2. Today, we are going to focus on Stage 3.

Recall the key points from Stages 1 and 2.

Some ideas to be reviewed for Stage 1 include:

- The Big Ideas/Established Goals are in the standards themselves.
- Enduring understandings are formed by grouping or relating core concepts and processes specified in the standards, either explicitly or implicitly; but these understandings specify the kinds of conceptual learning that students will retain beyond the unit and the course.
- By using a variety of modalities to answer essential questions via different tasks, activities, and/or assessments, students will provide

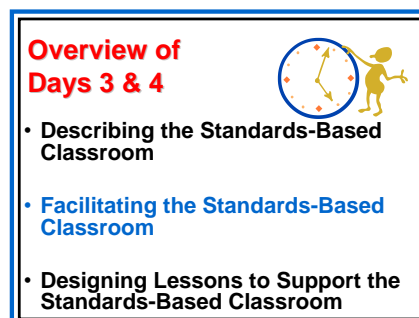
- evidence of learning.
- The knowledge and skill statements specify what students need to know and be able to do in order to provide evidence of learning, so this helps teachers design appropriate assessments in Stage 2.
 - The core concepts and processes are consistent because they are specified in the standards, so our desired results should be similar, if not identical in terms of the big ideas and established goals that we determine; however, because these core concepts and processes may be combined differently in different units, the standards we choose for a unit may look different.

Some ideas to be reviewed for Stage 2 include:

- We need to determine the assessments that will provide the best and most complete evidence of the desired learning goals from Stage 1 before we can plan the tasks and activities that will provide students with the best and most effective opportunities to learn.
- What learning goals have we determined for this unit? What are our achievement targets? Will this assessment generate evidence of learning appropriate to this achievement target? Is this the best assessment format for this achievement target? Will this assessment plan allow multiple opportunities for students to provide evidence of learning? Will students be able to use different modalities to provide evidence of learning?
- A list of assessment formats should be predetermined to use as a preparation guide throughout the course.
- We should work collaboratively with other teachers to evaluate our assessment plans.
- Classroom assessment for learning allows us to use assessment to guide instruction and to obtain a complete and ongoing record of student growth so that we can intervene whenever necessary in order to provide students with more practice, remediation, extension, or alternate means of expressing understanding.

Slide:
Overview

Show slide.



These are the three topics that will be addressed over the next two days.

First, we will spend time investigating what a standard-based classroom looks like. Next, we will discuss classroom management strategies that facilitate standards-based instruction. Finally, we will design lessons to support a cohesive unit on linear equations.



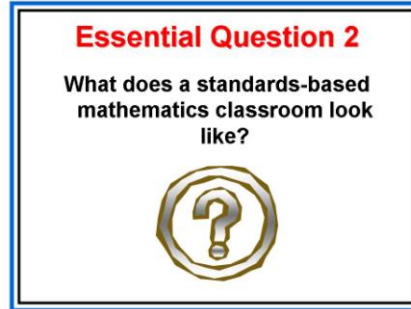
Describing the Standards-Based Classroom

Overview	In this section, participants will identify and explore the characteristics of a standards-based classroom.
Objective	➤ Describe what a standards-based mathematics classroom looks like.
Activities	➤ “Math Lab Raided” Activity ➤ The Heartbeat Activity ➤ A Staircase Task ➤ What We Should See in a Lesson ➤ Strategies
Materials	➤ Computer and LCD projector ➤ PowerPoint presentation ➤ Participant's Guide ➤ Internet access or DVD of the videos on the web ➤ Speakers for the computer ➤ Chart Paper ➤ Markers ➤ Cuisenaire Rods ➤ Graph Paper ➤ Pencils

Describing the Standards-Based Classroom

Slide:
Essential Question 2

Show slide.



Interrupt for a news bulletin.

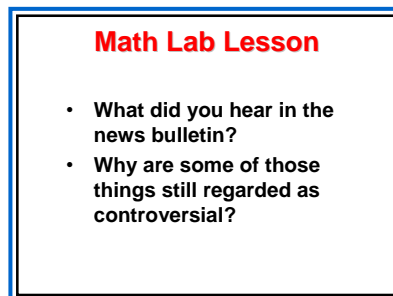
What evidence was reported that let you know what type of math lab the police had discovered? Why are some of those things still considered as controversial?

Allow a few minutes for discussion in the large group.

Slide:
Math Lab Lesson

Let's take a few minutes and have our own math lab lesson today.

Show slide.



Materials:

Warm-up:

Participants will work with a partner to measure and compare their pulse rates. After the data is collected and graphed. The facilitator may need to question the participants in order to remind them that this is an example of direct variation which was learned in 7th grade.

Mini-Lesson, Opening, Setting the Stage:

Participants will organize the green Cuisenaire rods into a staircase and determine the surface area and volume of their staircase. The facilitator may need to question the participants in order to help them remember surface area and volume and recognize that the overlap affects the surface area but not the volume.

Work period, activity period:

Allow time for the participants to complete the Staircase task in the participant's guide. Each small group should put their work on chart paper and be prepared to share their thinking with the large group.

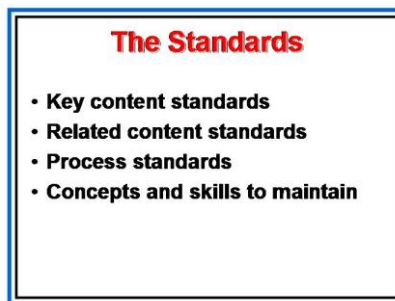
Slide:

The Standards

Summary, closing:

The facilitator should guide the participants to review what was alike and what was different concerning the group work and develop some generalizations. Include a list of the standards that were addressed in the task along with concepts and skills to maintain.

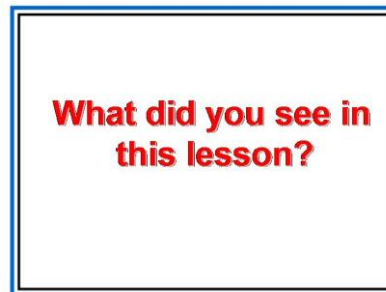
Show slide and have participants make posters with the following information.



Allow time for participants to share their posters.

Slide:
*What did you see in
this lesson?*

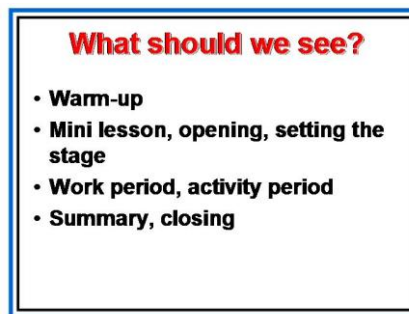
Show slide.



As the participants are telling what they saw in the lesson, someone should be listing what they say on posted chart paper.

Slide:
What should we see?

Show slide.



How does our list compare with the slide and the description in the participant's guide of a standards-based classroom?

Allow discussion.

If a teacher has these four components in his/her lessons, does that mean that he/she has a standards-based classroom? Why or why not?

or

Can the teacher be sure that every student obtains a deep understanding of what is being taught by following those four components? Why or why not?

Allow participants to discuss these questions and share their thoughts.

The discussion should lead to clarifying the importance of a standards-based instructional environment. Students should be taking ownership of their learning. This is generally the area that many teachers feel the need for more guidance. The following slides may help in defining their role.

Slides:
Role of the Teacher

Show slides.

<p style="text-align: center;">Role of the teacher:</p> <ul style="list-style-type: none"> • Plan authentic learning experiences. • Provide solid foundations in math to promote application of skills and knowledge • Talk less, listen more. 	<p style="text-align: center;">Role of the teacher:</p> <ul style="list-style-type: none"> • Circulate through the classroom, facilitating math discussions. • Provide clarification when necessary. • Ask questions that encourage reasoning and making connections.
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Slide:
Role of the Teacher continued

Bullets enter one at a time. Allow discussion as appropriate between them.

Show slide.

<p style="text-align: center;">Role of the teacher:</p> <ul style="list-style-type: none"> • Establish classroom procedures to promote effective management of small groups of differentiated learners. • Participate in ongoing assessments of all learners.

Allowing discussion as needed when exploring the teacher roles should help those feeling overwhelmed to feel better. Encourage participants in the room that have taught this way to give testimonies and assure the other participants that it is much more engaging and rewarding to teach this way.

Now for the role of the students...

Slides:
Role of the students

Show slides.

<p style="text-align: center;">Role of the students:</p> <ul style="list-style-type: none"> • Work individually, in pairs, or small groups to complete a task. • Gather data, share ideas, look for patterns, make conjectures, and utilize problem-solving strategies. 	<p style="text-align: center;">Role of the students:</p> <ul style="list-style-type: none"> • Explore mathematical relationships and make connections to real life experiences. • Ask questions and look for solutions.
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Bullets enter one at a time. Allow discussion as appropriate between them.

Through discussion, the participants should note that the role of the student assures learning.

What we have discussed today is very different from what most of us experienced when we were in “traditional” classroom settings as students.

Take a look at the differences in the “traditional” classrooms of our youth and the “standards-based” classrooms of today.

Show slides.

Slides:
What does the teacher do?

What does the teacher do?	
TRADITIONAL	STANDARDS-BASED
<ul style="list-style-type: none"> textbook guides instruction spends most of the time <i>telling</i> – whole group seeks the “ONE” right answer from students 	<ul style="list-style-type: none"> standards and curriculum map guide instruction spends most of the time <i>facilitating</i> – small group asks more open-ended / application questions

What does the teacher do?	
TRADITIONAL	STANDARDS-BASED
<ul style="list-style-type: none"> teaches only specific procedures discourages student interaction/discussion asks mostly knowledge-level questions 	<ul style="list-style-type: none"> encourages students to use problem solving strategies encourages students’ questions, explanations, and discussions asks more high-level questions

Show slides.

Slides:
What do the students do?

What do the students do?	
TRADITIONAL	STANDARDS-BASED
<ul style="list-style-type: none"> work alone focus on only getting the right answer memorize facts for tests practice procedures 	<ul style="list-style-type: none"> work in flexible groups or pairs use reasoning to justify their answers and solutions understand and apply concepts, as well as, facts solve problems and look for real life connections

What do the students do?	
TRADITIONAL	STANDARDS-BASED
<ul style="list-style-type: none"> use pencil, paper, and worksheets show knowledge by writing down numbers one way to show an answer 	<ul style="list-style-type: none"> use manipulatives, graphic organizers, and games show knowledge both orally and written use multiple representations for solutions (pictures, models, diagrams, words, etc.

Small slips of paper have one set of the corresponding traditional/standards-based information on them. Divide the large group into six small groups. Each small group of teachers will draw one of the small slips of paper.

As a facilitator, you may want to have these small pieces of paper available in advance. You will find this information below.

The textbook guides instruction.	The standards and curriculum map guide instruction.
Most of the time is spent telling – whole group.	Most of the time is spent facilitating – small group.
"ONE" right answer is sought from students.	More open-ended/application questions are asked.
Only specific procedures are taught.	Students are encouraged to use problem solving strategies.
Student interaction/discussion is discouraged.	Students' questions, explanations, and discussions are encouraged.
Mostly knowledge-level questions are asked.	More high-level questions are asked.

Using the drawn information, they are to think back to when they were in the eighth grade and what the classroom was like. Then using the same drawn information, they are to think ahead to next year and how their classroom will look.

Each small group will give two short (one minute or less) skits that show the contrast of the two (when they were students vs. when they teach next year).

After the last skit, time will be allowed for reflections and comments. Take time to summarize what a middle school mathematics classroom looks like while showing the next slide.

Show slide.

Slide:

What does a standards-based middle school math classroom look like?

What does a standards-based middle school math classroom look like?

- Flexible cooperative groups of children
- Hands-on learning experiences
- "Productive" noise
- Differentiation of processes and products is encouraged within tasks
- Student works with teacher commentary are available for student reference
- Multiple representations of solutions are valued
- Balanced approach to concepts, skills, and problem solving

Questioning students is critical in the standards-based mathematics classroom. However, it is not always easy to think of good questions on the spot in a classroom that encourage reasoning and make connections.

UGA has video taped several teachers and classrooms across the state. Some of these tapes have been placed on our framework website. We will view one from "Tips from the Trenches" and a "Questioning Video" that specifically address the topic of teacher questioning.

Internet access or DVD of the video "Tips from the Trenches"

Speakers for the computer may be needed.

Be sure that your computer has speakers that will project the sound loud enough for everyone in the room to hear the videos.

The direct link to the "Tips from the Trenches" videos is <http://lpsl.coe.uga.edu/mile3/resa/gpsinaction/TipsFromTheTrenches.html#>

We are viewing

- Judy Powell: [Asking questions instead of giving answers.](#)

The direct link to the "Questioning Video" is <http://lpsl.coe.uga.edu/mile3/resa/gpsinaction/QuestioningInClass.html>

This video takes place in a classroom setting with students working on an 'Orange Juice' task using ratio and proportion.

At your tables identify three questions you heard the teacher ask and why you think they chose those questions to ask.



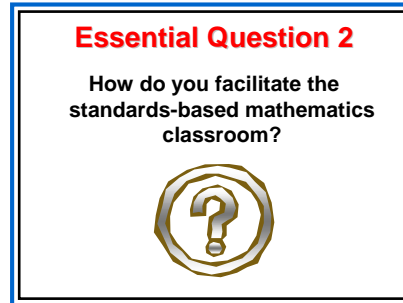
Facilitating the Standards-based Classroom

Overview	In this section, participants will examine the components needed for teachers to create and maintain a standards-based classroom.
Objectives	<ul style="list-style-type: none"> ➤ Identify methods to create an environment that fosters student involvement and cooperation in all classroom activities.
Activities	<ul style="list-style-type: none"> ➤ Water Pump Task ➤ Quote Activity ➤ Student Involvement and Cooperation ➤ <i>Never Say Anything a Kid Can Say!</i> article
Materials	<ul style="list-style-type: none"> ➤ Computer and LCD projector ➤ PowerPoint presentation ➤ Participant's Guide ➤ Chart Paper ➤ Markers

Student Involvement and Cooperation

Slide:
Essential Question 1

Show slide.

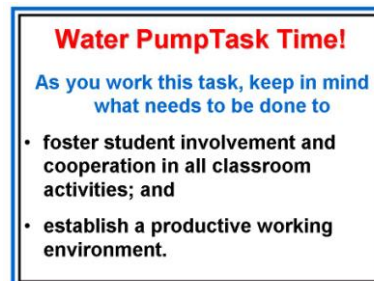


We will examine the components needed to facilitate a standards-based classroom.

As we work through the next task, please bear in mind what you have already observed.

Show slide.

Slide:
Water Pump



Encourage the participants to think about classroom management from the teacher's perspective as they work through the Water Pump task that is shown in the participant's guide.

Allow them to work in small groups, post their results on chart paper, and share their thinking with the large group.

The participants should discuss the standards that are addressed within this task before moving on to the 'Classroom Management' piece that is next.

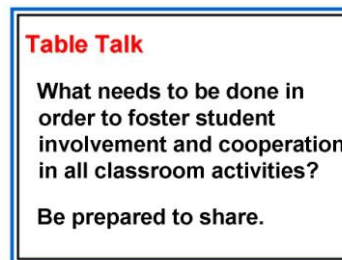
When all groups have shared, ask the participants, **"What is classroom facilitation?"**

They should respond with something similar to,
"It is all of the things we do in our job so that it is possible for us to teach; such as organizing the students, the room, time, and materials."

Participants should "Table Talk" for ideas about what needs to be done in order to foster student involvement and cooperation in all classroom activities.

Slide:
Table Talk i.e. student involvement

Show slide.



As the groups share their ideas, have a volunteer write them on chart paper posted on the wall. This may be referred to often as this portion of the training is continued.

The three areas below are critical for teachers to be able to foster student involvement and cooperation in all classroom activities. Facilitators should be sure that these are addressed during training.

1. **Positive expectations**
2. **Routines and procedures**
3. **Participatory learning**

1. POSITIVE EXPECTATIONS:

The "Power of Expectation" is phenomenal!

Slides
Harry K. Wong Quote,

Show slides:

"It takes just as much energy to achieve positive results as it does to achieve negative results. So why waste your energy on failing when that same amount of energy..."

... can help you and your students

SUCCEED."

Harry K. Wong 1998

Allow time for the participants to digest these two slides and share their thoughts and opinions.

Slide
Bill Page Quote

Show slide:

"Each child is living the only life he has - the only one he will ever have. The least we can do is not diminish it."

- Bill Page

Again, allow the participants to think about the quote and share their thoughts concerning it.

Slide
Larry Lezotte Quote

Show slide:

"Parents are sending us the best kids they have. They are not keeping the good ones at home."

- Larry Lezotte

Once again, have the participants ponder this quote and discuss their thoughts and opinions.

Research was done in the 1960's by Robert Rosenthal of Harvard University and Lenore Jacobson of the South San Francisco schools that support the fact that if we expect more from our students than they expect, we will get back more than we expect.

Oak School gave students a pretest called the '*Harvard Test of Inflected Acquisition*' just prior to the summer break. The next fall, the teachers were told that they were special teachers that had been selected to participate in a special experiment. They were told that the pretest identified special students as 'spurters' or 'bloomers' and that greater intellectual growth was expected from them. In reality, the names were selected at random and not from the pretest.

The teachers were instructed not to tell the students nor their parents that they were special.

At the end of the school year, all of the students were tested again. A significant gain in intellectual growth of those students was evident in the results, yet no significant gains were evident in the other students.

When the teachers were shown the results and congratulated for their success, they commented that it was easy because they had special students that learned fast. After they had been told the truth about the selection of the students, the teachers felt that it was because they themselves were told that they were special teachers. However, in reality, they were also randomly selected to teach these students!

The only variable in this perfectly designed experiment was --- TEACHER EXPECTATION!

Therefore, we should tell our students up front, on the first day of school, that the class will be exciting, they are going to have the best year they have every had, and that they are going to do very well in our class.

Inform participants that this is an excerpt from the book *Pygmalion in the Classroom* by Rosenthal, Robert and Jacobson, Lenore, (1968), , Holt Rinehart and Winston.

Direct the participants to look at the chart of examples of positive/negative expectations in the participants' guide.

2. ROUTINES AND PROCEDURES:

Routines are the things that students automatically do without the teacher needing to prompt or supervise.

Procedures are how the teacher wants something done and should be clearly stated by the teacher.

- *These must be **explained** in a clear and concise manner.*
- *These must be **rehearsed**, practiced, done over and over and over again until they become routines!*
- *These must be **reinforced** by reminding the students of the expectation and experiencing it.*

Note: "A rule is a **DARE** to be broken, whereas a procedure is not. A procedure is a **DO**, a step to be learned." Harry K Wong

Slides:
*Routines and
Procedures*

Show slides.

<p>Routines</p> <p>These are things that students automatically do without the teacher needing to prompt or supervise.</p>	<p>Procedures</p> <ul style="list-style-type: none"> • These must be explained in a clear and concise manner. • These must be rehearsed, practiced, done over and over and over again <u>until they become routines!</u> • These must be reinforced by reminding the students of the expectation and experiencing it.
-----------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

A list of some classroom procedures that need to be explained, rehearsed, and reinforced until they become routines may be found in the participants' guide.

Show slide.

Slide:
Lim Chye Tin Quote

“You seemingly waste a little time at the beginning to gain time at the end.”

- Lim Chye Tin

This is a good time to stop and reflect on the “Water Pump” task that was presented at the beginning of this section of training. Having the teachers stop and think about the task and what classroom management procedures or routines were needed to assure that the room fostered involvement and cooperation.

Allow time for the teachers to think quietly for a minute, and then share with the group.

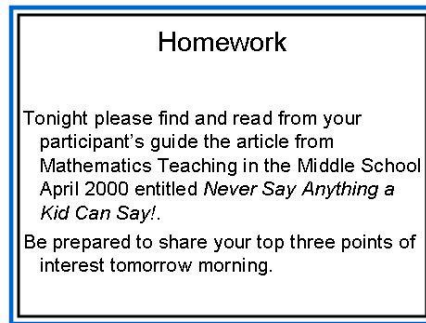
Teacher organization should be one of the things mentioned in the conversation. They should note that the materials were already placed on the tables and remember that with the Barbie Bungee task on Day 2, the materials were already packaged and ready for each group. Teachers know their students and should be prepared and organized enough to be ready for them.

3. **PARTICIPATORY LEARNING:**

Direct participants to the article *Never Say Anything a Kid Can Say* in the Participant's Guide.

Slide:
*Never Say Anything a
Kid Can Say!*

Show slide



Tell participants that their homework for the night is to read this article and choose three points that speak to them the most and be prepared to share with the group.

At the beginning of day four of training the facilitator should ask participants to share what they chose from the article. Allow time for participants to thoroughly discuss their points of interest.

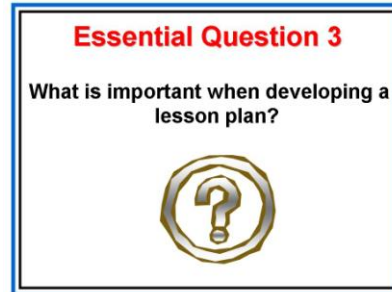
Designing Lessons and Assessments

Overview	In this section, participants focus on applying what they have learned throughout the GPS training thus far. They evaluate an instructional plan and complete lesson plans.
Objective	➤ Design lessons that will support the acquisition of content within the eighth grade framework and help students master the standards
Activities	➤ Crossing the River ➤ The Big Picture ➤ Putting it all together ➤ Designing lessons
Materials	➤ Chart paper ➤ Markers ➤ Transparencies or PowerPoint presentation ➤ Highlighter markers ➤ Paper for folded “tent” to label table topic for lessons ➤ Extra copies of a lesson plan template ➤ Copies of the eighth grade curriculum map

Designing Lessons

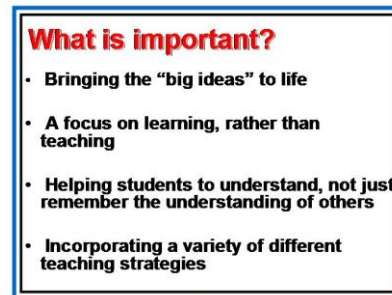
Slide:
Essential Question 3

Show slide.



Slide:
What is important?

Show slide.



As we begin designing our lessons we need to consider the key ideas that will drive our work.

Go over each bullet on the slide carefully.

Slide:
Instructional Planning

Show slide.

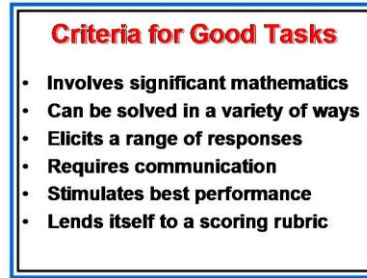


We have already discussed the importance of being familiar with standards and elements.

Copies of the curriculum map for the 8th grade Framework are also available.

Slide:
*Criteria for Good
Tasks*

Show slide.



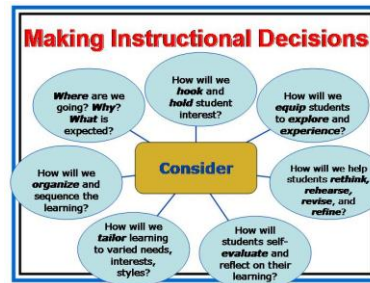
It all starts with assessment, and good tasks are the heart of assessment. Let's review the criteria for good tasks. The tasks we use will be the anchors for our lessons.

The lessons you are writing are to show what needs to happen in the classroom to prepare students for a selected task in the unit.

Discuss each bullet on the slide in depth.

Slide:
*Making
Instructional
Decisions*

Show slide.

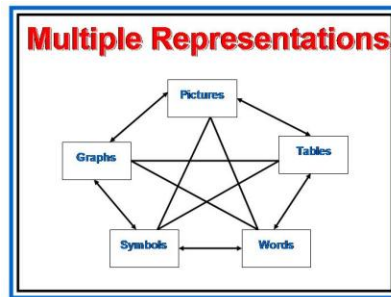


There are a number of additional resources in the participant's guide to help you as you make instructional decisions and consider the types of experiences students will need in order to apply the standards.

This slide supports the WHERETO model mentioned in the Participants' Guide. Explain to them that this is one of many ways to make instructional decisions concerning lesson plans. They should not feel that they have to use this model. However, they should definitely consider the points that are mentioned.

Slide:
*Multiple
Representations*

Show slide.



Remember how important these multiple representations are for students' concept development. You will want to be sure to consider a balance of these throughout your lessons.

The task that we are considering for our lesson plan is 'Crossing the River' from the NCTM *Journal, Mathematics Teaching in the Middle School*, January 2001. Find it in your Participants' Guide.

Why should we always work tasks and problems before we put them in our lesson plans?

Have the Participants respond to this question.

Allow adequate time for the participants to work the task. After each group has completed the task allow them to share their results with the entire group.

What do you remember about what was discussed relative to the four parts of a lesson?

Allow time for participants to reflect and answer the question.

At your tables work together to produce the remaining parts of the lesson.

When the groups finish producing the warm-up, mini-lesson, and summary allow them to share their products with the group.

Slide:
*Units are Big
Pictures*

Show slide.



Slide:
List of Tasks

Show slide.



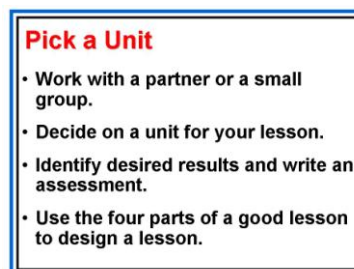
Now, identify the “Big Ideas” in this unit, and the math content of each task. Discuss whether the order of the tasks is logical and progressive and whether all of the mathematics associated with the big ideas have been addressed through these tasks.

How does this unit on equations of lines look different from a traditional unit?

Allow time for discussion. Have participants share with the group.

Slide:
Pick a Unit

Show slide



- **The unit that you choose to use may be from the eighth grade framework, or from your system, district, or school. It does not matter. Please use what is best for you.**
- **If your school or system has developed a lesson template, please use that one.**

Give participants adequate time to develop their lessons. Assist with resources and answering questions as needed.

As groups finish, gather their lessons electronically and print them off for each group (if possible). This will help make the sharing time more meaningful.

Try to have them reach a stopping point at an early enough time in the afternoon to share. Should some participants finish early, they may work on an additional lesson, or assist others that are struggling.

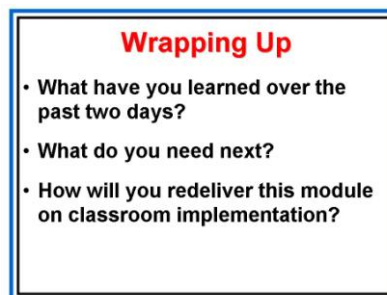
Slide:
Sharing Our Lessons

Show slide.



Have the participants visit each other and share their units.
Show slide.

Slide:
Wrapping Up



Discuss the questions on this slide in large group, making notes for further planning.

As always, let me know how I can help.

Slide:
*Discussion of
 Redelivery Action
 Plan*

Action Plan for Redelivery

Show slide.



Point out additional resources for teachers of mathematics in the back of the participant's guide.

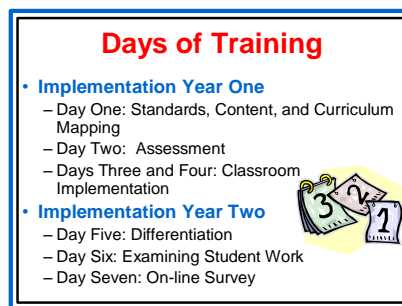
With time permitting, give them the opportunity to actually write out their redelivery plan before leaving for the day. If that is not possible, strongly encourage them to write it out before the end of the next 48 hours so that it is fresh in their minds and to make it much easier when the time comes for the redelivery.

Training Dates

Slide:
Days of Training

Review of Training Dates

Show slide.



We will be having Day 5 of training in the fall concerning 'Differentiation'.

Please continue to bring copies of student work with a copy of the task and signed permission forms to the training.

Day 6 training is 'Examining Student Work' and we would like to have plenty of student work in advance to not only incorporate within the training for Day 6, but also to place in our new eighth grade framework.

Assignment

Slide:
Assignment

Show slide.

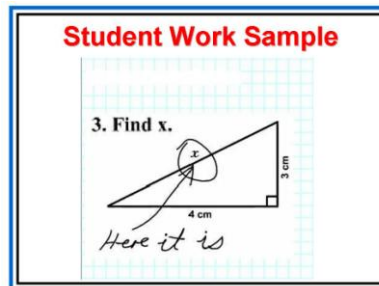
Assignment

- Bring student work for the tasks worked today along with completed permission forms.
- Bring four copies of another task from the Eighth Grade Framework and four copies of student work for that task along with permission forms.

Slide:
Student Work Sample

Permission forms are included in your Participants' Guide.

Share this humorous sample of eighth grade student work.



Slide:
Contacts

Show slide.

Contact Information

Janet Davis 404-463-1736
jdavis@doe.k12.ga.us

Massie McAdoo, Ph.D. 404-463-6924
mmcadoo@doe.k12.ga.us

Peggy Pool 404-657-9063
ppool@doe.k12.ga.us

Georgia Department of Education
1754 Twin Towers East
Atlanta, Georgia 30334



Thank the participants for their hard work and participation over the last two days.

Remind them that we are available via email to answer any questions they may have concerning the training or redelivery.