

We will lead the nation in improving student achievement.

Training for the New Georgia Performance Standards

Day 6: Differentiation

Content Facilitator's Guide Mathematics Grade 6

Use of This Guide

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

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 1 have occurred. Consult the trainer for other availability.

For more information on this or other GPS training modules, please contact Gerald Boyd at gboyd@doe.k12.ga.us

The module materials, including a Leader'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.

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Overview



By the end of Day 6 of training, participants will be able to:

- 1. Define differentiation and explain the importance of differentiation in the standards-based education process.
- 2. Explain key elements in planning for differentiation.
- 3. Describe and develop procedures for differentiating instruction in a flexible classroom.
- 4. Describe and develop effective classroom management strategies in a differentiated classroom.
- 5. Describe the roles of the teacher in a differentiated classroom.
- 6. Set individual goals for differentiating instruction in each classroom.

Module Sequence

Prior to redelivery of this module, you might have your participants read Carol Ann Tomlinson's "Mapping a Route Toward Differentiated Instruction." *Educational Leadership* 57.1 (Sept. 1999): 12-16. http://pdonline.ascd.org/pd_online/diffinstr/el199909_tomlinson.html.

Introduction to Differentiation

- ➤ Fund Raising Ideas
- > Four Corners
- Calvin's Day at School

What is Differentiation?

- What is it?
- Standards-Based Education Model
- > Self-Assessment
- Fund Raising Ideas, Continued

How and Why Do We Differentiate?

- ➤ How do we differentiate?
- > Why do we differentiate?
- Practice Analyzing a Differentiated Task
- Differentiation Stratego: A Reality Game

What Does a Differentiated Classroom Look Like?

- > True/False Quiz: What Does Differentiation Look Like?
- Creative Demonstration
- Setting Personal Goals for Differentiating
- Task Time!

Summary and Field Assignment

Module Materials for Day 6 of Training

Content Facilitator's Kit contents:

- Content Facilitator's Guide (one for each leader)
- Complete set of slide transparencies (PowerPoint)
- > Participant's Guide (one per participant and one per leader)

Other materials needed:

- Name tags
- > Easel chart paper and stand
- > Flipchart paper and stand
- > A number of colored markers for flipchart
- Post-it Notes
- Masking tape to post chart paper

Equipment:

Overhead projector or computer and LCD projector

Days 4 and 5 Follow Up/ Day 6 Preparation

Remind participants to complete the assigned reading as preparation for Day 6. Also remind each participant to bring a copy of the unit of instruction they are currently teaching OR a copy of a unit they have helped plan; and, if possible, his/her school's copy of the Carol Ann Tomlinson book, *How to Differentiate Instruction in Mixed-Ability Classrooms*, as well as the notebook from Days 1 through 5 of training.

Recommended Readings/Viewings/Websites: Differentiation

Note: A more general list of resources for the standards-based education process is contained in the materials for Day 1 of training.

At Work in the Differentiated Classroom. Alexandria, VA: ASCD, 2001.

This excellent resource includes three VHS tapes and a Facilitator's Guide. The videos provide clips of real differentiated classrooms and include commentary by Carol Ann Tomlinson. One set of these materials is being sent to each local system.

Berger, Sandra L. "Differentiating Curriculum for Gifted Students." 1991. Information Center on Disabilities and Gifted Children. Council on Exceptional Children, 1996. http://ericec.org/digests/e510.html.

Berger provides an overview of four areas of differentiation: content, process, product, and learning environment. In addition, she lists seven guiding principles for curriculum differentiation developed by the curriculum committee of the Leadership Training Institute.

Hall, Tracey, Nicole Strangman, and Anne Meyer. "Differentiated Instruction and Implications for UDL Implementation: Effective Classroom Practices Report." *Ideas that Work*. National Center on Accessing the General Curriculum. U.S. Office of Special Education Programs. CAST, Inc. 1999-2005. http://www.cast.org/publications/ncac/ncac/diffinstructudl.html.

This report examines information on the theory and research behind differentiated instruction and the intersection with Universal Design for Learning (UDL), a curriculum designed approach to increase flexibility in teaching and decrease the barriers that frequently limit student access to materials and learning in classrooms. The report includes a number of links to sites with more information about differentiated instruction.

"Interact Graphic Organizers." *Write Design Online*. zNet. http://www.writedesignonline.com/organizers/interact.html#interaction.

Using varying types/levels of graphic organizers provides one means of differentiating content or process. This website includes a number of different types of graphic organizers along with explanations and suggestions for their use. Links to other resources may also be valuable.

"The I-Search Curriculum Unit." *Literacy Matters*. Education Development Center, Inc., 2003-04. http://www.literacymatters.org/content/isearch/intro.htm.

Individual and group investigations, valuable strategies for differentiation, may be organized as I-Searches. An I-Search can actively engage students in the research process as they pursue questions of importance that they care about. This site explains one version of the I-Search process.

Laturnau, Joseph. "Standards-Based Instruction for English Language Learners." Honolulu: Pacific Resources for Education and Learning. http://www.prel.org/products/pc /standards-based.htm.

This article examines the potential benefits of standards-based instruction for English Language Learners (ELLs), presents a standards-based process for designing standards-based instructional units, and reviews the design of two standards-based units for ELLs. The benefits of performance standards for ELLs are clearly represented in a chart included in the article.

Teaching Styles Inventory. Texas Collaborative for Teaching Excellence. CORD, 2005. http://www.texascollaborative.org/tools/TSI.pdf.

Use this twelve item teaching style inventory to self-assess and self-score your teaching style in the areas of concept representation, learning, interaction, and cognitive processing.

Tomlinson, Carol Ann. *How to Differentiate in Mixed-Ability Classrooms*. 2nd ed. Alexandria, ASCD, 2001.

This valuable resource explains both the theory behind and the means to achieve differentiation in mixed-ability classrooms. Each school received one copy of this resource along with other materials in the fall of 2004.

----- "Mapping a Route Toward Differentiated Instruction." *Educational Leadership* 57.1 (Sept. 1999): 12-16. http://pdonline.ascd.org/pd_online/diffinstr/el199909_tomlinson.html.

Tomlinson provides a view into three separate classrooms to illustrate what a differentiated classroom does and does not look like.

----. *The Differentiated Classroom: Responding to the Needs of All Learners.* Alexandria, ASCD, 1999.

In this book, Tomlinson discusses the what, how, and why of differentiation, and provides examples from a number of differentiated classrooms.

Tomlinson, Carol Ann, and Caroline Cunningham Eidson. *Differentiation in Practice: A Resource Guide for Differentiating Curriculum, Grades K-5.* Alexandria, VA: ASCD, 2003.

This resource provides a brief primer on differentiation, as well as six differentiated units of instruction for grades K-5: two language arts units, two mathematics units, one science unit, and one social studies unit.

----. Differentiation in Practice: A Resource Guide for Differentiating Curriculum, Grades 5-9. Alexandria, VA: ASCD, 2003.

This resource provides a brief primer on differentiation, as well as six differentiated units of instruction for grades 5-9: one language arts unit, one mathematics unit, one science unit, two social studies units, and one French unit.

----. *Differentiation in Practice: A Resource Guide for Differentiating Curriculum, Grades 9-12.* Alexandria, VA: ASCD, 2005.

This resource is scheduled to be published in August of 2005.

Specialists' Contact Information

For a list of district coordinators visit the Georgia Learning Connection:

English Language Learners

http://www.glc.k12.ga.us/contact/contact.asp?groupname=ESOL+District+Coordinators

Gifted and Talented

http://www.glc.k12.ga.us/contact/contact.asp?groupname=Gifted+Education

For specialists at the Georgia Department of Education:

English Language Learners—Victoria Webbert
Gifted and Talented—Dr. Sally Krisel
Exceptional Students (Special Education)—Deborah Keane

wwebbert@doe.k12.ga.us skrisel@doe.k12.ga.us dkeane@doe.k12.ga.us

Agenda

Introduction to Differentiation

- > Fund Raising Ideas
- > Four Corners
- Calvin's Day at School

What is Differentiation?

- ➤ What is it?
- > Standards-Based Education Model
- > Self-Assessment
- > Fund Raising Ideas, Continued

How and Why Do We Differentiate?

- ➤ How do we differentiate?
- ➤ Why do we differentiate?
- Practice Analyzing a Differentiated Task
- > Differentiation Stratego: A Reality Game

What Does a Differentiated Classroom Look Like?

- > True/False Quiz: What Does Differentiation Look Like?
- > Creative Demonstration
- Setting Personal Goals for Differentiating
- Task Time!

Summary and Field Assignment



Introduction to Differentiation

Overview	In the introduction, the participants share their preconceptions about differentiation and relate these preconceptions to Carol Ann Tomlinson's statements about differentiation. Then, the group reviews Stages One, Two, and Three of the Standards-Based Education Process and examines the importance of differentiation in this process.
Objectives	 Define differentiation and explain the importance of differentiation in the standards-based education process. Explain key elements in planning for differentiation.
Activities	 Fund Raising Ideas Four Corners Calvin's Day at School
Materials	 Overhead projector or computer and LCD projector Transparencies or PowerPoint presentation Participant's Guide

Prior to the arrival of the participants, be sure to have the modules, nametags, note cards and books on the tables. Also, have the parking lot posted.

Title Slide

Show title slide and welcome participants to training.



Fund Raising Ideas PG 67 When at least half of the participants are present or when it is 8:30 (which ever happens to occur first), show the slide introducing the Fundraiser Ideas task. Participants are to begin listing types of sponsorship agreements. If they need help, you may mention the simple case of "I will sponsor you by donating \$1 for every kilometer that you walk."



Make a list of the various ones that are shared on chart paper to be posted around the room.

Show the GPS Welcome slide again.



This is a good time for participants to briefly introduce themselves.

Name tags Note cards Ask participants to put their name on a name tag and to fill out a "GPS status" means that they have attended last year's training in Days 1-5 for mathematics, they have attended redelivery of mathematics, they have heard about the GPS, or they have no previous experience with GPS.





This is a good time to discuss the group norms.

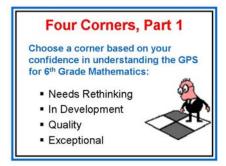


What Do We Know and What Do You Want to Know: Large Group Activity

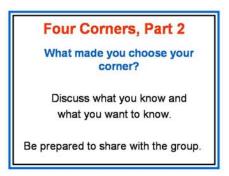
Everyone will stand after the corners have been labeled.

Four Corners Game Show Four Corner slide

Flipcharts, markers Ask participants to move to the corner that most closely matches their confidence level in understanding the GPS.



Show slide, Four Corners, Part 2. Ask what made them choose that particular corner. Have them discuss among themselves about what they know and want to know



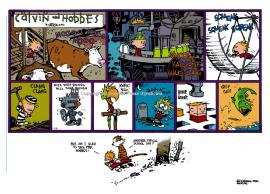
Ask for volunteers to share. During the sharing, someone should record the responses on posted chart paper.

Briefly note any patterns that you see and/or any items that may be listed on both sides of the room, then tell participants that we will get back to these lists throughout the day.

Slide: *Calvin & Hobbes cartoon*

➤ Let's take a minute to view a Calvin and Hobbes comic strip.

Show one slide at a time and allow participants to identify with Calvin's feelings.



What general statements might we make about Calvin's day? [Allow time for participants to respond.]

Responses may include things like you have been herded along, goo has been poured into your brain, you have been running in circles, you are a prisoner doing manual labor, you are just a robot going through programmed motions, you are just repeating what you have heard, you are scared to death, you have been forced into a mold, you were a fish out of water.

Can you imagine how a student might feel like this sometimes at school?

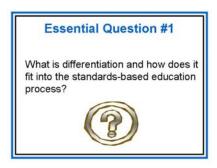
Does it appear that Calvin's educational needs are being met? Why or why not? [Allow time for participants to respond.]

What is Differentiation?

Overview	In this section will focus on the definition of differentiation. Topics of discussion will include what its is and how it relates to standards-based teaching and learning. Participants will have an opportunity to self-assess themselves about how they differentiate instruction. The essential principles of differentiation will be summarized.
Objectives	 Define differentiation and explain the importance of differentiation in the standards-based process. Set individual goals for differentiating instruction in each classroom.
Activities	 What is it? Standards-Based Education Model Self-Assessment Fund Raising Ideas, Continued
Materials	 Chart paper and markers Transparencies or PowerPoint presentation Participant's Guide Tic-Tac-Toe Handout Graph Handout

Slide: *Essential Question 1*

Show slide, Essential Question 1.



Defining Differentiation

Slide: What is Differentiation?

Show What is Differentiation? slide:



- ➤ This is time for a good discussion with responses posted on chart paper.
- ➤ Be sure that the responses include adaptations to what we teach, how we teach and how students learn, and how students show what they have learned.
- What does it mean when we say differentiation is "a way of teaching?"

Allow participants to respond. Summarize responses and conclude: Differentiation is not merely a single strategy or bag of tricks we can pull from. Differentiation is more a philosophy that requires us to rethink teaching and learning in order to understand not only what to do but also why it matters . . . to rethink not only our instructional decision-making but also the learning environment and what our classrooms look and feel like . . . to rethink everything we do in light of the potential for the academic growth of all students.

In a differentiated classroom we modify curriculum, teaching methods, resources, learning activities, and student products PROACTIVELY.

Slide: *Come to the* Show slide: Come to the edge.

edge.



- What are your thoughts, reactions and feelings about this quote?
- How does it relate to what we have been discussing about differentiation within the classroom?

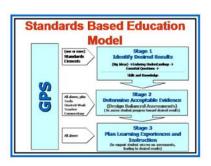
GPS Day 6 Training

Standards-Based Education Model

Slide: *The SBE*

Model

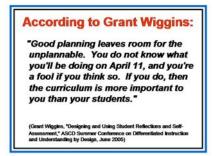
Show slide, The Standards-Based Education Model. [Trainer's Note: Click to show each stage of the model.]



As each stage appears on the slide. Review it in light of differentiation. Refer to the "Four Corners" activity to help those that are new to SBE.

Slide: *Grant* Wiggins' quotation

Show slide, Grant Wiggins' quotation.



At the ASCD conference on differentiation held in New York the last week of June this year, Grant Wiggins stated that "Good planning leaves room for the unplannable. You do not know what you'll be doing on April 11, and you're a fool if you think so. If you do, then the curriculum is more important to you than your students."

Wiggins may be exaggerating; he certainly advocates using the SBE model to plan instruction at the course and unit levels, so he's not saying we shouldn't plan. However, the message here is clear: in a differentiated classroom, teachers intervene and adjust instruction to meet the needs of the learners in that classroom; and that means using feedback from Monday's class to determine exactly what I need to do on Tuesday. Therefore, I will plan instruction carefully, but I must be willing to modify those plans to meet the needs of the students each day in my classroom.

Mention the Northey book that they have received today during training. In the past few minutes we have touched on a number of ideas about diverse learners and differentiated instruction, and we will spend the remainder of today exploring many of these ideas. However, a thorough and comprehensive study of differentiation is beyond the scope of our workshop today. ASCD has prepared a series of materials on differentiation that will complement and enhance the information from today's training. This series, At Work in the Differentiated Classroom, Alexandria, VA: ASCD, 2001, includes three VHS tapes and a Facilitator's Guide. The videos provide clips of real differentiated classrooms and include commentary by Carol Ann Tomlinson. The facilitator's guide suggests formats for utilizing the videos and other materials. One set of these materials will be provided to each local school system and each RESA. In addition, each system will receive one copy of Differentiation in Practice, Grades K-5 and one copy of Differentiation in Practice, Grades 5-9. I strongly recommend that you use these resources to further your conceptual understanding of differentiation.

Slide: Self-Assessment

Self-Assessment

Self-Assessment

Some Underlying Assumptions
Of
Differentiated Instruction

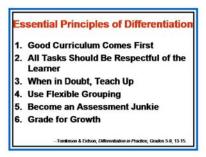
Self-Assessment

PG-29: "Some Underlying Assumptions of Differentiated Instruction" Read each assumption and assess your own "way of thinking about teaching" by marking the star if this assumption is implicit in your practice throughout the unit, the smiley face if you've taken this assumption into consideration in some way for this unit, and the question mark if you need to think about your practice in terms of this assumption. You have approximately 10 minutes for this activity.

After approximately 10 minutes, say: This pre-assessment is for your own use, but let's take a moment or two to debrief the activity and relate it to what we've looked at earlier this morning.

Slide: *Essential Principles of Differentiation*

Show slide: Essential Principles of Differentiation.



We've already discussed the importance of having a rigorous curriculum for all students.

- What do you think we mean when we say the "all tasks should be respectful of the learner"? [Allow participants to respond before going on.]
- To challenge every learner, Tomlinson says "when in doubt, teach up." What's your response? [Allow participants to respond before going on.]
- We'll discuss assessment and flexible grouping in the next section.
- The final essential principle of differentiation focuses on grading. Although we touched briefly on grading in Day 3 of training, we're going to reserve our discussion of fairness and grading in a differentiated classroom for Day 7 of training when we look more closely at examining student work.
- Keep these essential principles in mind as we move on to the next section and look at the what, how, and why of differentiation.

Tic-Tac-Toe Activity PG 68

We will now return to the Fund Raising Ideas Activity that started our morning.

Participants should have the Tic-Tac-Toe set of problems for them to use. This ties in directly with the Northey book, page 131. Each participant should work their choice of problems as long as they are three in a row.



Reference Van De Walle book, p. 440: Multiple Representations' "Star" As participants are finishing up this activity. They should share with others that have also completed their work.

Time for whole group discussion should follow this to follow up with the relevance to differentiation.

An "Expert" should be designated for this next activity.

The R-I-C-E activity is from page 142 in the Northey book.

Remember I magine logically Check with a classmate **E**xpert

Prior to starting this activity, the Facilitator should review the RICE Activity as shown on page 142 in the Northey book distributed this morning.



Use the Fund Raising Ideas Activity to reinforce this differentiation strategy.





Once again, this strategy and the results of using it should be discussed with partners and then as a whole group.

the room

Slide: *Ticket out of* This should be a good time for a break or possibly for lunch.



Ask: What are the important points that you have learned about differentiation so far?

Announcement: SAT Prep Online Course PG 49 Show the slide:



The Georgia Department of Education (GDOE) is pleased to announce the availability of the College Board's Official SAT Prep Online Course™ for all students in grades 9-12. The Online SAT Prep Course is another component of our continuing efforts to assist local systems in improving the quality of education for students in Georgia. Available twenty-four hours a day, seven days a week, this program can be integrated into classroom instruction or may be used as a self-paced independent study for students. While we are not going to go into detail here, we have included detailed information in the appendix to the Participant's Guide.

[Trainer's Note: This is also reprinted in the appendix to the Facilitator's Guide.]

Calculators and other materials that are being shipped to the schools. PG 50

This is a good place to discuss the materials that are being shipped to each school.

Framework: Unit 4 PG 14

Make sure that all participants are aware of the Framework that has been added to the GPS Mathematics website.



How and Why Do We Differentiate?

Overview	In this section will focus on the what, how, and why of differentiation. Topics of discussion will include readiness, student interests, and learning profiles; ways of differentiating content, process, product, and the learning environment; and access to learning, motivation to learn, and efficiency of learning. Participants will be provided with a guide for differentiating, and they will use this guide along with the information presented to prepare a plan for differentiating in a mixed-ability classroom.
Objectives	 Explain key elements in planning for differentiation. Describe and develop procedures for differentiating instruction in a flexible classroom. Describe and develop effective classroom management strategies in a differentiated classroom.
Activities	 How do we differentiate? Why do we differentiate? Practice Analyzing a Differentiated Task Differentiation Stratego: A Reality Game
Materials	 Chart paper and markers Transparencies or PowerPoint presentation Participant's Guide Cards, with profiles of individual students or groups of students

How and why do we differentiate?

Slide: Essential Ouestion 2 Show slide: Essential Question 2.



In this section of today's workshop, we will look at a number of aspects of differentiation that will help us make informed decisions about differentiating in our classrooms.

Slide: *How Do We Differentiate?*

Show slide: How Do We Differentiate?



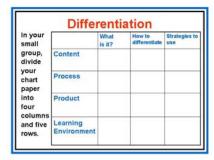
Participants will make a graphic organizer to support their thoughts concerning this.

In your group, make a table on your chart paper as demonstrated on the slide.

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On page 32 in the Participant's Guide is a table set up like the one that the groups are to be completing. Information on page 33 in the Participant's Guide could be helpful with this activity.

PG 32 PG 33



A Gallery Walk with sticky note comments would be appropriate here.

- Classroom management is an integral part of the learning environment. In a differentiated classroom multiple activities may be taking place and multiple groups or other teaching/learning arrangements may operating at any one time.
- Consequently, it is imperative to have classroom protocols in place for everything from what to do upon first entering the classroom to how to move from activity to activity to what to do if you finish early.
- As discussed earlier today, Tape 2 of the ASCD set entitled At Work in the Differentiated Classroom focuses on classroom management. The DOE will be providing each system and each RESA with a set of these materials, and we recommend that you view this tape to learn more about classroom management in a differentiated classroom.

PG 34

Refer participants to tips listed in the Participant's Guide on page 34 for a list of strategies for managing a differentiated classroom by Carol Ann Tomlinson.

Before we put these ideas into practice, let's take a quick look at the reasons why we differentiate.

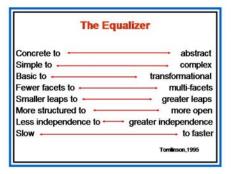
Slide: Why Do We Differentiate?

Show slide: Why Do We Differentiate?



A brief discussion of these reasons should occur. Among the reasons, participants should include something such as access to learning, motivation to learn, and efficiency of learning.

Slide: The Equalizer Show slide: The Equalizer.



- Carol Ann Tomlinson has developed a tool to use in planning differentiated lessons. She calls this tool "The Equalizer."
- ➤ The equalizer provides a visual guide to help teachers create tiered tasks.
- Teachers can adjust the difficulty of a task or a product along several continua.

- Tomlinson notes that "by matching task difficulty with learner readiness, a teacher can provide appropriate challenge for a given learner at a given time" (Differentiation in Practice, Grades 5-9, 235).
- Let's examine the other continua in order to make sure we understand how they can be used to adjust the difficulty of a task or product.
- Allow time for participants to discuss and reach consensus regarding the other continua before moving on.

PG-35: *The Equalizer*

You can find this Equalizer on page 35 of your Participant's Guide.

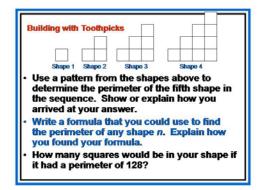
Practice: Differentiating a Task

Slide: *Building with Toothpicks*This is the culminating task for Unit 4 in the 6th Grade Framework.
PG 25

Show slide: Building with Toothpicks

We have reached the time to apply what we have learned today.

Take some time to analyze the Building with Toothpicks task as shown on the slide.



Your task is to practice differentiation. The cylinder task that you are so familiar with from previous GPS Training has some suggested differentiations shown on pages 36 and 54 in your Participant's Guide.

Slide: Practice

Practice

THE TASK:

Analyze the Building with Toothpicks Task.

THE TOOLS:

- <u>How</u> could we differentiate—content, process, product, learning environment;
- Why would we differentiate—access, motivation, efficiency;
- The Equalizer.

Reference Van De Walle book, p. 424: Functions Allow about 15 minutes for the groups to complete this activity. Groups should split up and share what they have with delegates from the other groups. Then the original groups should report back what they have seen.

Differentiation Stratego: A Reality Game

Slide:

Differentiation Stratego: A Reality Game Show slide: Differentiation Stratego: A Reality Game.



- Establishing a differentiated classroom means taking into consideration the needs of the diverse learners in that classroom.
- One way to do this is to develop tiered tasks—that is, a number of versions of a single task adjusted for different learners or groups of learners, just as we saw in the guided practice.

These adjustments take into consideration readiness, interests, and learner profiles. They provide different ways to access or process content, different types of products to provide evidence of understanding, and/or different learning environments including individual work, small group work, whole class work, and student/teacher conferencing.

We're going to practice differentiating via tiered tasks in this next activity.

Use the "deck" of playing cards and the sample tasks provided, and follow the instructions on this slide to "play" Differentiation Stratego: A Reality Game.

[Trainer's Note: Sample tasks and the student scenarios for the playing cards are printed at the end of the appendix in this Facilitator's Guide.]

- Remember, differentiation is not the same as individualized instruction. We often differentiate for groups of students in a mixed-ability classroom.
- You will have approximately 30 minutes to work in your table groups to prepare your differentiation plan. Obviously this isn't enough time to plan as well as we might like, but you'll be surprised at the amount you can accomplish when you put your heads together.
- ➤ Provide 10, 5, and 1 minute warnings. Distribute chart paper and designate a place for posting group work. As groups finish, provide tape for posting. When the time has expired, ask each group to share. Allow opportunity for other groups to comment on each presentation.

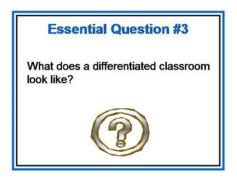
The Differentiated Classroom

Overview	This section will focus on the various roles and responsibilities of the teacher in a differentiated classroom. We will examine areas in which we may need to rethink traditional ways of doing in order to maximize every student's opportunity to learn. We will look at a number of ways of differentiating that require low levels of preparation, as well as other means that require more preparation. Finally, we will develop individual action plans for moving toward differentiated classrooms.
Objectives	 Describe the roles of the teacher in a differentiated classroom. Set individual goals for differentiating instruction in each classroom.
Activities	 True/False Quiz: What Does Differentiation Look Like? Creative Demonstration Setting Personal Goals for Differentiating Task Time!
Materials	 Chart paper and markers Transparencies or PowerPoint presentation Traditional and differentiated comparison chart Participant's Guide Cards with teacher metaphors

What Does a Differentiated Classroom Look Like?

Slide: *Essential Question 3*

Show slide: Essential Question 3.

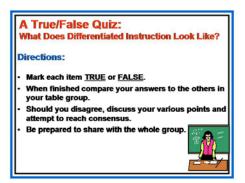


What Does Differentiation Look Like?: True/False Quiz

Slide: True/False

True/False Quiz.

Quiz



PG-37: *True/False Quiz*

- > To introduce this section, we're going to take a brief True/False Quiz.
- You will find this quiz on page 37 of your Participant's Guide.
- Review the answers with your group, then discuss them as a whole group.
- ➤ You have 10-12 minutes for this activity and then we will compare our answers.

PG 40: *Traditional* vs. *Differentiated* Comparison Chart

On page 40 of your Participant's Guide, you will find a chart that compares a traditional classroom to a differentiated classroom. Please turn to that chart.

- In your table groups, read through the characteristics of a traditional classroom.
- Next, read through the characteristics of the differentiated classroom.



Be creative! Develop a demonstration of the characteristics of the traditional classroom vs. the differentiated classroom.

If at all possible, try not to give them too many hints. However, if they are really struggling, you may mention ideas such as a poem, prose, creative writing, song, art work, skit, role play, ect...

Allow about 10 minutes for this activity before sharing.

- What conclusions might we draw from these similarities and differences?
- Responses will differ, but expect such things as:
 - Teachers will have to be able to adapt.
 - Teachers will have to be much better prepared.
 - Teachers will have to be more flexible.
 - The day of the teacher being front and center in the classroom are over.
 - Teachers can no longer assume one size fits all.

GPS Day 6 Training

Setting Personal Goals for Differentiating

Carol Ann Tomlinson notes that differentiated classrooms don't magically appear overnight. She contents that it is perfectly acceptable to begin slowly AS LONG AS WE DO BEGIN!

Slide: Set a goal...
You've got mail!

Show Slide: Set a goal... You've got mail!



Notecards

Self address the blank side of the 3 x 5 index card. On the other side write a personal goal for how you plan to differentiate in your classroom over the next month to six weeks. If you are not in a classroom, set your goal as to how you will assist someone with using differentiation within their classroom.

These will be mailed so that you may self-check your progress.

PG 42: Low-Prep and High-Prep Differentiation

- To help teachers begin, Tomlinson has developed a list of what she calls "low-prep" and "high-prep" differentiation possibilities.
- > Tomlinson's list is reprinted on page 42 of your Participant's Guide. Please turn to that page now.

Slide: Task Time! Slide: Task Time!

Task Time!

Pick any Unit 4 task from the Framework.

While doing the task, list ways to differentiate.

Be prepared to share your ideas.

Choose any of the unit 4 tasks within the framework. Plan ways to differentiate the task and be prepared to share your ideas.

PG 43: Action Plan

Using Tomlinson's chart and the Action Plan form on page 43 of your Participant's Guide, begin working on your individual action plan.

Trainer's Note: The amount of time allotted here will depend on the time remaining. You need to allow time to sum up and time to go over the homework for next time.

Your Assignment

- Redeliver Day 6 Training.
- Bring 4 copies of a student work sample to Day 7 Training
- Bring a copy of the assignment for the work samples to Day 7 Training.
- Bring the two signed permission forms to Day 7 Training.

- We have just skimmed the surface of differentiation today. Please dive deeper into this topic via the resources provided to each system and RESA by the DOE as well as the other resource listed in your Day 6 materials.
- Day 7 of training will focus on Examining Student Work, Fairness, Grading and Training with the calculators and manipulatives that are on the way to your schools.
- You'll find assignments for Days 7 and 8 are listed in the appendix to your Participant's Guide.

[Trainer's Note: The assignments are listed in the appendix to the Facilitator's Guide as well.]

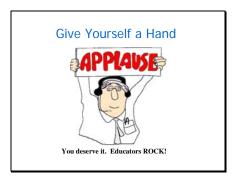
➤ For Day 6, please bring a student work sample to training. This sample should include 4 copies of the student work, 1 copy of the assignment that generated the work including the standard(s) being assessed via this student work, and 1 copy of each of the two permission forms (teacher permission form and student/parent permission form). These forms are printed in the appendix to the Participant's Guide.

[Trainer's Note: The forms are printed in the appendix to the Facilitator's Guide as well.]

As you work to implement the GPS standards this first year, we also like for you record your experiences in a notebook, journal, or other calendar format. Note any tasks, strategies, assessments, etc., that worked especially well; critical comments about particular standards (e.g., gaps that need filling, elements that are problematic, terms that need defining, etc.); suggestions for teachers/instructional leaders in Phase II who will be implementing the following year; thoughts or ideas about the second year of your implementation; etc. Please bring this record with you to Day 8 of training. The State Board of Education will be reviewing the GPS each year, and your comments will provide information for this review, as well as topics for discussion in training. Don't worry, we don't plan to collect your journals . . . just your suggestions!

Slide: Give Yourself Show slide: Give Yourself a Hand.

a Hand



- Thanks for coming and for all that you do for Georgia's students.
- Please remember that the staff at the DOE is available to help. Feel free to contact DOE personnel by phone or email.



Ability Grouping—Grouping students according to similar readiness levels or learning profiles.

Alternate Assignment—Assignments given to particular students or groups of students in lieu of the assignment given to the other members of the class. These assignments are designed to capitalize on student readiness levels, interests, or learning profiles.

Anchor Activity—A task or activity that a student automatically moves to upon completion of other assigned work.

Cluster Grouping—Flexible grouping and regrouping of students within a classroom to accommodate different instructional needs at different times and/or for different subject or content, different readiness levels, interests, or learning profiles.

Compacting—Modifying or streamlining content, process, or product in order to eliminate repetition of previously mastered material.

Contracting—Students contract for grades and/or choose from a variety of available project/product options.

Cooperative Learning—Students work with other students in groups to achieve a specific goal or purpose. Each group member has a particular, predetermined role in helping the group reach its goal.

Exit Cards—Teacher distributes index cards to students a few minutes before the end of class. Students respond quickly to a specific prompt such as "What's the most important thing you learned today?" Exit cards provide a quick and easy method of assessing understanding.

Flexible Grouping—Purposeful reordering of students into a variety of different groups in a short amount of time in order to ensure that all students work with a number of different students on a regular basis. Criteria for grouping—readiness, interest, learning profile, activity or task, content—will vary regularly as well.

Interest Centers/Groups—Interest centers (often used with younger learners) and groups (often used with older learners) allow students choice in an area or areas of study.

Independent Study Projects—A student or small group of students pursues an area of interest related to a specific topic, curricular area, or individual area of interest.

Literature Circles—Small groups of students read and/or study different books with varying degrees of difficulty and/or focusing on a variety of topics of interest.

Product/Project Options—Students chose from a variety of options the way that they will provide evidence of learning. These options allow students to utilize their individual strengths and interests.

Pyramid Activities—Any activity that begins with students working individually, progresses through pairs, groups of four, etc., until ending with the whole-class group. A good way to review material or to practice test-taking strategies. Students may begin by individually recording what they know and then add to or change their responses as they collaborate with other students.

Questioning Strategies—Different types of questions are employed before, during, and after an activity, a lesson, or a unit of instruction to engage and challenge students to demonstrate their understanding from the knowledge level to the evaluation level. These questions allow students to clarify their thinking, increase their knowledge, and deepen their understanding.

RAFT Activities—Students select a <u>Role</u>, <u>Audience</u>, <u>Format</u>, and <u>Topic for a particular task</u>. The task vary but may include writing, oral presentations, skits, review activities, etc.

Reader's Workshop—This student-centered, instructional model for "real reading" uses authentic literature and allows students to self-select books. Students read at their own pace, reflect on what they read, and talk about their reading with others.

Reading Buddies—One name for peer reading partners, pairs of students who assist each other in reading for comprehension. They may take turns: one reading aloud and the other summarizing OR one reading aloud while the other formulates guestions about that reading, etc.

Scaffolding—This refers to any support system that enables students to succeed with tasks they find genuinely challenging.

Subject/Content Acceleration—A student or group of students moves to a higher level of at an earlier time or age than the other students.

Thinking Maps—Visual representations of ideas that allow students to "unpack" their thinking and organize ideas in a visual format rather than solely in sentences or paragraphs.

Tiered Assignments—Teachers adjust the degree of difficulty for a particular assignment or task in order to meet the needs of students with varying levels of readiness, varying interests, and/or varying learner profiles.

Writer's Workshop—This student-centered, instructional model for "real writing" uses authentic assignments that allow students to participate in differentiated activities while participating in all stages of the writing process. Students spend time on self-selected writing activities.

Sample Tasks for "Differentiation Stratego: A Reality Game"

Symmetry Task

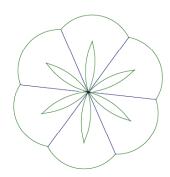
M6G1. Students will further develop their understanding of plane figures.

- a. Determine and use lines of symmetry.
- b. Investigate rotational symmetry, including degree of rotation.

Process Standards M6P1, 2, 3, 4, and 5

Task

a) Does the figure below have line symmetry? If so, draw the lines of symmetry in the figure. Does the figure have rotational symmetry? List the degrees that the figure can turn and still look like the original.



- b) Find 3 letters of the alphabet (if possible) that have only one vertical line of symmetry. Find 3 letters of the alphabet (if possible) that have only one horizontal line of symmetry. Find 3 letters of the alphabet (if Possible) that have both vertical and horizonatal line symmetry. Find 3 letters of the alphabet (if possible) that have point symmetry (180° rotational symmetry).
- c) Explain to a classmate haow you can test a letter for each line of symmetry in part (b). Explain to a classmate how you can test a letter for point symmetry. Listen tohis or her explanations and test them on the examples you found in part (b).
- d) Can you sketch a triangle that has exactly one line of symmetry? Exactly two? Exactly three? Justify your answers by sketching thest triangles and showing the lines of symmetry.

Science Fair Task

M6A1. Students will understand the concept of ratio and use it to represent quantitative relationships.

M6A2. Students will consider relationships between varying quantities.

- a. Analyze and describe patterns arising from mathematical rules, tales, and graphs.
- b. B. Use manipulatives or draw pictures to solve problems involving proportional relationships.
- c. C. Use proportions (a/b=c/d) to describe relationships and solve problems, including percent problems.

M6N1. Students will understand the meaning of the four arithmetic operations as related to positive rational numbers and will use these concepts to solve problems.

- d. Add and subtract fractions and mixed numbers with unlike denominators.
- e. Multiply and divide fractions and mixed numbers.
- f. Use fractions, decimals, and percents interchangeably.
- g. Solve problems involving fractions, decimals, and percents.

Process Standards M6P1, 2, 3, 4 and 5

Task

Three middle schools are going to have a science fair in a gymnasium. The amount of space given to each school is based on the number of students participating. McKenzie Middle School has 100 participants, Wesley Middle School has 60 participants, and Thomas Middle School has 40 participants.

- a. Draw a rectangle that represents the floor of the gymnasium. Divide the rectangle to show the amount of space each school should get based on the number of students participating. Label each section: MM-McKenzie Middle, WM-Wesley Middle, or TM-Thomas Middle.
- b. What fraction of the space should each school get based on number of participants? Show how you know.
- c. Does McKenzie Middle get more space than the other two schools combined? LUse fractions to explain.
- d. How many times more space does McKenzie Middle Get that Thomas Middle? Show how you know.
- e. If the schools share the cost of the science fair based on the number of students, what percent o the cost should each school pay? Show how you figured these percentages.
- f. If the cost of the science fair is \$300.00, how much should each school pay based on the number of students? Tell how you know.
- g. What fraction of the cost should each school pay based on number of schools, rather than participants? Show how you know.
- h. Do you think it is fairer to charge the schools based on the number of schools or on the number of participants per school? How wouls you convince someone who disagrees?

Making Sense of Graphs

M6A2. Students will consider relationships between varying quantities.

- d. Describe proportional relationships mathematically using y = kx, where k is the constant of proportionality.
- e. Graph proportional relationships in the form y = kx and describe characteristics of the graphs.
- f. In a proportional relationship expressed as y = kx, solve for one quantity given values of the other two. Given quantities may be whole numbers, decimals, or fractions. Solve problems using the relationship y = kx.
- g. Use proportional reasoning (a/b=c/d and y = kx) to solve problems.

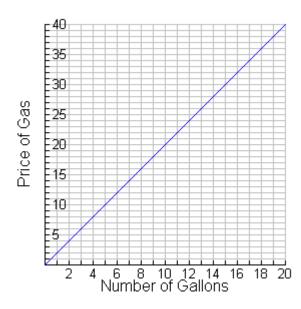
M6D1. Students will pose questions, collect data, represent and analyze the data, and interpret results.

Process Standards M6P1, 2, and 3

Task:

The graph below shows the amount of money required to buy gasoline if the cost per gallon is \$2.00.

- a) What two quantities vary proportionally in this situation?
- b) What is the value of the constant of proportionality? What does this value represent in the context of the problem?
- c) Write an equation to represent this situation.
- d) Suppose gas prices rose to \$3.00 per gallon. How would the graph change? Explain your reasoning.
- e) Write an equation to represent the situation in part d.



Making "Cents" of Percents

M6A2. Students will consider relationships between varying quantities.

- a. Use maniulatives or draw pictures to solve problems involving proportional relationships.
- b. Use proportions (a/b=c/d) to describe relationships and solve problems, including percent problems.
- q. Use proportional reasoning (a/b=c/d and k = kx) to solve problems.

M6A1. Students will understand the concept of ratio and use it to represent quantitative relationships.

Process Standards M6P1, 2, 3, 4, and 5

Task

- 1. If $\frac{3}{4}$ of a cup of juice gives you 60% of your daily value of Vitamin C, what percent of your daily value of Vitamin C will you get by drinking $\frac{1}{2}$ of a cup of juice? Justify your answer.
- 2. Is a% of b equal to b% of a? Why or why not?
- 3. The price of a necklace was first increased by 50% and later decreased by 50%. Is the final price the same as the original price? Why or why not?

Student Scenarios for "Differentiation Stratego: A Reality Game" Cards

Roy is a very bright student. He can remember most factual information the first time it is presented. However, he has a problem remaining focused during traditional instructional activities (lectures, worksheets, etc.) When he stops working he will sometimes look around the class, and beat on his desk. He simply cannot sit still, and pesters other students continually.

Ahmad is a gifted student. He is very interested in science. Ahmad often seeks out information pertaining to science outside the normal course curriculum. He excels on his daily class work, but will become bored if he is required to complete whole class assignments.

Sheila is an extremely quiet, intelligent young lady. She doesn't participate in class discussions, but consistently performs well on standardized tests. Sheila turns in all of her homework and class work assignments. She receives A's in all of her courses, but she dislikes completing more difficult or challenging assignments.

Phillip loves to draw. He has a book of cartoon characters that he uses his sketch paper to reproduce. Phillip often puts off classroom assignments to continue drawing the characters in his book. His classmates have acknowledged his talent, and often comment on his superior ability.

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Roscoe is a very smart student. However, he likes to entertain the class with his jokes and spontaneous comments during class sessions. He makes "funny" comments that actually go far beyond humor. The cutting effect of such comments is intentional. His classmates often become distracted by his "off the wall" statements. Though Roscoe enjoys amusing the class, he completes his assignments on time. He receives A's and B's in all of his classes.

Demarcus has a lot of energy. He can't sit still for more than 10 to 15 minutes at a time. He appears to be fidgety and has a very short attention span. He consistently gets out of his seat without permission and walks around the classroom. He attempts to move around the room when he should be working. If Demarcus is not out of his seat, he is raising his hand to ask permission to leave the room. His most common requests include: a) "Can I go to the restroom?" b) "I left my book in my locker. Can I go get it?" or c) "Can I go see the counselor?"

Stephen participates in various sports. He is a member of the basketball, football, and track teams. However, he is not consistent in turning in daily class work assignments. Stephen rarely completes homework assignments, and is a mediocre student. Stephen reads sports magazines incessantly. He is not a discipline problem, but does not seem to show an interest in anything besides sports.

Paul is an inclusion student. He feels a little uncomfortable being in a large class after years in a smaller setting. Paul thinks that many of the kids in his class are smarter than he is. As a result, he tends to withdraw during class discussions. He exhibits little or no effort on class assignments or projects. Paul can understand basic concepts and shows potential when he tries to complete the work he is given.

Carla likes to write poetry and listen to music. She often looks up her favorite artist's lyrics on the internet and attempts to memorize them. During class sessions it is not unusual for Carla to hum or sing to herself. Recently, her CD player was collected in class while she was listening to her favorite singing group. Carla aspires to become a famous singer and go on tour all over the world.

Kim is an extremely bossy student. She is very opinionated, and does not hesitate to interrupt lectures or class activities to challenge the validity of a concept presented. She does not work well in groups because she attempts to perform all the tasks herself without the assistance of other group members. Her classmates despise her and avoid working with her whenever possible.

Lucy is very talkative. She can't wait for a break in the class session so she can exchange the latest gossip with one of her friends. She is a very poor listener and often does not realize she is talking. The teacher often has to tell her to stop talking at inappropriate times. Lucy is a very bright student, but allows her talking to interfere with completing individual assignments.

Stephanie has trouble with her reading. Her standardized test scores reflect that she reads several years below grade level. When Stephanie reads aloud, some of the students laugh at her. Stephanie has trouble pronouncing basic words, and she possesses low reading comprehension skills. She feels uncomfortable reading aloud in class because of the comments other children make toward her.

Raphael always challenges the teacher's fairness regarding major tests. He seeks out alternative measures to prove his ability. Raphael may suggest to the teacher to take a different type of test or to be tested after the class is tested. He often argues over the correctness of answers on the test. The teacher feels he may be trying to escape blame for his failures, and uses his behavior to gain attention from his peers.

Mary is a constant worrier. She worries so often it may lead to her becoming upset physically and mentally. She worries about tests, projects, and how people perceive her. Mary expects failure, and this expectation often deepens her worrying. Her feelings tend to lead to lack of participation and withdrawal during class activities.

Laurie questions everything. She asks an abnormal number of questions about every conceivable subject. Laurie tends to ask questions even when she knows the answer. She even interrupts lectures or class activities to ask questions. Laurie makes very good grades, and her favorite subject is math. She would love to become a math teacher someday.

Jordan is extremely quiet and does not participate in class sessions. He sits in class and does nothing most of time. Jordan does enjoy playing various games on the computer, and he seems to make attempts to participate in class sessions that involve review games (i.e., Jeopardy, Wheel of Fortune).

Lakeisha approaches every task with an "I can't" attitude. Her teacher thinks Lakeisha lacks self-confidence. She even claims to be unable to complete assignments that she has done before. Lakeisha feels it's much better to say, "I can't" than to attempt any task. She will attempt to do rudimentary assignments, but refuses to do anything that requires her to complete complex tasks.

Ralph is an average student. He receives B's and C's in his core classes. He infrequently completes his homework and class work.
Ralph's dad taught him how to work on cars.
Ralph knows how to change oil, check tire pressure, and make other minor car repairs. He enjoys taking things apart and putting them back together. Ralph also enjoys working on electronic devices such as gameboys, radios, and even computers.

Joy seems to be satisfied with second place. She intentionally identifies the classmate who is first or the most intelligent pupil. She feels that she is only worthy of second place. Joy is capable of being a top student, but she seems to have a sense of inferiority. She tends to idolize the first-place student, and her lack of self-confidence makes her feel she could never be first.

Chan is overwhelmed with the number of assignments he has yet to complete. He gets so far behind he can't seem to catch up. Every class day seems to dig him deeper and deeper into the hole of failure. Chan gets very frustrated when he is unable to finish his class work or assigned projects. He tries to do his best, but he can never seem to catch up.

Simone is an inclusion student. She demonstrates a high degree of ability on the individual assignments she turns in. However, she always wants to do what the group is doing. She has a tendency to see herself as always "part of the group." Simone can complete assignments on her own, but seeks attention from her classmates to validate herself.

Andrew does not complete his assignments because he says, "I've never seen this before" or I don't know anything about that". He repeatedly makes comments like, "What?" "How did you do that?" "Huh?" and "Could you do that again?" The teacher questions whether Andrew really doesn't understand or if he is "playing dumb." He may be using this as a means to excuse himself from performing in the classroom.

Heather makes strange sounds or noises in the classroom. Some of her common odd noises include: hums, whistles, throat noises, and tapping on her desk. Heather plays the violin in the orchestra, and loves listening to classical music. Sometimes the noise she makes prevents her from completing her assignments and may distract other students.

Samuel never finishes a project. He loves to plan large scale projects, but he never comes close to completion. When Samuel works in a group situation, he will praise those that go along with his elaborate ideas and ridicule the more conservative group members. His goals are often too high for successful achievement, and he leaves the majority of the work for his group members to complete.

Robert is a student that has been retained several times during his schooling. Many of his past teachers pass him reluctantly because they don't want to deal with his disrespectful behavior another year. Robert has the ability to perform on a satisfactory level in a school setting, but has yet to reach his full potential. He doesn't work up to his ability level, and has taken on an indifferent attitude toward school because of past failures. Robert feels uncomfortable at times because he is older than the other students, and this makes him feel a little insecure.

Brittney complains about every assignment she is given. Her teacher usually writes the assignment on the board or tells the class when a project is due with very little input from the students. Brittney completes the majority of her work, but dislikes the redundant tasks she completes in class. In Brittney's spare time she writes and performs in plays for her local community center. She recruits younger kids from the neighborhood to participate in her productions. Brittney often wishes her classes at school were just as exciting as the performances at the community center.

Ethan displays an "I don't care" attitude toward school. He repeatedly says "he doesn't care" to teachers, students, and other school personnel. He shows disgust and lack of interest in many of his class activities.

Suzico is an above average student, and a perfectionist. She takes more time to complete assignments than other students in the class because she wants to make sure her answers are correct and her penmanship is neat.

Matthew likes to be the first person finished with his assignments. He is an intelligent young man, but he rushes through his work so he can be the first person complete. Occasionally, the speed at which he completes his assignments results in incorrect answers.

Maria is a good student. However, English is not her first language. Sometimes she struggles with comprehending the content of her textbooks because she is primarily a Spanish speaking student.

Chris is every teacher's favorite student. He consistently works to the best of his ability on every assignment. If he finishes early, he gladly assists the teacher or helps other students complete their work.

Margaret has to work harder to understand ideas and concepts; but once she does, she never forgets. She is always willing to spend extra time on assignments.



DIFFERENTIATION STRATEGO: A Reality Game





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