



GEORGIA
DEPARTMENT OF
EDUCATION

Kathy Cox, State Superintendent of Schools

**Training for the New Georgia
Performance Standards**

Day 5: Differentiation

**Content Facilitator's Guide
Mathematics Grades K - 2**

We will lead the nation in improving student achievement.

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 5 have occurred. Consult the trainer for other availability.

For more information on this or other GPS training, please contact Claire Pierce (404)657-7063 at cpierce@doe.k12.ga.us or Carmen Smith (404)463-1746 at csmith@doe.k12.ga.us.

Table of Contents

Use of This Guide	2
Table of Contents	3
Overview	4
Introduction to Differentiation	9
Welcome	10
Four Corners	12
What is Differentiation?	15
Standards-Based Education Model	17
Self Assessment	18
Tic-Tac-Toe	21
How and Why Do We Differentiate?	23
Equalizer	26
Differentiating a Task	27
Differentiation Stratego: A Reality Game	28
What Does a Differentiated Classroom Look Like?	29
What Does Differentiation Look Like?: A True/False Quiz	30
Traditional vs. Differentiated	31
Setting Personal Goals for Differentiating	32
Tasks and Assignments	33
Resources	48
Glossary	48
Recommended Readings/Viewings/Websites: Differentiation	50
Specialists' Contact Information	53
Pre-Assessing the ELL	54
What Does Differentiated Instruction Look Like	55
Low Prep and High Prep	56
Instructional Accommodations for ELL	57
Differentiation Menu	59
Student Created Products	65
Assignments for Days 6 & 7	68
Permission Forms	69
Money In My Pocket	71
Underlying Assumptions of Differentiation	72
What to Differentiate	73
Strategies for Managing a Differentiated Classroom	74
Equalizer	76
Differentiation Look Like?: A True/False Quiz	76
Action Plan	78
Student Scenarios for "Differentiation Stratego: A Reality Game"	83

Overview

Day 5

By the end of Day 5 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.
7. Cultivate a strong awareness of standards-based teaching and learning.
8. Become familiar with K – 2 mathematics GPS along with the expected depth and rigor.
9. Have a deeper understanding of the content addressed within the module.

**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

- Math Task
- Four Corners
- Calvin's Day at School

What is Differentiation?

- What is it?
- Standards-Based Education Model
- Self-Assessment
- Math Task

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 5 of
Training****Content Facilitator's Kit contents:**

- Hard copy of the Content Facilitator's Guide (one for each leader)
- CD containing the Content Facilitator's Guide, Participant's Guide, and Power Point Presentation of the K – 2 mathematics Day 5 module

Other materials needed:

- Name tags
- Flipchart with stand
- Colored Markers
- Post-it Notes
- Masking tape to post chart paper

Equipment:

- Projection System for Power Point Presentation
- Computer

**Days 3 and 4
Follow Up/ Day
5 Preparation**

If possible, have participants bring a copy of the Carol Ann Tomlinson book, *How to Differentiate Instruction in Mixed-Ability Classrooms*. These were sent to schools during Phase 1. Also remind them to bring the notebook from Days 1 through 4 of training.

Agenda

Introduction to Differentiation

- Coins in My Pocket
- Four Corners
- Calvin's Day at School

What is Differentiation?

- What is it?
- Standards-Based Education Model
- Self-Assessment
- Coins in My Pocket--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

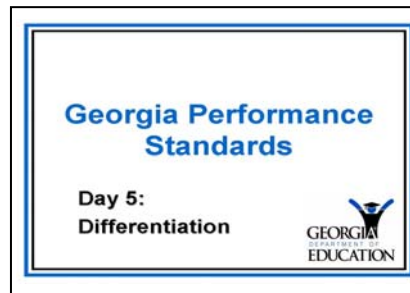
Introduction to Differentiation

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	<ul style="list-style-type: none">➤ Define differentiation and explain the importance of differentiation in the standards-based education process.➤ Explain key elements in planning for differentiation.
Activities	<ul style="list-style-type: none">➤ Coins in my Pocket➤ Four Corners➤ Calvin's Day at School
Materials	<ul style="list-style-type: none">➤ 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.

Slide 1
Welcome

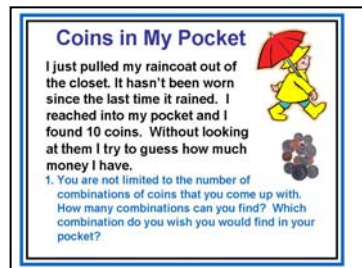
Show title slide and welcome participants to training.



Slide 2
Coins in My Pocket

When at least half of the participants are present show the slide introducing the Math task.

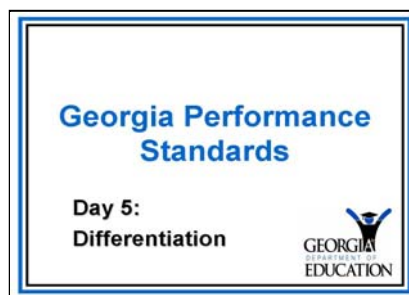
PG pg.6



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.

Slide 3
Welcome



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 1-4 for mathematics, they have attended redelivery of mathematics, they have heard about the GPS, or they have no previous experience with GPS.

Slide 4
Getting Acquainted

Getting Acquainted

Name Tag:


- First Name or Nickname
- Favorite "math strand"

Index Card:

- Name
- E-mail Address
- System/School
- GPS Status



Slide 5
Contact Information



Carmen Smith

1754 Twin Towers East, Atlanta, Georgia 30334
Office phone: (404) 463-1746
Office email: csmith@doe.k12.ga.us

Slide 6
Group Norms

This is a good time to discuss the group norms.

Group Norms and Housekeeping

<p><u>Group Norms:</u></p> <ul style="list-style-type: none"> • Ask questions • Work toward solutions • Honor confidentiality • Meet commitments or let others know if you are struggling 	<p><u>Housekeeping:</u></p> <ul style="list-style-type: none"> • Parking Lot • Phone calls • Rest rooms • Breaks • Lunch
--	--



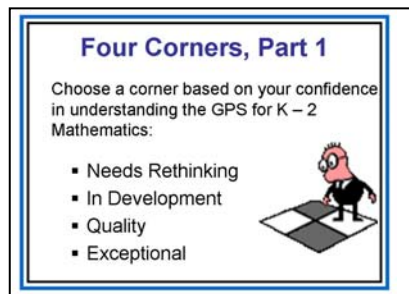
What Do We Know and What Do We Want to Know: Large Group Activity

Everyone will stand after the corners have been labeled.

Four Corners Game Show Four Corner slide

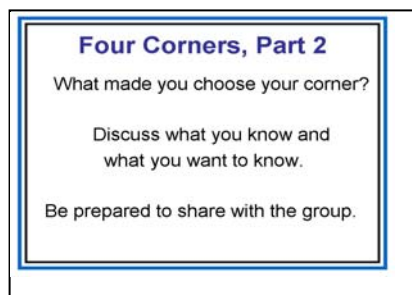
Flipcharts, markers Ask participants to move to the corner that most closely matches their confidence level in understanding the GPS.

Slide 7
Four Corners,
Part 1



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

Slide 8
Four Corners,
Part 2

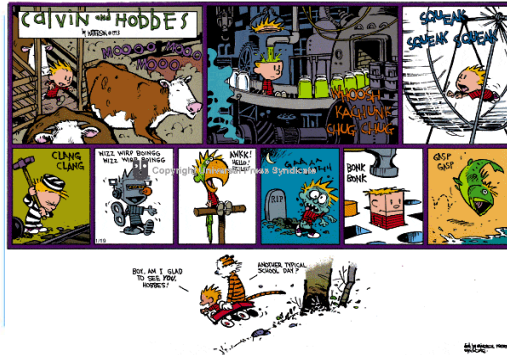


Ask for volunteers to share. During the sharing, someone should record the responses on posted chart paper.

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 9
Calvin & Hobbes
 cartoon

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



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 are 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.]

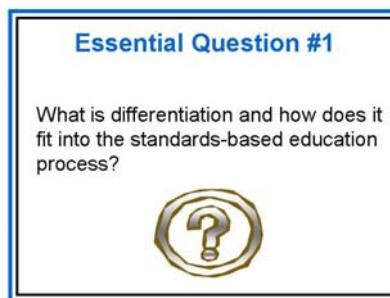
What is Differentiation?

Overview	In this section will focus on the definition of differentiation. Topics of discussion will include what it 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	<ul style="list-style-type: none"> ➤ Define differentiation and explain the importance of differentiation in the standards-based process. ➤ Set individual goals for differentiating instruction in each classroom.
Activities	<ul style="list-style-type: none"> ➤ What is it? ➤ Standards-Based Education Model ➤ Self-Assessment ➤ Math Task
Materials	<ul style="list-style-type: none"> ➤ Chart paper and markers ➤ Transparencies or PowerPoint presentation ➤ Participant's Guide ➤ Task Time!

Slide10

Show slide, Essential Question 1.

*Essential
Question 1*



Defining Differentiation

Slide 11

*What is
Differentiation?*

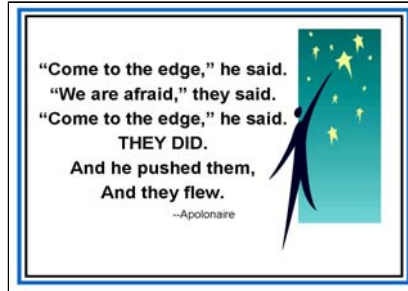
Show *What is Differentiation?* slide:



- 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 12
Come to the edge.

Show slide: Come to the edge.



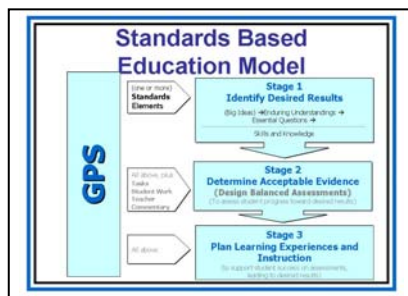
- What are your thoughts, reactions and feelings about this quote?
- How does it relate to what we have been discussing about differentiation within the classroom?

Standards-Based Education Model

Slide 13
The SBE Model

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

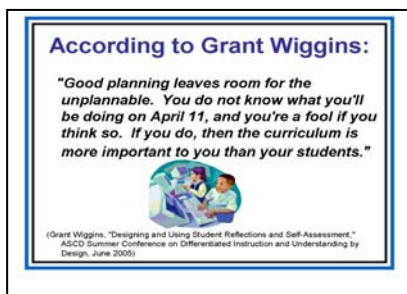
PG pg. 20



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.

Slide14
Grant Wiggins' quotation

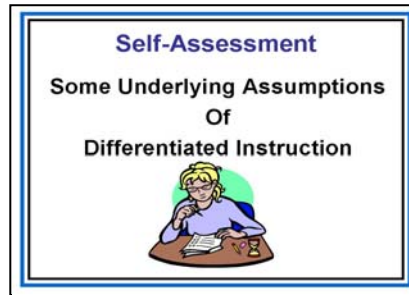
Show slide, *Grant Wiggins' quotation.*



Slide15
Self-Assessment

PG pg. 21

Self-Assessment



Self-Assessment

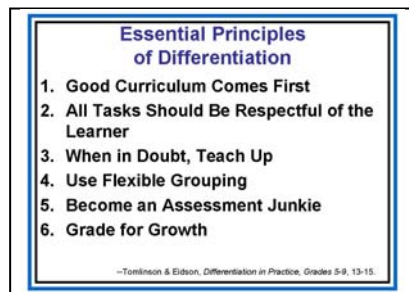
“Some Underlying Assumptions of Differentiated Instruction”

Read each assumption and assess your own “way of thinking about teaching” by marking the star if this assumption is implicit when planning instruction, the smiley face if you take this assumption into consideration in some way during planning, 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 16
Essential Principles of Differentiation

Show slide: *Essential Principles of Differentiation.*

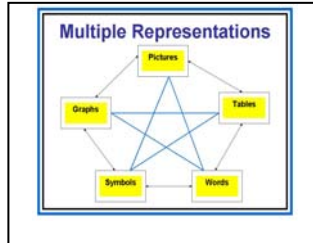


- **We’ve already discussed the importance of having a rigorous curriculum for all students.**
- **What do you think we mean when we say that “all tasks should be respectful of the learner”?** [Allow participants to respond before going on.]
- **To challenge every learner, Tomlinson says “when in doubt, 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 2 of training, we're going to reserve our discussion of fairness and grading in a differentiated classroom for Day 6 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.**

Slide 17
Multiple Representations

The Tic-Tac-Toe activity we are about to do, allows children to use multiple types of representations to not only come up with their answer to the task, but also to demonstrate their knowledge. It supports different learning styles, different interests of the student, and personal preference for problem solving strategies.



We will now return to the Coin in My Pocket Activity that started our morning.

Tic-Tac-Toe Activity

Please choose which tasks you would like to complete. Remember that Tic-Tac-Toe requires three in a row!

Each participant should work their choice of problems as long as they are three in a row.

Slide 18
Tic-Tac-Toe

PG pg. 6

Drawing paper
 Crayons
 Pencils
 Coin manipulatives

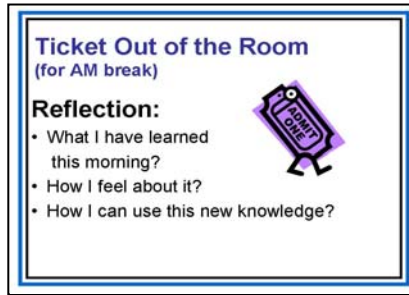
As participants are finishing up this activity. They should share with others that have also completed their work. Time for whole group discussion should follow this to follow up with the relevance to differentiation.

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

Slide 19
Ticket out of the room

This should be a good time for a break or possibly for lunch.

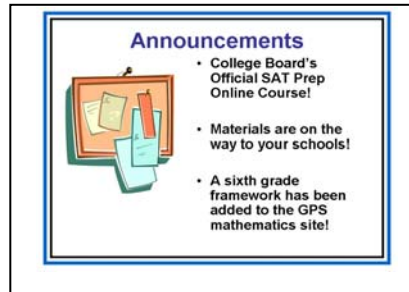
Notecards



Ask: **What are the important points that you have learned about differentiation so far? Please write these down on a notecard.**

Slide 20
Announcements

Show the slide:



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

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 we 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	<ul style="list-style-type: none"> ➤ 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	<ul style="list-style-type: none"> ➤ How do we differentiate? ➤ Why do we differentiate? ➤ Practice Analyzing a Differentiated Task ➤ Differentiation Stratego: A Reality Game
	<ul style="list-style-type: none"> ➤ 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?

Slide22

*Essential
Question 2*

Show slide: Essential Question 2.

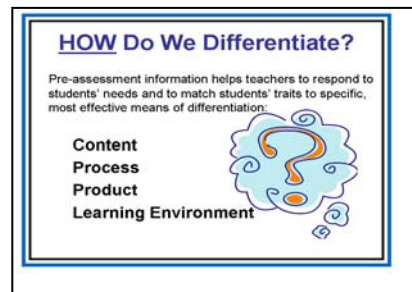


- **In this section of today's workshop, we will look at a number of aspects of differentiation that will help us make informed decisions about differentiating in our classrooms.**

Slide23

*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.

Slide 24
Differentiation

In the Participant's Guide and in the back section of this module there is a table set up like the one that the groups are to be completing. Information in the Participant's Guide and in the back section of this guide could be helpful with this activity.

PG pg. 24

Differentiation			
	What is it?	How to differentiate	Strategies to use
Content			
Process			
Product			
Learning Environment			

In your small group, divide your chart paper into four columns and five rows.

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 operate 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 provided each system and each RESA with a set of these materials last year, and we recommend that you view this tape to learn more about classroom management in a differentiated classroom.**

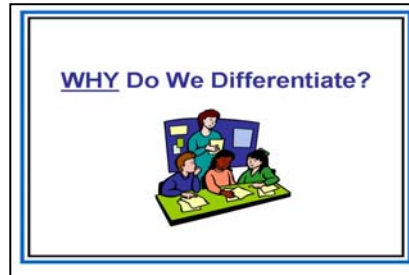
List of classroom management strategies by Carol Ann Tomlinson
PG pg. 27

Refer participants to tips listed in the Participant's Guide for a list of strategies for managing a differentiated classroom by Carol Ann Tomlinson. These are also in the back section of this guide.

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

Slide 25
Why Do We
Differentiate?

Show slide: Why Do We Differentiate?

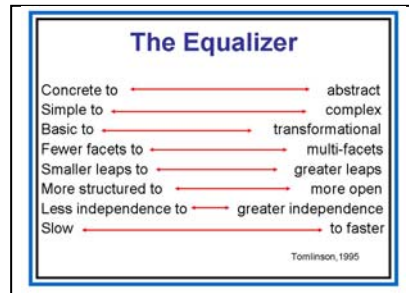


A brief discussion of these reasons should occur. Among the reasons, participants should include something such as access to learning, motivation to learn, and efficiency of learning.

Slide 26
The Equalizer

Show slide: The Equalizer.

PG pg. 28



- **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.

The Equalizer

- **You can find this Equalizer in the Participant's Guide and also in the back section of this guide.**

Practice: Differentiating a Task

Slide 27

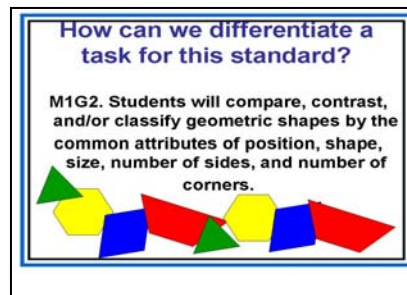
How can we differentiate this task?

Show slide: How can we differentiate this standard?

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

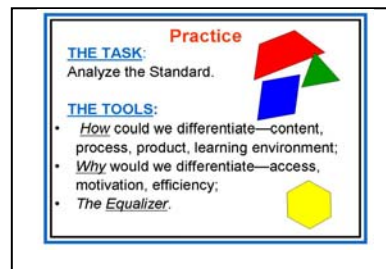
Take some time to analyze this 1st grade standard. In a small group, come up with a task that supports the standard and that can be differentiated.

PG pg. 26



Slide 28

Practice



Allow about 15 minutes for the groups to complete this activity. Groups should share what they came up with.

Differentiation Strategy: A Reality Game

Slide 29

*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	<ul style="list-style-type: none"> ➤ Describe the roles of the teacher in a differentiated classroom. ➤ Set individual goals for differentiating instruction in each classroom.
Activities	<ul style="list-style-type: none"> ➤ True/False Quiz: What Does Differentiation Look Like? ➤ Creative Demonstration ➤ Setting Personal Goals for Differentiating ➤ Task Time!

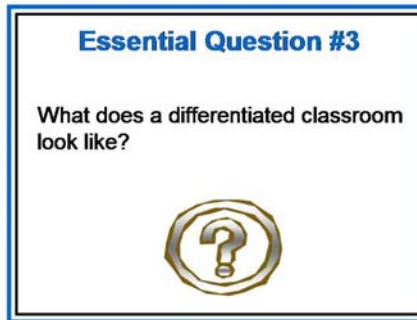
Materials	<ul style="list-style-type: none"> ➤ Chart paper and markers ➤ Transparencies or PowerPoint presentation ➤ Traditional and differentiated comparison chart ➤ Participant's Guide ➤ Cards with teacher metaphors
------------------	--

What Does a Differentiated Classroom Look Like?

Slide 30

*Essential
Question 3*

Show slide: *Essential Question 3.*



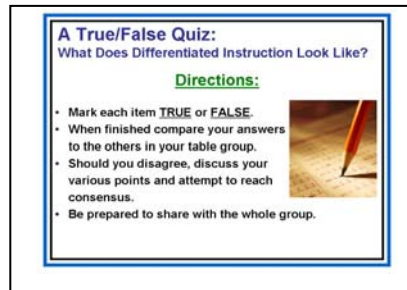
What Does Differentiation Look Like?: True/False Quiz

Slide 31

True/False Quiz

True/False Quiz.

PG pg. 29



True/False Quiz

- **To introduce this section, we're going to take a brief True/False Quiz.**
- **You will find this quiz in your Participant's Guide and in the back of this 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.**

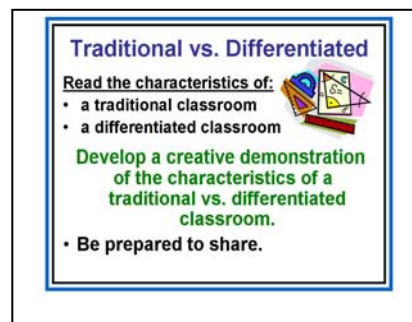
Traditional vs. Differentiated Comparison Chart

In the Participant's Guide and also at the back of this guide, you will find a chart that compares a traditional classroom to a differentiated classroom. Please turn to that chart.

PG pg.21

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

Slide 32

Traditional vs. Differentiated

- **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.

Setting Personal Goals for Differentiating

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

Slide 33
Set a goal...

Show Slide: *Set a goal...*



Notecards

On an index card 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.

Low-Prep and High-Prep Differentiation

PG pg. 33

- 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 in your Participant’s Guide and also in the back of this guide. Please turn to that page now.

Slide 34

Task Time!

PG pg.8

Slide: *Task Time!*



Choose any task within the framework for the grade that you work with. Plan ways to differentiate the task and be prepared to share your ideas.

Action Plan

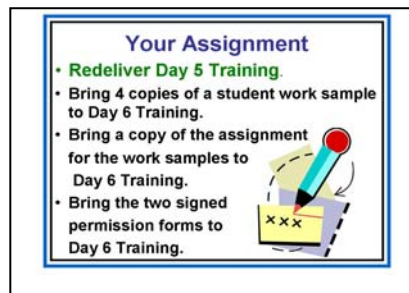
PG pg. 34

- Using Tomlinson’s chart and the Action Plan form in your Participant’s Guide and also in the back of this 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.

Slide 35

Your Assignment



- **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 5 materials.**
- **Day 6 of training will focus on Examining Student Work, Fairness, and Grading.**
- **You'll find assignments for Days 6 and 7 are listed in the appendix to your Participant's Guide and in the back of this 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 36

Give Yourself a Hand

Show slide: Give Yourself a Hand.



Slide 37

Contact Information

Show contact information.



Assure the participants that you are there to help them.

Thank participants for their time and efforts and encourage them to make the most of the new GPS.

K-2 Mathematics GPS

K-12 Mathematics Introduction

The Georgia Mathematics Curriculum focuses on actively engaging the students in the development of mathematical understanding by using manipulatives and a variety of representations, working independently and cooperatively to solve problems, estimating and computing efficiently, and conducting investigations and recording findings. There is a shift towards applying mathematical concepts and skills in the context of authentic problems and for the student to understand concepts rather than merely follow a sequence of procedures. In mathematics classrooms, students will learn to think critically in a mathematical way with an understanding that there are many different ways to a solution and sometimes more than one right answer in applied mathematics. Mathematics is the economy of information. The central idea of all mathematics is to discover how knowing some things well, via reasoning, permit students to know much else—without having to commit the information to memory as a separate fact. It is the connections, the reasoned, logical connections that make mathematics manageable. As a result, implementation of Georgia's Performance Standards places a greater emphasis on problem solving, reasoning, representation, connections, and communication.

Kindergarten

By the end of kindergarten, students will understand small numbers, quantities, and simple shapes in their everyday environment. They will also count, compare, describe and sort objects, and develop a sense of properties and patterns. Students will begin to understand measurement through the direct comparison of objects, money by making fair trades with coins and the concept of time by experiencing a daily schedule. Instruction and assessment should include the use of manipulatives and appropriate technology. Topics should be represented in multiple ways including concrete/pictorial, verbal/written, numeric/data-based, graphical, and symbolic. Concepts should be introduced and used in the context of real world phenomena.

MKN. Numbers and Operations

Students will correctly represent the number and order of objects using numbers and understand them.

MKN1. Students will connect numerals to the quantities they represent.

- a. Count a number of objects up to 30.
- b. Produce models for number words through ten.

Georgia Department of Education
Kathy Cox, State Superintendent of Schools
8/26/04
All Rights Reserved

- c. Write numerals through 20 to label sets.
- d. Sequence and identify using ordinal numbers (1st-10th).
- e. Compare two or more sets of objects (1-10) and identify which set is equal to, more than, or less than the other.
- f. Estimate quantities using five and ten as a benchmark. (e.g. 9 is one five and four more. It is closer to two fives or one 10 than it is to one five.)
- g. Use informal strategies to share objects equally (divide) between two to three people or sets.
- h. Identify coins by name and value (penny, nickel, dime, and quarter).
- i. Count out pennies to buy items that together cost less than 30 cents.
- j. Make fair trades involving combinations of pennies and nickels or pennies and dimes.

MKN2. Students will use representations to model addition and subtraction.

- a. Use counting strategies to find out how many items are in two sets when they are combined.
- b. Build number combinations up to 10 (e.g., 4 and 1, 2 and 3, 3 and 2, 4 and 1 for five) and for doubles to 10 (3 and 3 for six).
- c. Use objects, pictures, numbers, or words to create, solve and explain story problems for two numbers that are each less than 10.

MKM. Measurement

Students will explore quantitative situations involving distance, length, capacity, weight, time, and temperature.

MKM1. Students will group objects according to common properties such as color, shape, texture, or number.

- a. Compare and order objects on the basis of length.
- b. Compare and order objects on the basis of capacity.
- c. Compare and order objects on the basis of height.
- d. Compare and order objects on the basis of weight.

MKM2. Students will understand the measurement of calendar time.

- a. Know the names of the days of the week.
- b. Know the months of the year.
- c. Know the four seasons.

MKM3. Students will tell time as it relates to a daily schedule.

- a. Order daily events.
- b. Tell the time when daily events occur, such as lunch, to the nearest hour.

c. Know the name of the day of the week when weekly events occur in class.

MKG. Geometry

Students will recognize and name basic geometric shapes and spatial relationships.

MKG1. Students will correctly name simple two and three-dimensional figures, and recognize them in the environment.

- a. Recognize and name the following basic two-dimensional shapes: triangles, rectangles, squares, and circles.
- b. Recognize and name the following three-dimensional shapes: spheres (balls), and cubes.
- c. Observe concrete objects in the environment and represent the objects using basic shapes, such as drawing a representation of a house using a square together with a triangle for the roof.
- d. Combine basic shapes into basic and more complicated shapes, and will decompose basic shapes into combinations of basic shapes.
- e. Compare geometric shapes and identify similarities and differences of the following two and three-dimensional shapes: triangles, rectangles, squares, circles, spheres, and cubes.

MKG2. Students will understand basic positional relationships.

- a. Identify when an object is beside another object, above another object, or below another object.
- b. Identify when an object is in front of another object, behind another object, inside another object or outside it.

MKG3. Students will identify, create, extend, and transfer patterns from one representation to another using actions, objects, and geometric shapes.

- a. Identify a missing shape within a given pattern of geometric shapes.
- b. Extend a given pattern, and recognize similarities in different patterns.

MKD. Data Analysis and Probability

Students will pose questions and gather data about themselves and their surroundings.

MKD1. Students will pose information questions, collect data, organize, and record results using objects, pictures, and picture graphs.

MKP. Process Skills

Students will apply mathematical concepts and skills in the context of authentic problems and will understand concepts rather than merely follow a sequence of procedures. The students will use the process standards as a way of acquiring and using content knowledge.

MKP1. Students will solve problems that arise in mathematics and in other contexts.

- a. Solve non-routine word problems using the strategy act out the problem or use objects.
- b. With the use of manipulatives, solve routine word problems related to all appropriate kindergarten math standards.

MKP2. Students will investigate, develop, and evaluate mathematical arguments.

MKP3. Students will use the language of mathematics to express ideas precisely.

MKP4. Students understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.

MKP5. Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.

Terms/Symbols:

numbers through 30, set, longer, shorter, heavier, lighter, morning, afternoon, evening, yesterday, today, tomorrow, days of the week, months of the year, seasons, triangle, rectangle, square, circle, sphere, cube, beside, above, below, in front of, behind, inside, outside, more, less, equal.

Grade 1

By the end of grade one, students will understand and use the concept of ones and tens in the place value number system. The students will add and subtract small numbers with ease. They will represent quantity with numbers, models, diagrams, and number sentences. They will begin to use tools for measuring and observe, create, and decompose geometric shapes and solve simple problems including those involving spatial relationships. The students will pose questions, record data, and interpret simple charts and picture graphs.

Instruction and assessment should include the use of manipulatives and appropriate technology. Topics should be represented in multiple ways including symbolic, verbal/written, numeric/data-based, graphical, and concrete/pictorial. Concepts should be introduced and used in the context of real world phenomena.

Concepts/Skill to Maintain

Number words
Ordinal numbers
Equivalence
Basic geometric shapes
Positional words
Calendar time
Estimating—using 10 as a benchmark
Name and value of coins

M1N. Number and Operations

Students will understand how to represent numbers, and be able to add and subtract small numbers.

M1N1. Students will estimate, model, compare, order, and represent whole numbers up to 100.

- a. Represent numbers less than 100 using a variety of models, diagrams, and number sentences. Represent numbers larger than 10 in terms of tens and ones using counters and pictures.
- b. Correctly count and represent the number of objects in a set using numerals.
- c. Compare small sets using the terms greater than, less than, and equal to ($<$, $>$, $=$).
- d. Understand the magnitude and order of numbers up to 100 by making ordered sequences and representing them on a number line.
- e. Exchange equivalent quantities of coins by making fair trades involving combinations of pennies, nickels, dimes, and quarters and count out a combination needed to purchase items less than a dollar.
- f. Identify bills (\$1, \$5, \$10, \$20) by name and value and exchange equivalent quantities by making fair trades involving combinations of bills and count out a combination of bills needed to purchase items less than twenty dollars.

M1N2. Understand place value notation for the numbers between 1 and 100. (Discussions may allude to 3-digit numbers to assist in understanding place value.)

- a. Determine which multiple of ten a given number is nearest (rounding) using tools such as a sequential number line or hundreds chart to assist in estimating.
- b. Represent collections of less than 30 objects with 2-digit numbers and understand the meaning of place value. (Make sure that students, when given a number like 27 initially describe it as 2 tens and 7 ones, and only later use standard language, twenty-seven, when talking about the number.)

M1N3. Students will add and subtract numbers less than 100 as well as understand and use the inverse relationship between addition and subtraction.

- a. Identify one more than, one less than, 10 more than, and 10 less than a given number.
- b. Skip-count by 2's, 5's, and 10's forward and backwards – to and from numbers up to 100.
- c. Compose/decompose numbers up to 10 --“break numbers apart”, e.g., 8 is represented as $4 + 4$, $3 + 5$, $5 + 2 + 1$, and $10 - 2$). Decompose numbers between 11 and 19 as one ten and the appropriate number of ones.
- d. Understand a variety of situations to which subtraction may apply: taking away from a set, comparing two sets, and determining how many more or how many less.
- e. Understand addition and subtraction number combinations using strategies such as counting on, counting back, doubles and making tens.
- f. Know the single-digit addition facts to 18 and corresponding subtraction facts with understanding and fluency. (Use strategies such as relating to facts already known, applying the commutative property, and grouping facts into families.)
- g. Apply addition and subtraction to 2 digit numbers without regrouping (e.g. $15 + 4$, $80 - 60$, $56 + 10$, $100 - 30$, $58 + 5$).
- h. Solve and create word problems involving addition and subtraction to 100 without regrouping. Use words, pictures and concrete models to interpret story problems and reflect the combining of sets as addition and taking away or comparing elements of sets as subtraction.

M1N4. Students will count collections of up to 100 objects by dividing them into equal parts and represent the results using words, pictures, or diagrams.

- a. Use informal strategies to share objects equally between two to five people.
- b. Build number patterns, including concepts of even and odd, using various concrete representations. (Examples of concrete representations include a hundreds chart, ten grid frame, place value chart, number line, counters, or other objects.)
- c. Identify, label and relate fractions (halves, fourths) as equal parts of a whole using pictures and models.

M1M. Measurement

Students will measure basic quantitative attributes of concrete objects.

M1M1. Students will compare and/or order the length, weight, or capacity of two or more objects by using direct comparison or a nonstandard unit.

- a. Directly compare length, weight, and capacity of concrete objects.
- b. Estimate and measure using a non-standard unit that is smaller than the object to be measured.
- c. Measure with a tool by creating a “ruled” stick, tape, or container by marking off ten segments of the repeated single unit.

M1M2. Students will develop an understanding of the measurement of time.

- a. Tell time to the nearest hour and half hour and understand the movement of the minute hand and how it relates to the hour hand.
- b. Begin to understand the relationship of calendar time by knowing the number of days in a week and months in a year.
- c. Compare and/or order the sequence or duration of events (e.g., shorter/longer and before/after).

M1G. Geometry

Students will understand the concepts of basic geometric shapes and spatial relationships of concrete objects.

M1G1. Students will study and create various two and three-dimensional figures and identify basic figures (squares, circles, triangles, and rectangles) within them.

- a. Build, draw, name, and describe triangles, rectangles, pentagons, and hexagons.
- b. Build, represent, name, and describe cylinders, cones, and rectangular prisms (objects that have the shape of a box).
- c. Create pictures and designs using shapes, including overlapping shapes.

M1G2. Students will compare, contrast, and/or classify geometric shapes by the common attributes of position, shape, size, number of sides, and number of corners.

M1G3. Students will arrange and describe objects in space by proximity, position, and direction (near, far, below, above, up, down, behind, in front of, next to, and left or right of).

M1D. Data Analysis and Probability

Students will pose questions, collect, organize and interpret data about themselves and their surroundings.

M1D1. Students will create simple tables and graphs and interpret them.

- a. Interpret tally marks, picture graphs and bar graphs.
- b. Organize and record data using objects, pictures, tally marks, and picture graphs.

M1P. Process Skills

Students will apply mathematical concepts and skills in the context of authentic problems and will understand concepts rather than merely following a sequence of procedures. The student will use the process standards as a way of acquiring and using content knowledge.

M1P1. Students will solve problems that arise in mathematics and in other contexts.

- a. Solve non-routine word problems using the strategy make a picture or diagram and continue to develop the strategy act out or use objects learned in kindergarten.
- b. Solve single step routine word problems related to all appropriate first grade math standards.
- c. Determine the operation(s) needed to solve a problem.
- d. Determine the most efficient way to solve a problem (mentally, paper/pencil, or calculator).

M1P2. Students will investigate, develop, and evaluate mathematical arguments.

M1P3. Students will use the language of mathematics to express ideas precisely.

M1P4. Students understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.

M1P5. Students will create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.**Terms/Symbols:**

place value—ones, tens, hundreds, greater than, less than, equal to, fewer than, more than, sum/add, difference/subtract, coins—penny, nickel, dime, quarter, compare/contrast, length, weight, estimate, hexagon, cylinder, cone, rectangular prism, $<$, $>$, $=$, $+$, $-$, even, odd, tally mark

Grade 2

By the end of grade two, students will understand place value and number relationships in addition and subtraction and use simple concepts of multiplication. They will measure length with appropriate units and determine perimeter. Students will classify shapes and see relationships among them by recognizing their geometric attributes. They will know the relationships of time and count back change. The students will collect, analyze, and interpret data using bar graphs and Venn diagrams.

Instruction and assessment should include the use of manipulatives and appropriate technology. Topics should be represented in multiple ways including symbolic, verbal/written, numeric/data-based, graphical, and concrete/pictorial. Concepts should be introduced and used in the context of real world phenomena.

Concepts/Skill to Maintain

Fluency with single digit addition/subtraction facts to 18

Fair trades with coins or bills

Duration and sequence of events

Number patterns-skip count, odd/even

Fact families

Fractions.halves, fourths

Tally marks

Picture graphs

Estimation.rounding to nearest ten

M2N. Numbers and Operations

Students will further develop their understanding of numbers - including fractions - and how to represent them. The students will understand and apply addition, subtraction and multiplication through concrete manipulation and perform basic calculations.

M2N1. Students will understand the place value representation of whole numbers through four digits.

Georgia Department of Education
Kathy Cox, State Superintendent of Schools
8/26/04
All Rights Reserved

- a. Represent numbers using a variety of models, diagrams, and number sentences (e.g., 4703 represented as $4,000 + 700 + 3$, and units, 47 hundreds + 3, or $4,500 + 203$).
- b. Understand the relative magnitudes of numbers using 10 as a unit, 100 as a unit, or 1000 as a unit. Represent 2-digit numbers with drawings of tens and ones and 3-digit numbers with drawings of hundreds, tens, and ones.
- c. Use money as a medium of exchange. Count back change and use decimal notation and the dollar and cent symbols to represent a collection of coins and currency.

M2N2. Students will build fluency with multi-digit addition and subtraction.

- a. Correctly add and subtract two whole numbers up to three digits each with regrouping.
- b. Understand and use the inverse relation between addition and subtraction to solve problems and check solutions.
- c. Use mental math strategies such as benchmark numbers to solve problems.
- d. Use basic properties of addition (commutative, associative, and identity) to simplify problems (e.g. $98 + 17$ by taking two from 17 and adding it to the 98 to make 100 and replacing the original problem by the sum $100 + 15$).
- e. Estimate to determine if solutions are reasonable for addition and subtraction.

M2N3. Students will understand multiplication, multiply numbers, and verify results.

- a. Understand multiplication as repeated addition.
- b. Use repeated addition, arrays, and counting by multiples (skip counting) to correctly multiply 1-digit numbers and construct the multiplication table.
- c. Use the multiplication table (grid) to determine a product of two numbers.
- d. Use repeated subtraction, equal sharing, and forming equal groups to divide large collections of objects and determine factors for multiplication.

M2N4. Students will understand and compare common fractions with small denominators.

- a. Model, identify, label, and compare fractions (thirds, sixths, eighths, tenths) as a representation of equal parts of a whole or of a set.
- b. Know that when all fractional parts are included, such as three thirds, the result is equal to the whole.

M2N5. Students will represent and interpret quantities and relationships using mathematical expressions including equality and inequality signs ($=$, $<$, $>$).

- a. Include the use of boxes or to represent a missing value.
- b. Represent problem solving situations where addition, subtraction or multiplication may be applied using mathematical expressions.

M2M. Measurement

Students will understand length, time, and temperature and choose an appropriate tool to measure them.

M2M1. Students will know the standard units of inch, foot, yard, and metric units of centimeter and meter and measure length to the nearest inch or centimeter.

- a. Compare the relationship of one unit to another by measuring objects twice using different units each time.
- b. Estimate lengths, and then measure to determine if estimations were reasonable.
- c. Determine an appropriate tool and unit for measuring.

M2M2. Students will tell time to the nearest five minutes and know relationships of time such as the number of minutes in an hour and hours in a day.

M2M3. Students will estimate, then measure, temperature (Fahrenheit) and determine if estimations were reasonable.

M2G. Geometry

Students will understand basic and compound geometric shapes together with the elements from which they are composed.

M2G1. Students will describe and classify plane figures (triangles, square, rectangle, trapezoid, quadrilateral, pentagon, hexagon, and irregular polygonal shapes) according to the number of edges and vertices and the sizes of angles (right angle, obtuse, acute).

M2G2. Students will describe and classify solid geometric figures (prisms, cylinders, cones, and spheres) according to such things as the number of edges and vertices and the number and shape of faces and angles.

- a. Recognize the (plane) shapes of the faces of a geometric solid and count the number of faces of each type.
- b. Recognize the shape of an angle as a right angle, an obtuse or acute angle.

M2G3. Students will describe the change in attributes as two and threedimensional shapes are cut and rearranged.

Students will pose questions, collect, organize, and interpret data about themselves and their surroundings.

Georgia Department of Education
Kathy Cox, State Superintendent of Schools
8/26/04
All Rights Reserved

M2D1. Students will create simple tables and graphs and interpret their meaning.

- a. Organize and display data using picture graphs, Venn diagrams, bar graphs, and simple charts/tables to record results.
- b. Know how to interpret picture graphs, Venn diagrams, and bar graphs.

M2P. Process Skills

Students will apply mathematical concepts and skills in the context of authentic problems and will understand concepts rather than merely following a sequence of procedures. The students will use the process standards as a way of acquiring and using content knowledge.

M2P1. Students will solve problems that arise in mathematics and in other contexts.

- a. Solve non-routine word problems using the strategies of use or look for a pattern or guess and check as well as all strategies learned in previous grades.
- b. The student will solve single step routine word problems related to all appropriate second grade math standards.
- c. Determine the operation(s) needed to solve a problem.
- d. Determine the most efficient way to solve a problem (mentally, paper/pencil, or calculator).

M2P2. Students will be able to investigate, develop, and evaluate mathematical arguments.**M2P3. Students will be able to use the language of mathematics to express ideas precisely.****M2P4. Students understand how mathematical ideas interconnect and build on one another and apply mathematics in other content areas.****M2P5. Students will be able to create and use pictures, manipulatives, models, and symbols to organize, record, and communicate mathematical ideas.****Terms/Symbols:**

place value, thousands, sum, difference, product, multiply, regroup, array, numerator, denominator, inch, foot, yard, centimeter, meter, quadrilateral, right angle, obtuse, acute, edge, face, vertex/vertices, prism, perimeter, plane, $>$, $<$, $=$, \neq , $+$, $-$, \times , minute, hour, Venn diagram

Georgia Department of Education
Kathy Cox, State Superintendent of Schools
8/26/04
All Rights Reserved



Glossary

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 Role, Audience, Format, and Topic for a particular task. 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 questions 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.



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.

Laternau, 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.

Mathematics

Danielson, Charlotte. *A Collection of Performance Tasks and Rubrics: Middle School Mathematics.* Larchmont, NY: Eye on Education, 1997.

Illuminations. <http://illuminations.nctm.org/index.asp>

Intermath. <http://www.intermath.uga.gatech.edu>

National Library of Virtual Manipulatives. <http://nlvm.usu.edu/en/nav/vlibrary.html>

Northey, Sheryn Spencer. *Handbook on Differentiated Instruction for Middle and High Schools.* Larchmont, NY: Eye on Education, 2005.

Van de Walle, John A. *Elementary and Middle School Mathematics: Teaching Developmentally, Fifth Edition.* New York, NY: Longman Press, 2004.

Van de Walle, John A. and LouAnn Lovin. *Teaching Student-Centered Mathematics: Grades 5-8.* Boston, MA: Pearson Allyn & Bacon, 2006.



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—Andrea Mirtalebi

amirtale@doe.k12.ga.us

Gifted and Talented—Linda Andrews

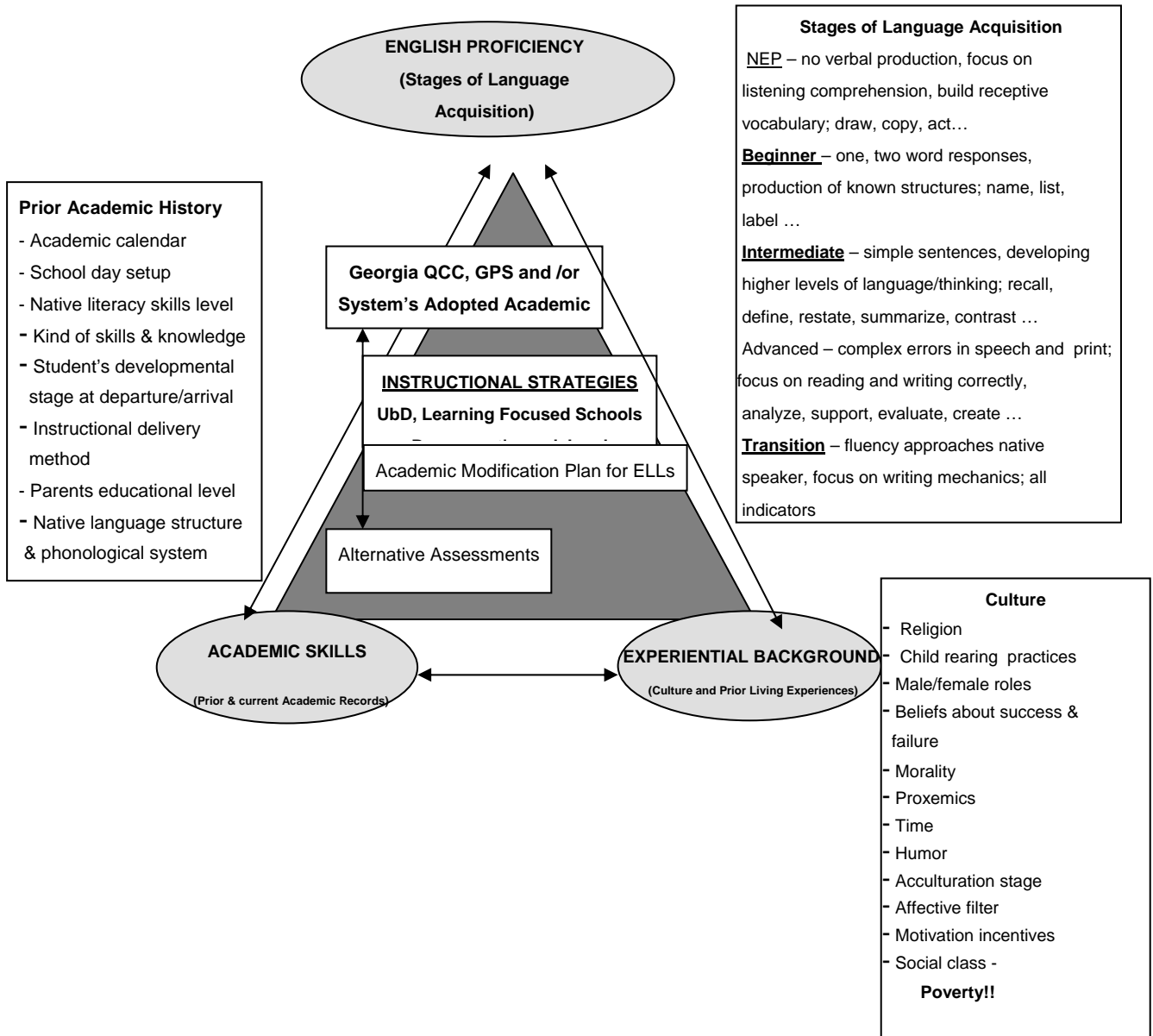
lindrew@doe.k12.ga.us

Exceptional Students (Special Education)—Marlene Bryar

mbryar@doe.k12.ga.us

Pre-Assessing the English Language Learner

Framework for Understanding the Learning of PHLOTE & ELL Students: Who Am I Teaching?



© Victoria V. Webbert, 2003

What Does Differentiated Instruction Look Like?

Differentiated Instruction is...	Differentiated Instruction is not...
1. Assessing students before a unit of instruction to determine what they already know	1. All students in the class completing the same work for a unit/chapter
2. Adjustment of the core curriculum by content (below to above grade level), process (concrete to abstract), and product (simple to complex)	2. Limiting how and what is taught by teaching to the average student
3. Providing assignments tailored for students of different levels of achievement	3. Assigning more work at the same level to high achieving students
4. Having high expectations for ALL students	4. Focusing on student weaknesses and ignoring student strengths
5. Educational experiences which extend, replace, or supplement standard curriculum	5. Activities that all students will be able to do
6. Structuring class assignments so they require high levels of critical thinking and allow for a range of responses	6. Giving the same kind of problems or questions and expecting more
7. Students participating in respectful work	7. Creating more work-extra credit, do when done
8. Students and teachers collaborating in learning	8. Using higher standards when grading
9. Putting students in situations where they don't know the answer- often	9. Providing free-time challenge activities
10. Differing the pace of instruction	10. Using capable students as tutors
11. A blend of whole class, group, and independent learning	11. Using individualized instruction

Low-Prep and High-Prep Differentiation

Low-Prep Differentiation

Choice of books
 Homework options
 Use of reading buddies
 Varied journal prompts
 Orbitals
 Varied pacing with anchor options
 Student-teacher goal setting
 Work alone/work together
 Whole-to-part and part to whole explanations
 Flexible seating
 Varied computer programs
 Design-A-Day
 Varied supplementary materials
 Options for varied modes of expression
 Varying scaffolding on same organizer
 Let's Make a Deal projects
 Computer mentors
 Think-Pair-Share by readiness, interest,
 learning profile
 Use of collaboration, independence, and
 cooperation
 Open-ended activities
 Miniworkshops to reteach or extend skills
 Jigsaw
 Negotiated Criteria
 Explorations by interest
 Games to practice mastery of information
 and skill
 Multiple levels of questions

High Prep-Differentiation

Tiered activities and labs
 Tiered products
 Independent studies
 Multiple texts
 Alternative assessments
 Learning contracts
 4-MAT
 Multiple intelligence options
 Compacting
 Spelling by readiness
 Entry Points
 Varying organizers
 Lectures coupled with
 graphic organizers
 Interest groups
 Tiered centers
 Interest centers
 Personal agendas
 Literature Circles
 Stations
 Complex instruction
 Group investigation
 Tape-recorded materials
 Teams, Games, and
 Tournaments
 Think-Tac-Toe
 Simulations
 Problem-Based Learning
 Graduated rubrics
 Flexible reading formats
 Student-centered writing
 Formats

Tomlinson, *How to Differentiate in Mixed-Ability Classrooms*, 34.

Instructional Accommodations for ELLs

Accommodations for ELLs are appropriate and effective only to the level that these match the English language learners proficiency in English, prior academic knowledge and cultural learning patterns.

- give tests orally rather than in written form
- give more time to complete assignments
- allow same-language buddy to assist
- require fewer responses to demonstrate mastery
- permit incomplete sentences in responses
- permit ungrammatically correct sentences in responses
- provide lower level text on content material
- provide video on content material
- provide text on tape
- highlight key points
- reduce number of key points that student is responsible for knowing
- give advanced organizers/study guides
- permit open book tests
- use graphic organizers
- give written instructions as well as oral
- make a written record of instruction and display it on chart paper
- take time to develop students' prior knowledge of new topics
- increase % of student talk about topic (more discussions)
- break students into small groups for discussion
- plan for group work
- use demonstrations when possible
- present model of work done well at the beginning of the assignment
- use hands-on activities when possible
- give sufficient wait time after asking questions
- adapt homework requirements to reflect stage of language development
- use performance based assessment when possible
- adapt project/assignment requirements so students can participate
- provide learning centers (language masters, books on tape, magazines for classifying and developing picture dictionaries, language based games)
- provide computer time (phonics software, *Kidspiration* graphic organizer software, internet)
- seat student near teacher or positive role models
- relate content to real life
- present tasks from easy to hard

- reduce details needed to learn main concepts
- use simpler vocabulary or paraphrase
- provide additional examples
- pair verbal directions with visual clues
- look at students when talking
- use audio-visual aids frequently
- provide student with outline of lesson notes
- use peer assisted note taking
- use role-playing
- use games
- provide self-checking materials
- use different colors for worksheets
- use enlarged type on worksheets
- reduce the length or amount of work
- mark only correct answers
- do NOT write the name of a Korean student in red...it means death
- give short quizzes/avoid long tests
- allow the use of a dictionary during tests
- allow student to take tests until passes/emphasize mastery

Georgia Department of Education, GPS Differentiation Menu

For students who have difficulty with writing/composing written material:

- cooperative learning groups
- word processing application
- dictation to a scribe or onto a tape
- demonstrate/role play
- oral responses, presentation, and assessments
- multi-media presentation
- graphic organizer
- extended time on timed tasks
- word prediction software
- *Co-Writer, Write Out Loud, Dragon Naturally Speaking*, or other software
- voice output computer programs
- spell check/grammar check (not allowed on standardized tests)
- task item rubrics
- teacher prepared format
- break work into manageable parts
- individual or small group test taking
- story starters
- sentence starters
- outlines
- tape recorded essays and oral presentations
- voice activated software
- portable word processor
- prewriting conference/prewriting activities
- illustrations
- K-W-L chart
- provide sample work
- debates
- proofreading checklist
- word bank/word wall
- matrix usage
- note taking assistance
- provide student with key words on essay tests
- abbreviate assignments
- adapted writing tools or other assistive technology, as appropriate

For students who have difficulty with reading/accessing written material:

- cooperative learning groups/group discussion
- extended time on timed tasks
- voice output computer programs
- talking dictionaries

- break work into manageable parts/presentation of small chunks of a passage
- individual or small group test taking
- testing with reader or scanable text readers
- books on tape/listening to recording/viewing film version of story
- text read to the student by adult or peer
- reading guides (highlighted text, summaries, etc.)
- Language Master
- tracking light or other tracking device
- colored overlays
- computer generated books
- answer “yes/no” questions for comprehension checks
- choral reading
- pre-reading summary
- electronic text (text reader)
- oral (or audio) presentation to student
- teacher introduction of vocabulary words
- paired reading
- picture cues
- illustrations to show comprehension
- *CoWriter, Write Out Loud*, other software
- K-W-L chart
- previewing topics to introduce vocabulary and key concepts
- listening guide to facilitate note taking
- links to prior knowledge/personal experience
- debates
- word bank/word wall
- other assistive technology, as appropriate

For students who have difficulty speaking:

- sign language interpreter/transliterators
- augmentative communication devices
- communication boards
- cooperative learning groups
- usage of other preferred means of communication
- demonstrate/play act tasks
- picture symbol program
- object symbols
- voice output computer programs
- object symbols
- voice output computer programs
- break work into manageable parts
- provide time to respond
- ask “yes/no” questions
- indicating correct answer by pointing
- assign written rather than oral reports

- avoid situations that create pressure
- other assistive technology, as appropriate

For students who have difficulty listening:

- cooperative learning groups
- visual presentation using computer software, such as *PowerPoint* or *Inspiration*
- break work into manageable parts
- repeat, rephrase, simplify statements and instructions
- provide time to respond
- use of literal, concrete speech
- visual aids
- preferential seating
- note taking assistance (copy or notes/note-taking guides/note taker)
- have student repeat instructions
- reinforce oral instructions with written instructions
- assistive technology, as appropriate

For students who have difficulty with mobility:

- cooperative learning groups
- switch use
- touch screen
- modified keyboards
- extended time on timed tasks (or waive timed tasks)
- modified handwriting and/or grid paper
- weighted pencils and other motoric devices
- slant board or wedge
- magnets, tape, or other paper stabilizers
- stabilized materials
- break work into manageable parts
- individual or small group test taking
- provide time to respond
- page turner
- flexible schedule/scheduled rest breaks
- provide assistance in manipulating classroom and personal materials
- note taking assistance
- adaptive or special furniture
- dictation to a scribe or onto a tape
- other assistive technology, as appropriate

For students who have difficulty attending to task:

- cooperative learning groups with specific tasks assigned
- rubrics
- graphic organizers
- extended time on timed tasks
- break work into manageable parts

- individual or small group test taking
- task analysis
- task analysis graphically displayed
- proximity control
- visual, verbal, and tactile cues
- gain student's attention before delivery of information
- flexible schedule/scheduled rest breaks
- preferential seating
- note taking assistance
- provide study guides for tests
- have student repeat instructions
- regular notebook/agenda checks
- give abbreviated assignments
- set time allotments for tasks
- organizer/daily planner/homework notebook/folders
- fewer items on each page
- allow students to mark answers in workbooks and test booklets
- select optimal time of day for assessments
- provide study carrel or other quiet work space with minimal distractions
- assistive technology, as appropriate

For students who have difficulty with organizations/study skills:

- cooperative learning groups
- graphic organizers
- extended time on timed tasks
- break work into manageable parts
- individual or small group test taking
- task analysis
- task analysis graphically displayed
- organizer/daily planner/homework notebook/folders
- provide time to respond
- preferential seating
- provide sample work
- task item rubrics
- provide study guides for tests
- have student repeat instructions
- regular notebook/agenda checks
- set time allotments for task
- fewer items on each page
- provide study carrel or other quiet work space with minimal distractions
- provide books to remain at home
- establish and post daily routines
- allow students to mark answers in workbooks and test booklets
- assistive technology, as appropriate

For students who are Deaf/Hard of Hearing:

- sign language interpreter/transliterater
- amplification equipment
- sound-treated classrooms/special acoustics
- visual presentation using computer software, such as *PowerPoint* or *Inspiration*
- highlighted vocabulary
- closed captioning for viewing movies and other video presentations
- cooperative learning groups
- demonstrate/play act tasks
- voice output computer programs
- individual or small group test taking
- give short, specific verbal instructions
- story webs
- story starters
- *Write Out Loud*, *CoWriter*, or other software
- peer scribe
- note taking assistance
- provision of class notes with critical information, test questions, and highlighted vocabulary
- preferential seating
- refrain from speaking with back turned to students
- provide a work space with minimal noise
- other communication aids (assistive technology), as appropriate

For students who are Visually Impaired:

- Braille text/Braille writer
- enlarged print
- print with optical devices
- tactile symbols
- calendar system
- auditory and electronic formats
- dark or raised line paper
- cooperative learning groups
- slant board
- individual or small group test taking
- low vision devices/magnifying equipment
- screen readers/text scanners
- audiotaped directions and text (Talking Books for the Blind)
- word processing program with voice output
- electronic Braille note takers
- positioning in class away from glare
- black print handouts
- primary typewriter
- preferential seating
- usage of grid paper

- special or adapted lighting
- other alternate formats, communication aids, or assistive technology, as appropriate

Student-Created Products

<p><u>Verbal</u> anecdote audio recording ballad book report campaign speech characterization choral reading cinquain comedy act comparison conference couplet debate description dialog discussion documentary dramatization explanation fairy tale/tall tale free verse interview jingle joke lecture lesson limerick mock interview monologue myth newscast nursery rhyme oral report panel discussion quatrain radio show radio commercial rap recorded dialogue rhyme weaving wire sculpture</p>	<p>riddle role-play song speech story telling survey</p> <p><u>Visual</u> advertisement CD cover anagram animation annotated biblio. area graph artifact collection award banner bar graph blueprint book jacket booklet bookmark brochure bulletin board calendar cardboard relief cartoon chart checklist collage collection comic book costume cross-section crossword puzzle design diagram diorama display drawing film dialog dictionary editorial</p>	<p>filmstrip flag flashcard flip chart flowchart game graphic greeting card hieroglyphic icon id chart illustration layout map mask mobile mosaic movie newscast outline painting pattern pennant photo essay photograph picture dictionary picture story pie chart playing card print puzzle scatter graph scenario scrap book scroll sign silk screen slide show stencil TV commercial timeline letter to editor limerick list</p>	<p>transparency travel ad travel log tree chart video tape wall hanging weather map weaving web web page window shade word game word search</p> <p><u>Kinesthetic</u> apparatus aquarium artifacts card game cardboard relief ceramics charade circuit boards clothing collage collection dance demonstration discovery center display dramatization equipment etching experiment fair food furniture gadget game hat imaginary play patent pen pal petition</p>	<p>improvisation instrument invention jigsaw puzzle kite laboratory learning center macramé mime mobile model origami parallel play paper mache play prototype puppet finger puppet marionette hand puppet puppet show puzzle quilt relief rubbing role play sand casting scavenger hunt service sewing cards shadow box simulation skit soap sculpture stage set stitchery terrarium tie-dye tool toy uniform vehicle riddle satire science fiction</p>
--	--	---	--	---

Written	essay	log	plan	scroll
advertisement	fairy tale/tall tale	lyrics	play	short story
autobiography	field manual	magazine	poem	skit
book report	free verse	magazine article	prediction	slogan
booklet	friendly letter	manual	profile	speech
brochure	glossary	metaphor	puppet show	story
business letter	guidebook	myth	questionnaire	story problems
characterization	handbook	new story ending	questions	survey
classified ad	handout	newsletter	radio script	telegram
comic book	interview script	newspaper	rating scale	TV script
comparison	job description	newspaper article	rationale	term paper
computer prog.	joke book	notes	recipe	test
couplet	jot list	novel	reference	travel log
creative writing	journal article	oath	report	vocabulary list
critique	label	outline	research paper	yearbook
database	law	pamphlet	review	
description	lesson plan	parody	rewritten ending	

from GA Dept. of Education *Curriculum Guide for the Education of Gifted Students*, by Jim Curry and John Samara

Product Possibilities

Design a web page	Design political cartoons	Compile a newspaper
Develop a solution to a community problem	Formulate & defend a theory	Develop an exhibit
Create a public service announcement	Conduct a training session	Conduct an ethnography
Write a book	Design & teach a class	Write a biography
Design a game	Do a demonstration	Present a photo-essay
Generate & circulate a petition	Present a news report	Hold a press conference
Write a series of letters	Write a new law & plan for its passage	Develop & use a questionnaire
Present a mime	Make learning centers	Conduct a debate
Design & create a needlework	Create authentic recipes	Make a video documentary
Lead a symposium	Choreograph dances	Create a series of illustrations
Build a planetarium	Present a mock trial	Write poems
Conduct a series of interviews	Make a plan	Develop tools
Develop a collection	Compile & annotate a set of Internet resources	Design or create musical instruments
Submit writings to a journal, magazine, or newspaper	Design a new product	Compile a booklet or brochure
Interpret through multimedia	Write a series of songs	Draw a set of blueprints
Design a structure	Create a subject dictionary	Present a radio program
Design & conduct an experiment	Make and carry out a plan	Do a puppet show
Collect & analyze samples	Design a simulation	Create a series of wall hangings
Plan a journey or an odyssey	Write a musical	Go on an archeological dig
Make an etching or a woodcut	Develop a museum exhibit	Design & make costumes
Write letters to the editor	Be a mentor	Present an interior monologue
	Write or produce a play	Generate charts or diagrams to explain ideas

Carol Ann Tomlinson, *How to Differentiate in a Mixed-Ability Classroom*, 2nd ed., Alexandria, ASCD, 2001, 89.

Assignments for Days 6 and 7 of GPS Training

For Day 6 for all grade levels and all content areas:

Each participant should bring a student work sample to Day 6 of 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 in the Participant's Guide for Day 5 of the training and in the back of this guide.

For Day 7 for all grade levels and all content areas:

As you work to implement the GPS standards this first year, please 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 III who will be implementing the following year; thoughts or ideas about the second year of your implementation; etc. Please have this available for you for the Day 7 online 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.

Permission Forms for Student Work

CONSENT AND ASSIGNMENT

This Consent and Assignment (the "Assignment") is effective when signed by the undersigned Georgia educator ("Educator") and is between Educator and the Georgia Department of Education (the "GDOE"). For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree:

1. GDOE gratefully acknowledges the contribution Educator is hereby making to GDOE of the original work product (the "Work Product") created, developed, worked on or revised by Educator in connection with GDOE's Georgia Performance Standards Project (the "Project"). So that GDOE may fully use the Work Product in any manner it sees fit, including making copies, modifications and derivative works, Educator hereby fully and unconditionally transfers, assigns and conveys to GDOE all of Educator's copyright, ownership interests and other intellectual property rights in the Work Product (collectively, the "Intellectual Property Rights"). Educator further agrees that GDOE may publicly recognize and acknowledge Educator's contribution to, and involvement in, the Project.

2. This Assignment is governed by Georgia law, can only be amended if both parties do so in writing, is assignable solely by GDOE and supersedes any contrary oral or written agreement or understanding. Educator grants to GDOE the power and authority to execute any documentation deemed necessary by GDOE to register or protect the Work Product or Intellectual Property Rights therein or complete the full transfer of the Work Product and Intellectual Property Rights to GDOE which is the purpose of this Assignment.

"Educator"

Name:

Signature:

Print:

"GDOE"

Georgia Department of Education

By:

Title:

Date:

CONSENT AND ASSIGNMENT

This Consent and Assignment (the "Assignment") is effective when signed by the undersigned legal guardian ("Guardian") on behalf of the Guardian and minor Georgia student named below ("Student"), and is among Guardian, Student and the Georgia Department of Education (the "GDOE"). For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree:

1. GDOE gratefully acknowledges the contribution Student and Guardian are hereby making to GDOE of the original work product (the "Work Product") created, developed, worked on or revised by Student. So that GDOE may fully use the Work Product in any manner it sees fit in connection with GDOE's Georgia Performance Standards Project (the "Project"), including making copies, modifications and derivative works, Guardian on behalf of Guardian and Student (and their heirs and successors) hereby fully and unconditionally transfer, assign and convey to GDOE all of Student's and Guardian's copyright, ownership interests and other intellectual property rights in the Work Product (collectively, the "Intellectual Property Rights"). Guardian further agrees that GDOE may publicly recognize and acknowledge Student's contribution to, and involvement in, the Project.

2. This Assignment is governed by Georgia law, can only be amended if both parties do so in writing, is assignable solely by GDOE and supersedes any contrary oral or written agreement or understanding. Student grants to GDOE the power and authority to execute any documentation deemed necessary by GDOE to register or protect the Work Product or Intellectual Property Rights therein or complete the full transfer of the Work Product and Intellectual Property Rights to GDOE which is the purpose of this Assignment.

"Guardian"

"GDOE"

Signature:

Georgia Department of Education

By:

Print Name:

Title:

Guardian's Relationship to Minor:

Date:

Print Minor's Name:

**Money in My Pocket
Tic-Tac-Toe**

<p>List two of the combinations you thought of. Write the amount that each is worth. Create a Venn Diagram to compare the different amount of money and list the possible things you could buy with those amounts of money.</p>	<p>Use coins to make a visual of the different groups you could have found. Label each group with an amount of money. (at least 3 ways)</p>	<p>Create a pocket and coins out of construction paper to represent the combination of coins found in your pocket. Label your pocket with the amount of money.</p>
<p>Write a song / rap about your money. It should tell a combination of coins and have the amount of money in the song.</p>	<p>Make a chart to show all of the different combinations of coins you can think of (at least 3 ways).</p>	<p>Make a pattern with the coins that you found in your pocket. Can you find another pattern with another group of ten coins? Draw your patterns on a piece of paper and label it with the amount of money represented.</p>
<p>Draw a picture of the different combinations of coins. Be sure to separate each group and write how much each group is worth.</p>	<p>Graph 1 combination of coins and how many you had of each. Be sure to label all parts of your graph.</p>	<p>Write a story about the coins you found, how much money it was, and how you spent your money.</p>

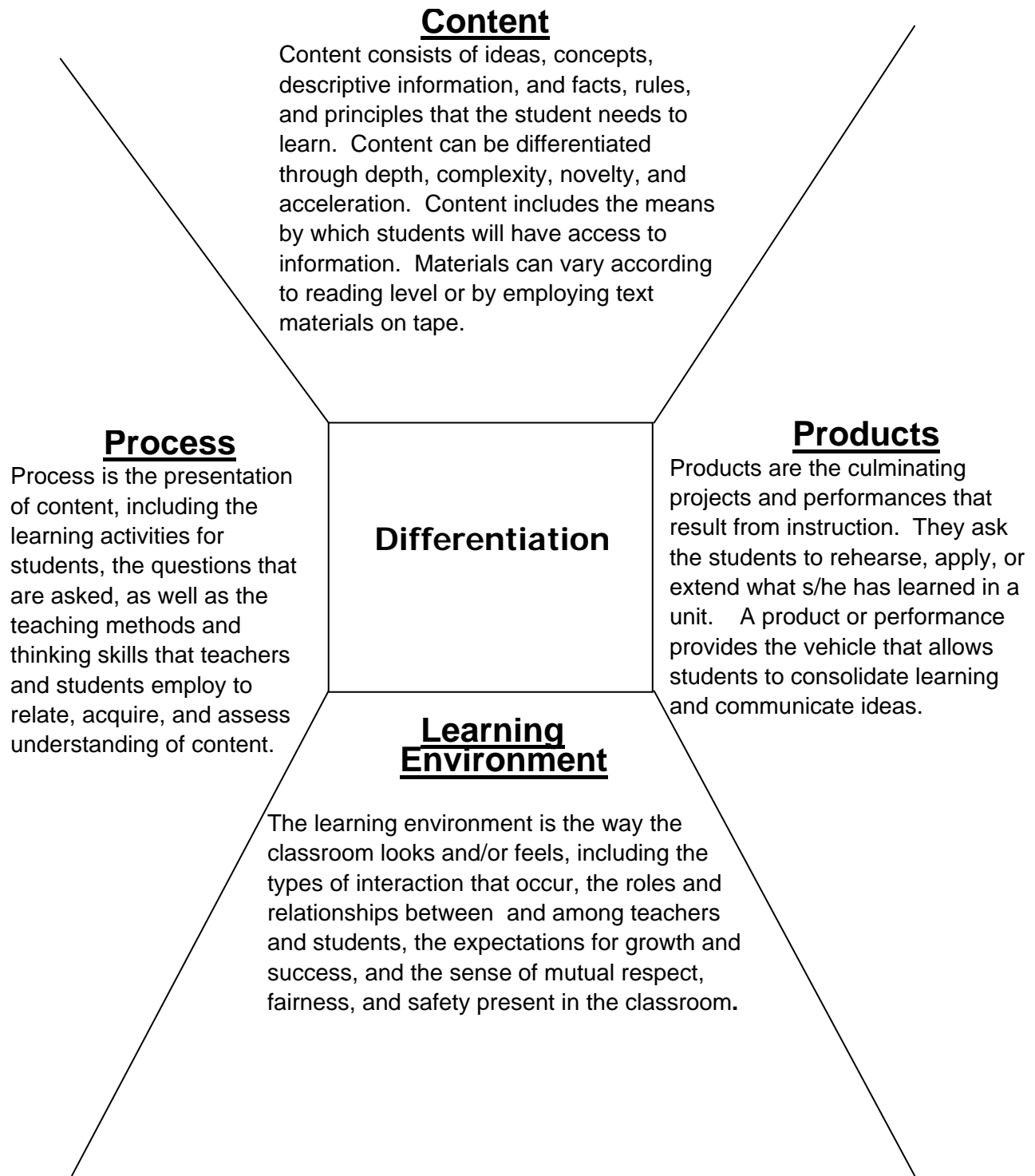
Some Underlying Assumptions of Differentiated Instruction

Read each assumption and assess your own "way of thinking about teaching" by marking the star if this assumption is implicit when planning instruction, the smiley face if you take this assumption into consideration in some way during planning and the question mark if you need to think about your practice in terms of this assumption.

The Underlying Assumption	☆	☺	?
1. When planning, I accommodate multiple and varied learning needs (social as well as cognitive), rather than attempting to accommodate them after student frustration or failure.			
2. I work to create and maintain a classroom community where students feel safe and valued as they are; at the same time I support each student in order to maximize his or her potential.			
3. I interact with each student with positive regard and positive expectations.			
4. I recognize every student has both talents and areas of need, and I emphasize the student's strengths rather than accentuating labels, deficits, or differences. At the same time, I do not call attention to the differentiation, but rather I help students appreciate varied ways in which all of them can find personal success with important goals.			
5. I use multiple and alternative forms of assessment at all stages of student learning in order to uncover and address a full range of learning needs and strengths.			
6. I gather and employ knowledge and information about my students in order to identify and address their varied readiness levels, interests, and learning profiles.			
7. I find ways to provide opportunities for all students to access meaningful and powerful ideas, information, and skills rather than reducing the standards, watering down the curriculum, or assigning busy work.			
8. I use multiple methods to engage students in active learning. Although I may employ whole-class instruction, I question and encourage student discussions and explanations to enrich and remediate throughout the instruction.			
9. I work to develop classroom management skills that allow 1) multiple tasks to proceed smoothly in the classroom, 2) students to take increasing responsibility for their learning, and 3) the time to monitor student activity and coach for student growth and quality work.			

Based on the work of Stephanie Corrigan, Utah Valley State College. Adapted and modified from "The Facilitator's Guide," *At Work in the Differentiated Classroom*, Alexandria: ASCD, 2001, 57-58.

What to Differentiate

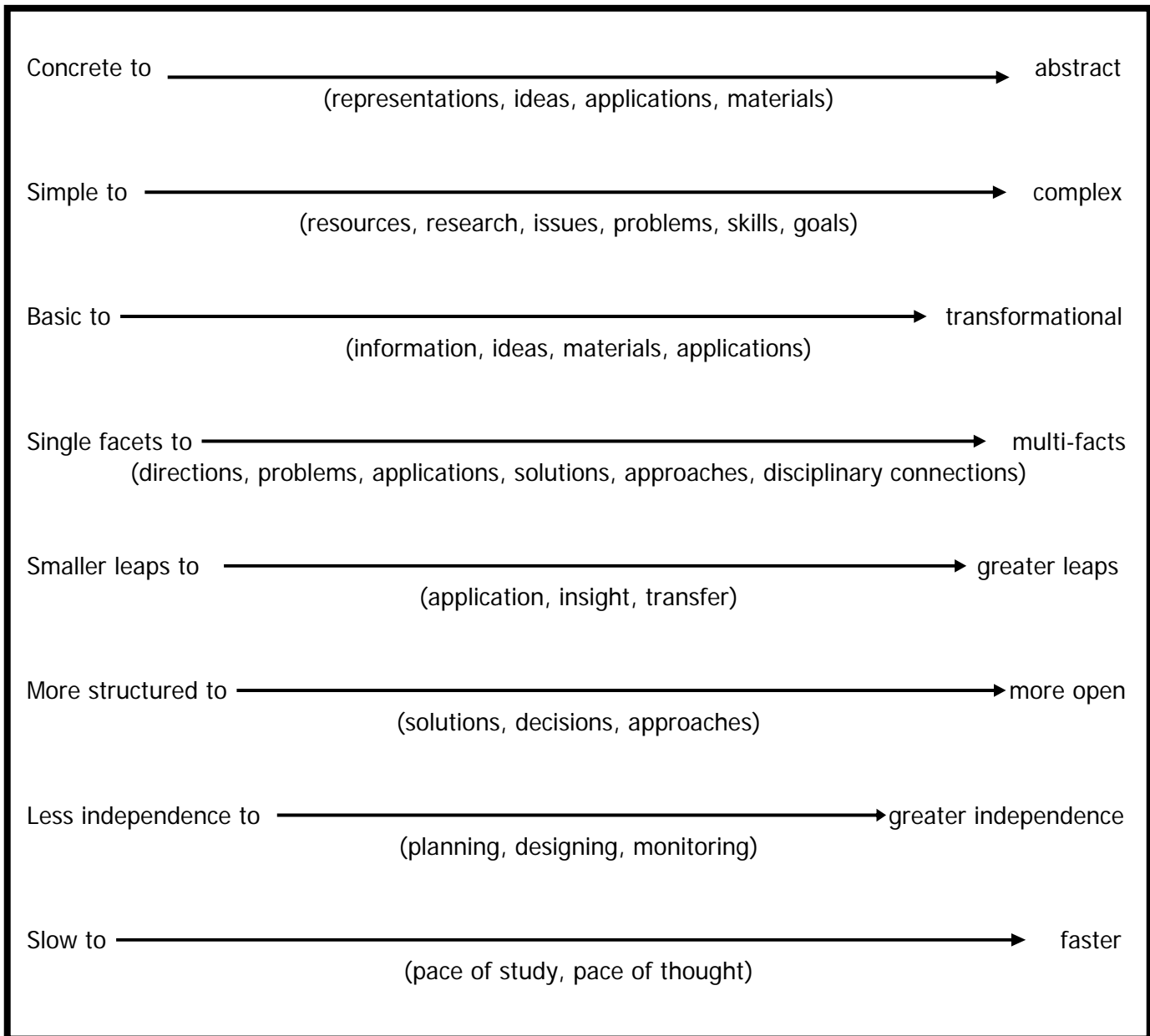


Strategies for Managing a Differentiated Classroom

Carol Ann Tomlinson

1. Have a strong rationale for differentiation instruction based on student readiness, interest, and learning profile.
2. Begin differentiating at a pace that is comfortable for you.
3. Time differentiated activities to support student success.
4. Use an “anchor activity” to free you up to focus your attention on your students.
5. Create and deliver instructions carefully
6. Assign students into groups or seating areas smoothly.
7. Have a “home base” for students.
8. Be sure students have a plan for getting help when you’re busy with another student or group.
9. Minimize noise.
10. Make a plan for students to turn in work.
11. Teach students to rearrange furniture.
12. Minimize “stray movement”.
13. Promote on-task behavior.
14. Have a plan for “quick finishers”.
15. Make a plan for “calling a halt”.
16. Give your students as much responsibility for their learning as possible.
17. Engage your students in talking about classroom procedures and group process.

The Equalizer



Tomlinson

What Does Differentiation Look Like: A True/False Quiz

Directions: Mark the item T if it is TRUE for a differentiated classroom or F if it is FALSE for a differentiated classroom. After you have responded individually, compare your answers to the others in your table group. When you disagree, discuss your various points and attempt to reach consensus.

- _____ 1. Allowing all students in the class to complete the same work for a unit/chapter.
- _____ 2. Assessing students before a unit of instruction to determine what they already know.
- _____ 3. Adjusting the **core** curriculum by content (below to above grade level),
- _____ 4. Limiting how and what is taught by teaching to the average student.
- _____ 5. Providing assignments tailored for students of different levels of achievement.
- _____ 6. Having high expectations for **ALL** students.
- _____ 7. Providing educational experiences which extend, replace, or supplement standard curriculum.
- _____ 8. Assigning more work at the same level to high achieving students.
- _____ 9. Focusing on student weaknesses and ignoring student strengths.
- _____ 10. Using activities that **all** students will be able to do.
- _____ 11. Structuring class assignments so they require high levels of critical thinking and allow for a range of responses.
- _____ 12. Giving the same kind of problems or questions and expecting more.
- _____ 13. Creating more work-extra credit, to do when done.
- _____ 14. Having students participating in respectful work.
- _____ 15. Putting students in situations where they don't know the answer often.
- _____ 16. Ensuring that students and teachers collaborating in learning.
- _____ 17. Providing free-time challenge activities.
- _____ 18. Differing the pace of instruction.
- _____ 19. Using capable students as tutors.

_____ 20. Using higher standards when grading.

_____ 21. Blending of whole class, group, and independent learning.

_____ 22. Using individualized instruction.

Redelivery Action Plan

Directions: Complete the following chart to create your individual plan for building a differentiated classroom. Consider the following:

- What am I already doing to differentiate?
- How can I assess and use student readiness, interests, and learning profiles to maximize learning growth for every student?
- How can I differentiate content, process, products, or the learning environment?
- How can I employ Tomlinson's Equalizer to create tiered assignments, activities, tasks, and products?

Step/Activity	Who	By When	How	Resources and Ideas

Student Scenarios for “Differentiation Stratego: A Reality Game” Cards

<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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?”</p>

<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>

<p>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.</p>	<p>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).</p>
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>

<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>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.</p>

