



GEORGIA
DEPARTMENT OF
EDUCATION

Kathy Cox, State Superintendent of Schools

**Training for the New Georgia
Performance Standards**

Day 6: Differentiation

**Content Facilitator's Guide
General Curriculum**

We will lead the nation in improving student achievement.

Acknowledgements

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

For more information on this or other GPS training, contact Gerald Boyd at (404) 656-0476 or gboyd@doe.k12.ga.us.

Use of This Guide

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

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Overview



Day 6

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

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

Module Sequence

Prior Preparation—Participants will have attended Days 1 through 5 of GPS training, or, if replacing another trainer, be thoroughly trained in the knowledge, skills, and conceptual understandings introduced in Days 1 through 5. In addition, teachers should 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 (1½ hours)

- Calvin's Day at School
- Defining Differentiation, An Introduction
- The Three Stages of Standards-Based Education, A Review
- Looking Inside Our Classrooms

The What, How, and Why of Differentiation (3½ hours)

- Overview of What, How, and Why of Differentiation
- Guided Practice Analyzing a Differentiated Task
- Differentiation Stratego: A Reality Game
- True/False Quiz: What Does Differentiation Look Like?

The Teacher's Role in a Differentiated Classroom (1 hour)

- Rethinking Our Roles
- Setting Personal Goals for Differentiating

**Module
Materials for
Day 6 of
Training****Content Facilitator's Kit contents:**

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

Other materials needed:

- Name tags
- Easel chart paper and stand
- Flipchart paper and stand
- A number of colored markers for flipchart
- Post-it Notes
- Masking tape to post chart paper
- Cards, with profiles of individual students or groups of students, for Differentiation Stratego

Equipment:

- Overhead projector or computer and LCD projector

**Days 4 and 5
Follow Up/ Day 6
Preparation**

Remind participants to complete the assigned reading as preparation for Day 6. Also remind each participant to bring a copy of the unit of instruction s/he is currently teaching OR a copy of a unit s/he has helped plan, as well as the notebook from Days 1 through 5 of training.

Recommended Readings/Viewings/Websites: Differentiation

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

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

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

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

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

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

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

"Interact Graphic Organizers." *Write Design Online*. zNet. <http://www.writedesignonline.com/organizers/>.

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

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

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

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

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

Renzulli Learning Systems: Free Trial. 2005. <http://students.renzullilearning.com/>.

This site, developed by Renzulli Learning Systems, provides comprehensive enrichment and differentiation activities for students. Beginning by determining an individual student's profile—interests, abilities, preferred style of expression, and learning style—this site then matches individual students with a number of enrichment and differentiation opportunities. Although the resource is still in the development stage, this URL offers teachers a free trial opportunity to navigate the site.

Rose, David H., and Meyer, A. *Teaching Every Student in the Digital Age: Universal Design for Learning*. Alexandria: ASCD, 2002.

This introduces a framework for utilizing technology to address the needs of all students and meet the challenges posed by high standards and increased student diversity.

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 provides a brief primer on differentiation, as well as nine differentiated units of instruction for grades 9-12: two language arts units, two mathematics units, one science unit, one social studies unit, one humanities unit, one visual arts unit, and one world language unit.

Specialists' Contact Information

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

English Language Learners

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

Gifted and Talented

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

For specialists at the Georgia Department of Education:

English Language Learners—Victoria Webbert

vwebbert@doe.k12.ga.us

Gifted and Talented—Dr. Sally Krisel

skrisel@doe.k12.ga.us

Exceptional Students (Special Education)—Deborah Keane

dkeane@doe.k12.ga.us

Agenda

This is a one-day course, with approximately 6 hours of instructional time.

Prior Preparation—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.
- Bring a copy of an instructional unit for a class you are currently teaching.

Introduction to Differentiation.....1½ hours

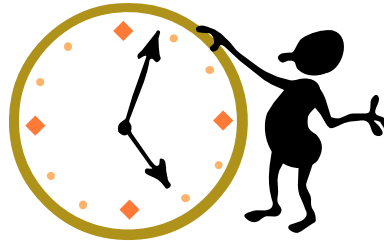
- Calvin's Day at School
- Defining Differentiation, An Introduction
- The Three Stages of Standards-Based Education, A Review
- Looking Inside Our Classrooms

The What, How, and Why of Differentiation.....3½ hours

- Overview of What, How, and Why of Differentiation
- Guided Practice Analyzing a Differentiated Task
- Differentiation Stratego: A Reality Game
- True/False Quiz: What Does Differentiation Look Like?

The Teacher's Role in a Differentiated Classroom.....1 hour

- Rethinking Our Roles
- Setting Personal Goals for Differentiating

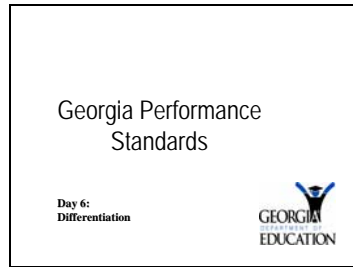


Introduction to Differentiation

Time	1½ hours
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">➤ Evaluate Calvin's Day at School➤ Share Preconceptions About Differentiation➤ Review Stages One, Two, and Three of SBE Process➤ Self-Evaluate
Materials	<ul style="list-style-type: none">➤ Overhead projector or computer and LCD projector➤ Transparencies or PowerPoint presentation➤ Participant's Guide

Calvin's Day at School

Title Slide Show title slide and welcome participants to training.



Announcement:
SAT Prep Online
Course

Announce:

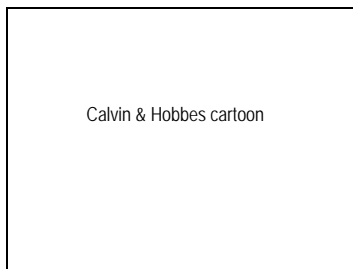
The Georgia Department of Education (GDOE) is pleased to announce the availability of the College Board's Official SAT Prep Online Course™ for all students in grades 9-12. The Online SAT Prep Course is another component of our continuing efforts to assist local systems in improving the quality of education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

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

Slide: *Calvin & Hobbes cartoon*

Show slide, *Calvin & Hobbes cartoon*.

[Trainer's Note: The digital file for this cartoon is too large to represent in Facilitator's Guide.]

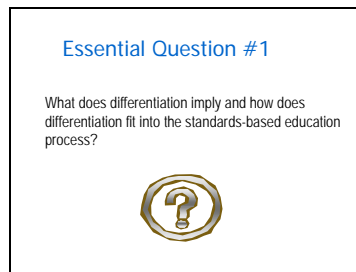


Present:

- **Let's take a minute to examine Calvin's day at school. What do you see? What general statements might we make about Calvin's day?** [Allow time for participants to respond.]
- **Does it appear that Calvin's educational needs are being met? Why or why not?** [Allow time for participants to respond.]

Slide: *Essential Question 1*

4. Show slide, Essential Question 1.



Defining Differentiation, An Introduction

1. Present:

- **In order to meet the needs of diverse learners in our classrooms, we must differentiate instruction to meet those needs. Let's take a minute to list some of the characteristics of diverse learners we have in our classrooms.** [List participants' responses on chart paper.]
- Expect or work to elicit responses such as:
 - advanced or gifted learners
 - struggling learners
 - English language learners
 - students with disabilities
 - students with varying degrees of experiences and/or prior knowledge
 - students with personal or family problems that inhibit their ability to learn
 - students with varying interests and/or attention spans.

2. Present:

- **As we can see from this list, the needs of the diverse learners we encounter in our classrooms each year, like Calvin's needs, can't be addressed with a "one size fits all" approach to teaching and learning.**
- **In today's workshop, we will be focusing on differentiation of instruction in order to address the needs of all students. But just what do we mean when we use the term *differentiation*? Let's take a few minutes to identify our preconceived notions of differentiation.**
- **In your table groups, brainstorm your ideas about differentiation then discuss your brainstormed lists. Be prepared to share your ideas with the whole group in 7-10 minutes.**
- Allow 7-10 minutes for the table groups to discuss, then ask each group to share their ideas.

3. Present:

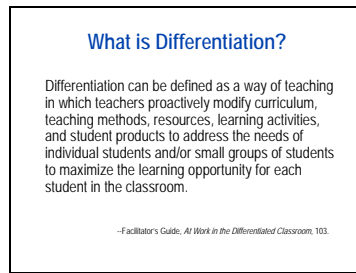
- **In the past few minutes we have touched on a number of ideas about diverse learners and differentiated instruction, and we will spend the remainder of today exploring many of these ideas. However, a thorough and comprehensive study of differentiation is beyond the scope of our workshop today. ASCD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

- **Let's take a look now at some of the experts' statements about differentiation.**

[Trainer's Note: Several of the activities in this module were designed for table-sized groups. However, depending on your group composition and facility, you may want to vary the grouping arrangements – time for individual reflection, think-pair-share, triads, small group, whole group, etc. Using a variety of grouping strategies would allow you to more effectively address the variety of learning styles in your group, as well as model a key principle of curriculum differentiation.]

Slide: *What is Differentiation?*

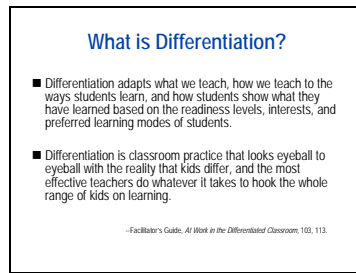
4. Show slide, *What is Differentiation?*



- Let's examine the key elements here:
"Differentiation can be defined as a way of teaching in which teachers proactively modify curriculum, teaching methods, resources, learning activities, and student products to address the needs of individual students and/or small groups of students to maximize the learning opportunity for each student in the classroom."
- **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.**
- **We make the conscious decision to offer multiple ways of learning and multiple means of providing evidence of learning that are based on our assessments of the needs of those students or groups of students in our classrooms, assessments that are continuous and ongoing.**

Slide: *What is Differentiation?*
(2nd with same title)

5. Show next slide, *What is Differentiation* (2nd with same title).

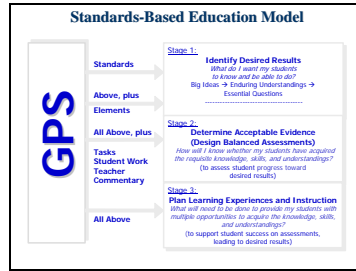


- **Assessment is the bedrock of a differentiated classroom. In order to meet the needs of individual students or groups of students, we must be cognizant of our students' prior knowledge and experiences, as well as of their readiness to learn those skills and concepts included in different units of instruction.**
 - **Because individual students have a variety of strengths and weaknesses, assessing readiness is continuous and ongoing. A student, for example, may read fluently and comprehend sophisticated texts but, at the same time, have difficulty communicating his/her ideas in writing.**
 - **We must also explore and address the individual interests of our students. As Wiggins and McTighe emphasize, engaging students is an essential step toward student learning; and tapping into the interests of our students is one way to hook them.**
 - **Finally, as we have discussed in our previous days of training, students learn and provide evidence of learning via different modalities. Knowing the learning styles and preferences of our students allows us to provide instruction and assessment opportunities that work best for those students.**
6. Transition: **I've just referred to what we've discussed on previous training days, but we may not all be at the same readiness level in terms of our prior knowledge and experience with the SBE process, so let's review that process before we move on.**

The Three Stages of Standards-Based Education, A Review

Slide: *The SBE Model*

1. Show slide, The Standards-Based Education Model.
[Trainer's Note: See next bullet for clicking instructions.]



- **How does all of this fit into the Standards-Based Education process? To answer this question, we need to review the stages of the standards-based education process.**
[Trainer's Note: Name each of the three stages and click to show that information on the slide.]
- **To review the stages of the SBE process, we're going to form peer groups based on prior knowledge and experience. I know some of you have been to all of the GPS training, Day 1 through today, Day 6; some of you have been to every session EXCEPT Day 1; some missed both Day 1 and Day 2; some attended for the first time for Days 4 and 5; and some of you may be new today.**
- **If today is your first day, raise your hand.** [Note any new participants and assign them to separate groups. The number of groups will depend on the total number of participants, but you will need to have a minimum of 3 groups.]
- **Now, raise your hand if you have been to all of the Days of GPS training.** [Divide these participants among the different groups.]

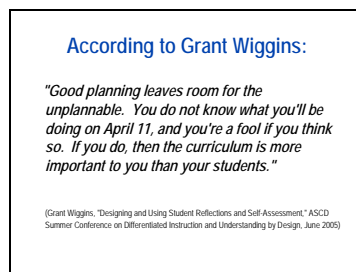
- Assign the remainder of the participants to a group according to the days of training they have attended. The goal is to create a number of groups equal in prior knowledge and experience.
2. Present:
- **In your groups, I'd like for you to review briefly the different stages of the SBE process.** [Assign each group a different stage. If you have more than 3 groups, have multiple groups assigned to a single stage.]
 - **You will have 10 minutes to review the essential information relevant to your assigned stage of the SBE process and to represent that information on chart paper. In 10 minutes, I'm going to ask you to share this essential information with the rest of the group.** [Designate wall space where charts can be posted in order: Stage One, Stage Two, and Stage Three.]
 - Allow 10 minutes for group work. Provide 5 and 1 minute warnings. Encourage participants to post work as they finish.
3. Ask group(s) that focused on Stage One to share their work, then summarize and ask: **What connections do you see to differentiation at this stage of the process?**
- Allow for responses, then say: **In their resource guides entitled, *Differentiation in Practice*, Carol Ann Tomlinson and Caroline Cunningham Eidson state, "There is no such thing as effective differentiation devoid of high-quality curriculum The teacher's first job is always to ensure that curriculum is coherent, important, inviting, and thoughtful. Then and only then does it make sense to differentiate that curriculum." The Georgia Performance Standards provide a high-quality curriculum for all learners.**

4. Ask group(s) that focused on Stage Two to share their work, then summarize and ask: **What connections do you see between assessment and differentiation?**
 - Allow for responses, then say: **Tomlinson and Eidson stress the connections between assessment and differentiation. They note that “everything a student says and does is a potential source of assessment”; assessment is ongoing. First we must pre-assess to determine a student’s “knowledge, understanding, and skill set related to an upcoming unit or lesson” because it’s “critical for the teacher in a differentiated classroom to have a sense of student starting points.” Tomlinson and Eidson specify that assessment must also occur throughout the unit to continuously figure out a student’s knowledge, understanding, and skill set as s/he progresses through the unit; and final assessments should involve more than one format, for example, a product as well as a test or essay.**

5. Ask group(s) that focused on Stage Three to share their work, then summarize and ask: **Does differentiation also play a part in Stage Three: Making Instructional Decisions? How?**
 - Allow for responses, then say: **As we saw from Rick Stiggins’ work, assessment *for* learning means using assessment to make instructional decisions. We plan instruction based on what we find out each day about our students’ progress toward the learning goals.**

Slide: *Grant Wiggins’ quotation*

6. Show slide, *Grant Wiggins’ quotation*.



7. Present:

- **At the ASCD conference on differentiation held in New York the last week of June this year, Grant Wiggins stated that *"Good planning leaves room for the unplannable. You do not know what you'll be doing on April 11, and you're a fool if you think so. If you do, then the curriculum is more important to you than your students."***
- **Wiggins may be exaggerating; he certainly advocates using the SBE model to plan instruction at the course and unit levels, so he's not saying we shouldn't plan. However, the message here is clear: in a differentiated classroom, teachers intervene and adjust instruction to meet the needs of the learners in that classroom; and that means using feedback from Monday's class to determine exactly what I need to do on Tuesday. Therefore, I will plan instruction carefully, but I must be willing to modify those plans to meet the needs of the students each day in my classroom.**

8. Transition: **So far we've been speaking theoretically about differentiation. Before we move on to the what, how, and why of differentiating on a practical level, let's each apply some basic assumptions underlying differentiated instruction to our own classroom practices.**

Looking Inside Our Classrooms

1. Present:

- **As stated previously, establishing a differentiated classroom is a way of thinking about teaching. Most teachers are already at work implementing the Georgia Performance Standards in their classrooms. As instructional leaders, you've worked with them to identify the learning goals for a unit of instruction, prepare an assessment plan, and make instructional decisions. Now let's take a minute to pre-assess teachers' readiness for differentiation. Let's use this activity to look inside classrooms in your schools to see where your teachers are before you determine where they need to go and how you're going to help them get there.**
- **You'll need the copy of a plan for a unit of instruction that you brought with you and the list of "Some Underlying Assumptions of Differentiated Instruction" (PG-7). If you didn't bring a copy of a unit plan, just respond with a particular unit of instruction in mind.**
- **Read each assumption and, based on what you see in the unit, assess what appears to be your teachers' "way of thinking about teaching" by marking the star if this assumption is implicit in their practice throughout the unit, the smiley face if they've taken this assumption into consideration in some way for this unit, and the question mark if you need more information about your teachers' practice in terms of this assumption. You have approximately 10 minutes for this activity.**

Participants' Unit Plans;
PG-7: "Some Underlying Assumptions of Differentiated Instruction"

[Trainer's Note: This activity has been modified so that curriculum and special education directors can evaluate units that are being developed by teachers with whom they work, thus identifying areas in which they may need to provide additional support. If the activity is redelivered to a teacher group, participants will assess one of their own units.]

Some Underlying Assumptions of Differentiated Instruction (PG-7)

Read each assumption and assess your own "way of thinking about teaching" by marking the star if this assumption is implicit in your practice throughout the unit, the smiley face if you've taken this assumption into consideration in some way for this unit, and the question mark if you need to think about your practice in terms of this assumption.

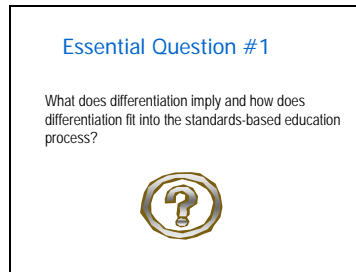
The Underlying Assumption	☆	😊	?
1. I have planned this unit to accommodate multiple and varied learning needs (social as well as cognitive), rather than attempting to accommodate them after student frustration or failure.			
2. I work to create and maintain a classroom community where students feel safe 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 this unit 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 during this unit.			
7. I find ways to provide access for all students to meaningful and powerful ideas, information, and skills in this unit rather than reducing the standards, watering down the curriculum, or assigning busy work.			
8. I use multiple methods in this unit to engage students in active learning. Although I may employ whole-class instruction, I know that differentiation does not take place during whole class 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.			
10. I accept responsibility for successful teaching and learning of each student in the class while working collaboratively with specialists to ensure success of individuals and the class as a whole.			

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

2. 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 looked at earlier this morning.**
3. Ask: **What are the important points that you have learned about differentiation so far?** [Allow participants to share what they've learned. Use this to summarize important points about differentiation before moving on to the next section of the training.]

Slide: *Essential Question #1*

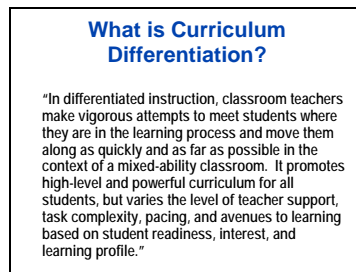
4. Show slide, Essential Question #1.



- **We began our exploration of differentiation with this essential question.**
- **I'd like to conclude this section with a couple of additional points stressed by Carol Ann Tomlinson and others.**

Slide: *What is Curriculum Differentiation?*

5. Show slide, What is Curriculum Differentiation?

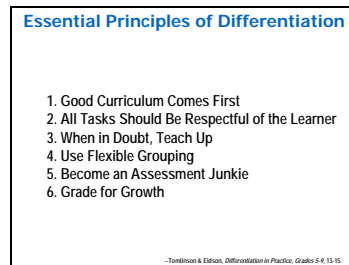


6. Present:

- **As Tomlinson makes clear, differentiation involves beginning where our students are; however, as we all know, our students may not all be at the same place at the same time.**
- **To differentiate effectively, Tomlinson and Eidson advocate six essential principles to guide our decision making.**

Slide: *Essential Principles of Differentiation*

7. Show slide: Essential Principles of Differentiation.



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

The What, How, and Why of Differentiation

Time 3½ hours

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

- Explain key elements in planning for differentiation.
- Describe and develop procedures for differentiating instruction in a flexible classroom.

Activities

- Overview of What, How, and Why of Differentiation
- Guided Practice Analyzing a Differentiated Task
- Differentiation Stratego: A Reality Game
- True/False Quiz: What Does Differentiation Look Like?

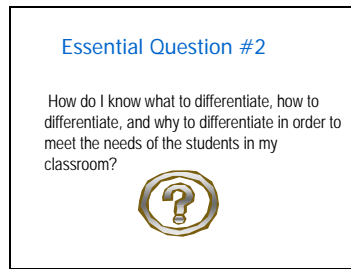
Materials

- Chart paper and markers
- Transparencies or PowerPoint presentation
- Participant's Guide
- Cards, with profiles of individual students or groups of students, for Differentiation Stratego

Overview of What, How, and Why of Differentiation

Slide: *Essential Question 2*

1. Show slide: Essential Question 2.



[Trainer's Note: This section contains a great deal of information. Plan so that sufficient time is allotted for the application of this information in the Guided Practice and Differentiation Stratego: A Reality Game. Several of the handouts included in the appendix to the Participant's Guide and copied in the Facilitator's Guide can be noted as resources without going into detail.]

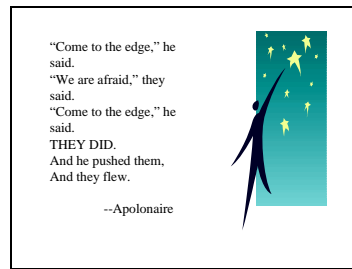
2. Present:

- **Differentiating in a mixed-ability classroom involves a complex process. It's not as simple as deciding to differentiate and "voilà," the next day or week or semester we've accomplished our goal.**
- **We need to help teachers work toward a more differentiated classroom one day at a time. As with all journeys, this one begins with the first step. Coming together to talk in a collegial way about differentiation is that first step.**
- **In this section of today's workshop, we will look at a number of aspects of differentiation that will help us work with teachers so that they are better prepared to make informed decisions about differentiating in their classrooms.**

3. Present:
- **Each day when teachers enter their individual classrooms, they encounter students with diverse needs, abilities, and interests. Think for a moment about the students sitting in your teachers' classrooms today. Providing each of those students access to a rigorous curriculum and opportunity for growth is our goal.**
 - **This, however, does not mean teachers must individualize instruction for every student. Rather it means that, with your help, they must plan for the diverse groups of students they meet each day.**
 - **Children already come to school differentiated. Students in today's classrooms represent a broad range of academic readiness, interests, learning profiles, modes of learning, and cultures.**
 - **To maximize the potential for each learner, educators need to meet each child at his or her starting point and ensure substantial growth during each school term. Sometimes that means pushing our students beyond their comfort zones.**

Slide: *Come to the edge.*

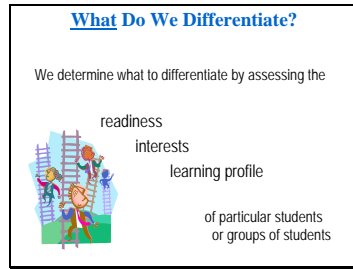
4. Show slide: Come to the edge.



5. Present:

- **The words of Apolonaire have particular significance both for the students we teach and for ourselves as teachers and instructional leaders.**
- **For most of us, differentiating in a mixed-ability classroom offers a challenge that brings with it moments of fear and uncertainty.**
- **Real growth occurs when we move to the edge of what we know and are able to do, don wings, and fly into new territory.**
- **How well we fly, however, depends on those wings. In this section we're going to construct metaphorical wings that will allow us to soar into the realm of differentiation.**
- **Similarly, real student growth occurs when we encourage our students to move to the edge of what they know and are able to do—the zone of proximal development—help them build their wings, and then gently push them off the edge so that they can fly.**
- **In order to help our students fly, we must first determine how best to help them build their wings.**

Slide: *What Do We Differentiate?* 5. Show slide: What Do We Differentiate.

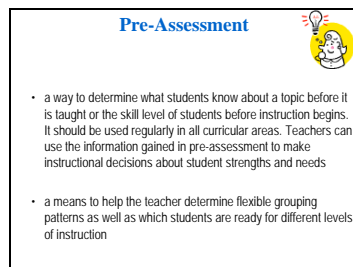


6. Present:

- **To determine a student's readiness to learn, teachers must assess the student's abilities, prior knowledge, and experiences.**
- **To determine a student's interests teachers must take the time to find out that student's likes and dislikes, what s/he spends time doing outside the classroom, and what piques that student's desire to learn.**
- **To determine a student's learning profile, teachers must analyze that student's learning style in order to discover the most effective ways the student learns as well as the best ways for that student to provide evidence of learning and to convey understanding.**
- **Teachers determine a student's readiness, interests, and learning profile through assessment. Initially this means pre-assessing their students.**

Slide: *Pre-Assessment*

7. Show slide: Pre-Assessment.




8. Present:

PG-8: Range of Activities in a Differentiated Classroom

- **Pre-assessment allows teachers to make the appropriate instructional decisions for each of their students. It also helps them to decide how to use flexible grouping to maximize learning.**
- **Tomlinson uses a chart to illustrate the range of activities in a differentiated classroom. This chart is reproduced on page 8 of your Participant's Guide [FG-37].**
- **In a differentiated classroom, students work in a variety of instructional arrangements, some whole class, some small group, some individual, and some student-teacher conferences.**
- **At times groups may be formed with students of similar levels of readiness, interests, or learning styles; other times groups may be made up of individuals with a range of abilities, interests, or learning styles.**
- **Most importantly, the constitution of these groups changes throughout a unit or course of study based on the needs and/or growth of the students. Flexible grouping is an integral part of a differentiated classroom. Tomlinson and Eidson define flexible grouping as the "purposeful reordering of students into working groups to ensure that all students work with a wide variety of classmates and in a wide range of contexts during a relatively short span of time" (*Differentiation in Practice, Grades 5-9, 235*).**
- **Pre-assessment helps teachers to determine the most effective activity formats and/or groups for particular purposes and to meet the needs of the diverse learners in the class.**

Slide: *Pre-Assessment Strategies*

9. Show slide: Pre-Assessment Strategies.

Pre-Assessment Strategies	
<ul style="list-style-type: none">✓ teacher prepared pretest✓ KWL charts and other graphic organizers✓ writing prompts/samples✓ Questioning✓ guess box✓ picture interpretation✓ prediction✓ teacher observation/checklists✓ student demonstrations and discussions✓ initiating activities✓ informational surveys/questionnaires/inventories	<ul style="list-style-type: none">✓ student interviews✓ student products and work samples✓ self-evaluations✓ portfolio analysis✓ game activities✓ show of hands to determine understanding: every pupil response✓ drawing related to topic or content✓ standardized test information✓ reader response survey✓ anticipation journals 

10. Present:

PG-9: *Pre-Assessment Strategies*

- **This slide lists a number of pre-assessment strategies.**
- **You can find this list on page 9 of the Participant's Guide as well.**
- **As you can see, testing is but one way to pre-assess.**
- **Assessing certain students or groups of students such as English Language Learners (ELLs) and learners with special needs often requires specific knowledge and skills. Our focus for today, however, is on differentiating in the mixed-ability classroom.**
- **While all classroom teachers work with diverse populations, including English language learners and students with special needs, specialists are available at the school, system, or state level to assist in these areas. For specialists' contact information, see page 6 in the Participant's Guide.**

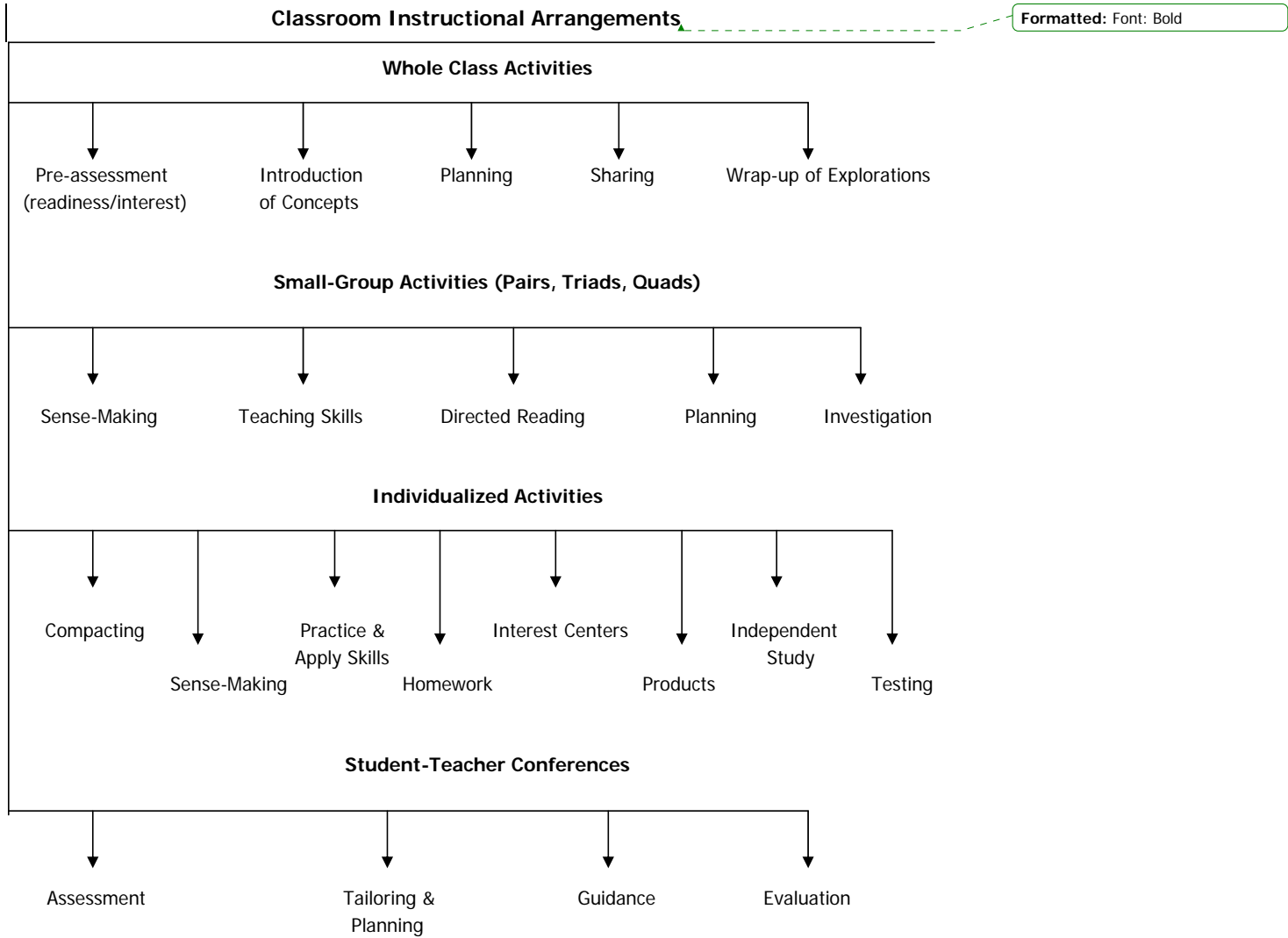
[Facilitator's Guide, page 11]

- **A few resources related to English language learners and students with special needs are included in the appendix to the Participant's Guide. These include an overview of the factors involved in assessing English language learners, a list of instructional accommodations for ELLs, and a differentiation menu for students with special needs.**

[Trainer's Note: These resources are also included in the appendix to the Facilitator's Guide. The DOE Gifted Education Specialist is currently working on a Differentiation Guide for high-ability students. This document will provide more details on how teachers might differentiate GPS tasks to make them more challenging for advanced students and numerous examples of differentiated tasks.]

- **Finally, assessment is ongoing throughout any unit of instruction. Effective teachers don't make differentiation decisions one time and move on. Differentiation is ongoing and guided by continuous assessment.**

Range of Activities in a Differentiated Classroom (PG-8)



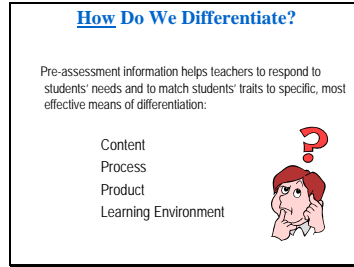
Carol Ann Tomlinson, *How to Differentiate in Mixed-Ability Classrooms*, 2nd ed., Alexandria: ASCD, 2001, 25.

Pre-Assessment Strategies (PG-9)

- ✓ **teacher prepared pretest**
- ✓ **KWL charts and other graphic organizers**
- ✓ **writing prompts/samples**
- ✓ **questioning**
- ✓ **guess box**
- ✓ **picture interpretation**
- ✓ **prediction**
- ✓ **teacher observation/checklists**
- ✓ **student demonstrations and discussions**
- ✓ **initiating activities**
- ✓ **informational surveys/questionnaires/inventories**
- ✓ **student interviews**
- ✓ **student products and work samples**
- ✓ **self-evaluations**
- ✓ **portfolio analysis**
- ✓ **game activities**
- ✓ **show of hands to determine understanding: every pupil response**
- ✓ **drawing related to topic or content**
- ✓ **standardized test information**
- ✓ **reader response survey**
- ✓ **anticipation journals**

Slide: *How Do We Differentiate?*

- 11. Show slide: How Do We Differentiate?

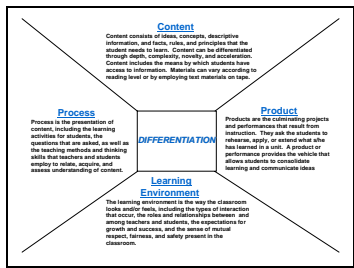


- 12. Present:

➤ **In order to decide how to differentiate, we need to look at the four most effective means of differentiating.**

Slide: *How to Differentiate*

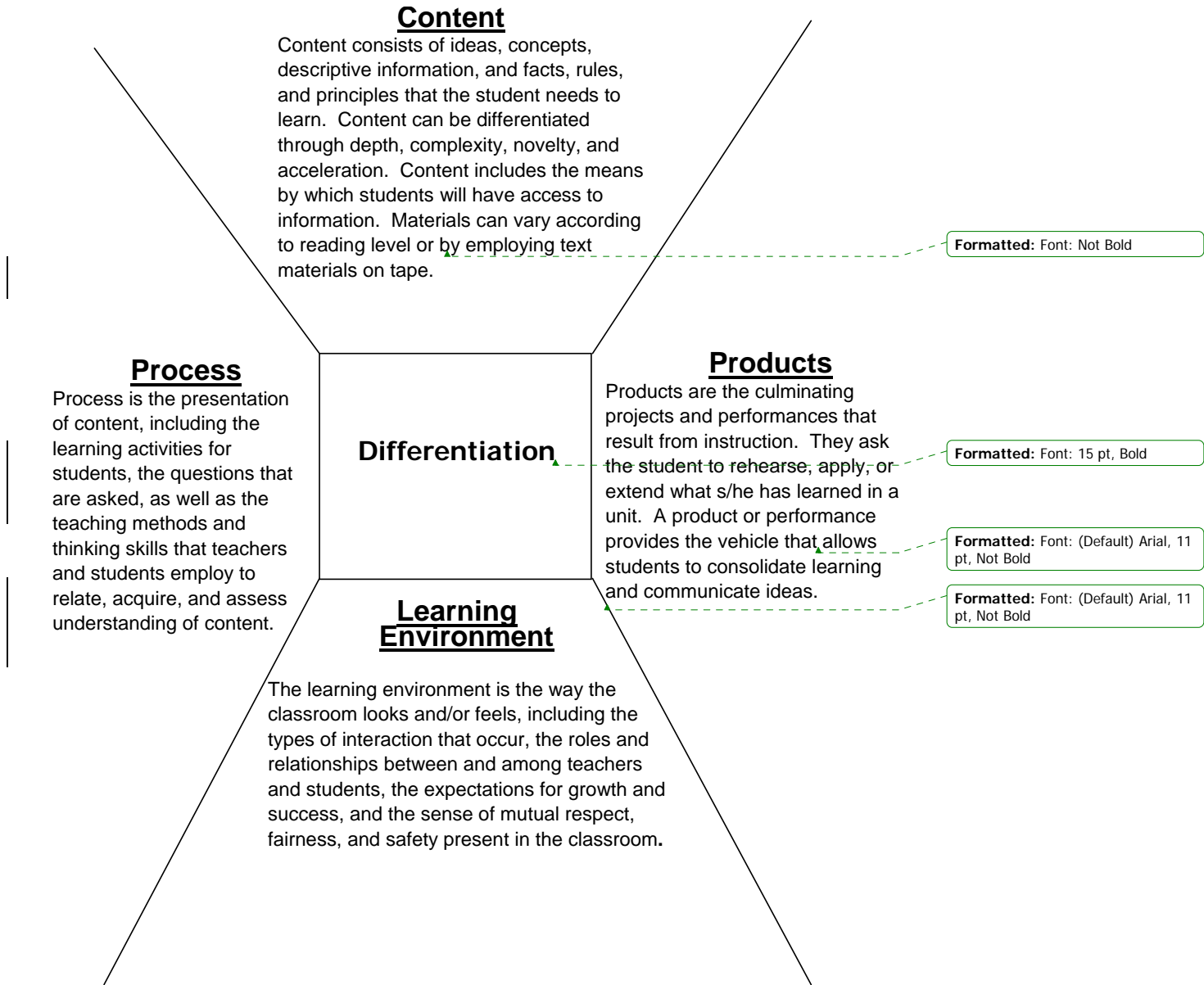
- 13. Show slide: How to Differentiate. [Trainer's Note: Click to reveal each of the four means of differentiation, one at a time.]



PG- 10: *Content, Process, Product, Learning Environment*

➤ **The content of this slide is also on page 10 of the Participant's Guide.**

How to Differentiate (PG-10)



14. Present:

- **Let's take a closer look at each of these four means of differentiating.**
- **Time does not allow us to discuss all the possible differentiation strategies; however, a glossary of many of these strategies is provided in the Participant's Guide (PG – 28).**

[Trainer's Note: The Facilitator's Guide has this glossary as well (FG – 79).]

Slide: *Content*

15. Show slide: Content. [Trainer's Note: Present the information from each slide and ask participants to suggest additional strategies for each before going on to the next.]

Content

Content consists of ideas, concepts, descriptive information, and facts, rules, and principles that are presented to the learner. Content can be differentiated through depth, complexity, novelty, and acceleration.

Examples of differentiating content at the elementary level include the following:

- using reading materials at varying readability levels
 - pulling text materials on tape
 - using spelling or vocabulary lists at readiness levels of students
 - meeting with small groups to re-teach on ideas or skill for struggling learners, or to extend the thinking or skills of advanced learners

(Tomlinson, C.A. Differentiation of Instruction in the Elementary Grades, August 2000)

Some Strategies for Differentiating Content

Readiness/reading	Concept based teaching	Learning Contracts	Multiple tests and supplementary	Small group
Learning Styles and Multiple Intelligences	Interest based mini-lessons	Curriculum compacting	Technology	Varying rate of learning and complexity

Slide: *Process*

16. Show slide: Process.

Process

Process is the presentation of content, including the learning activities for students, the questions that are asked, as well as the teaching methods and thinking skills that are used.

Examples of differentiating process or activities at the elementary level include the following:

- using hand activities through which all learners work with the same important understandings and skills, but proceed with different levels of support, challenge, or complexity
- providing interest centers that encourage students to explore subsets of the class topic of particular interest to them
- developing personal agendas (task lists written by the teacher and containing both in common work for the whole class and work that addresses individual needs of learners) to be completed either during specified agenda time or as students complete other work early
- offering manipulatives or other hands-on supports for students who need them
- varying the length of time a student may take to complete a task in order to provide additional support for a struggling learner or to encourage an advanced learner to pursue a topic in greater depth

(Tomlinson, C.A. Differentiation of Instruction in the Elementary Grades, August 2000)

Some Strategies for Differentiating Process

Student Choice	Themed Curriculum	Clustering	Learning Stations	Similar Readiness Grouping
Mixed Readiness Grouping	Learning Contracts	Choice of Work Arrangement	Anchor Activities	Varied Journal Prompts

Slide: *Products*

17. Show slide: Products

Products

Products are the outcomes of instruction that consolidate learning and communicate ideas. Examples of differentiating products at the elementary level include the following:

- giving students options of how to express required learning in their preferred learning style (e.g. create a puppet show, write a letter, develop a mural with labels, etc.)
- using rubrics that match and extend students' varied skills levels.
- allowing students to work alone or in small groups on their products.
- encouraging students to create their own product assignments as long as the assignments contain required elements.

(Tomlinson, C.A., Differentiation of Instruction in the Elementary Grades, August 2000)

Some Strategies for Differentiating Products

Tiered products	Student choice	Interest-based investigations	Independent study	Mentors
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18. Note: **Two, more comprehensive lists of products are provided in the appendix to the Participant's Guide (PG 45-47).**

[Trainer's Note: These lists are in the appendix to the Facilitator's Guide as well (FG 93-95.)

Slide: *Learning Environment*

19. Show slide: Learning Environment.

Learning Environment

The learning environment is the way the classroom looks and/or feels, including the types of interaction that occur, the roles and relationships between and among teachers and students, the expectations for growth and success, and the sense of mutual respect, fairness, and safety present in the classroom.

Examples of differentiating learning environment at the elementary level include:

- Making sure there are places in the room to work quietly and without distraction as well as places that invite student collaboration.
- Providing materials that reflect a variety of cultures and home settings.
- Setting out clear guidelines for independent work that matches individual results.
- Invitinging routines that allow students to get help when teachers are busy with other students and cannot help them immediately.
- Helping students understand that some learners need to move around to learn, while others do better sitting quietly.

(Tomlinson, C.A., Differentiation of Instruction in the Elementary Grades, August 2000)

Some Strategies for Differentiating Products

Class Meetings	Shared Decision Making	Response Journals	Responsibility for Learning	Established Partners
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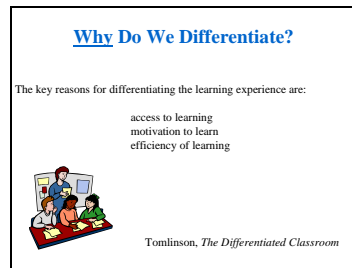
20. Present:

- **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 be operating at any one time.**
- **Consequently, it is imperative to have classroom protocols in place for everything from what to do upon first entering the classroom, to how to move from activity to activity, to what students do if they finish early.**
- **Tape 2 of the ASCD set entitled *At Work in the Differentiated Classroom* focuses on classroom management. The DOE will be providing each system and each RESA with a set of these materials, and we recommend that you (a) view this tape to learn more about classroom management in a differentiated classroom and (b) design professional learning activities to share that information with your teachers.**

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

Slide: Why Do We Differentiate?

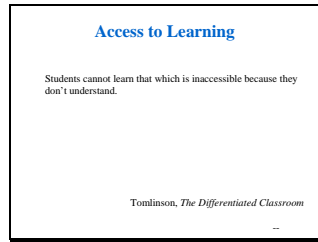
22. Show slide: Why Do We Differentiate?



[Trainer's Note: Show each of the next three slides and review the information on each.]

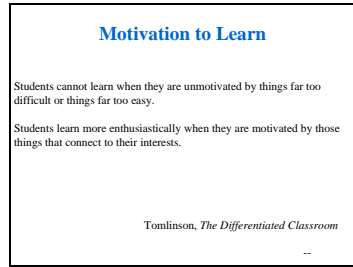
Slide: *Access to Learning*

23. Show slide: Access to Learning.



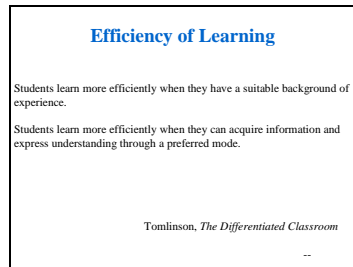
Slide: *Motivation to Learn*

24. Show slide: Motivation to Learn.

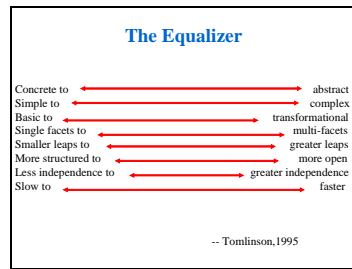


Slide: *Efficiency of Learning*

25. Show slide: Efficiency of Learning.



Slide: *The Equalizer* 26. Show slide: The Equalizer.



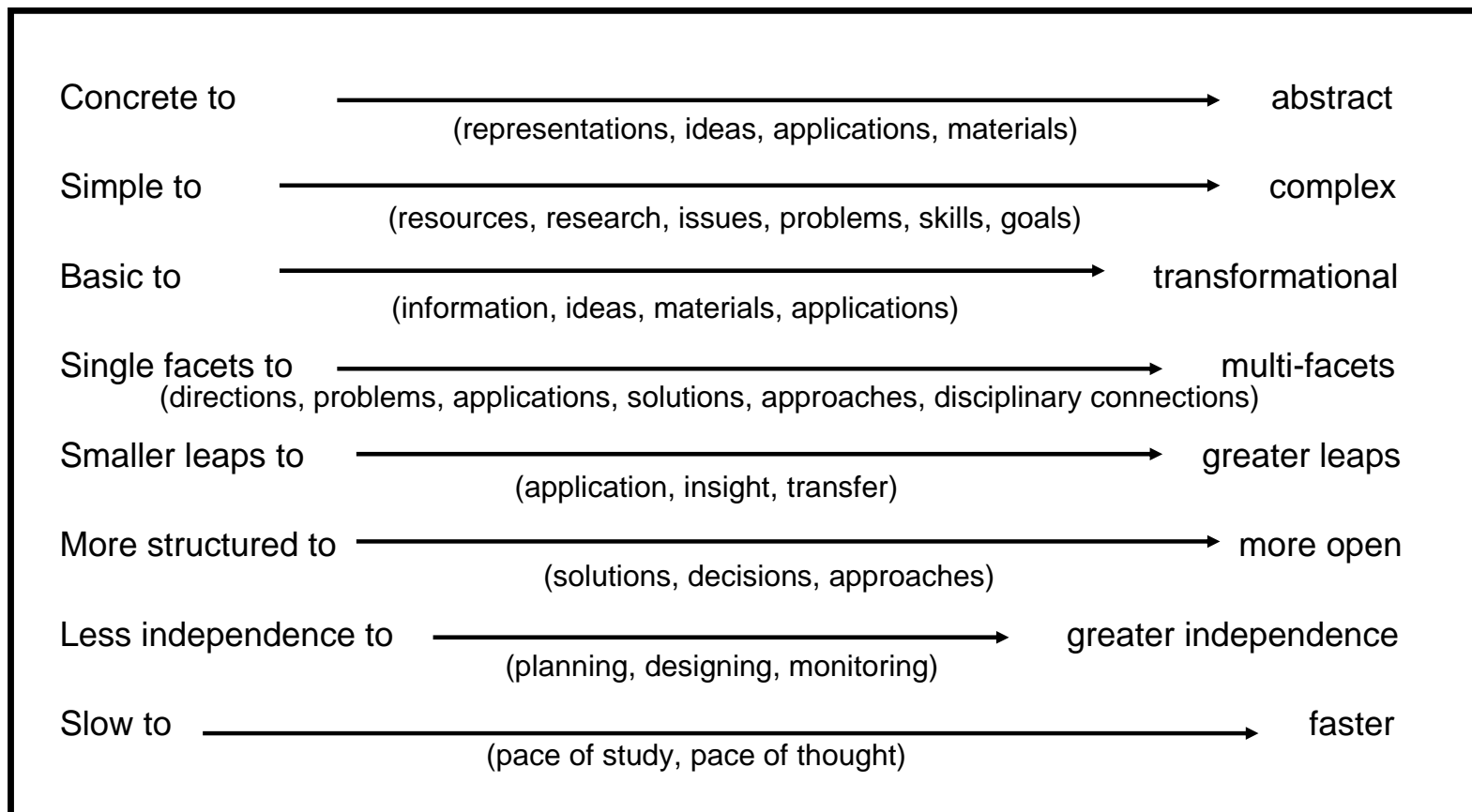
27. Present:

- **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).**
- **“For example, if students in a math class are working with measurement, their teacher might ask them to measure the surface area of a desk. If the teacher asks students having difficulty with measurement to measure the surface area of their bedroom floors as a homework assignment, that task, on the Equalizer, would be relatively ‘foundational’ [basic]—that is, similar to the familiar, in-class task. If on the other hand, the teacher finds that some students have a solid grasp of the in-class task, the teacher might assign homework asking them to develop a plan for measuring the surface area of a tree. That task is much more ‘transformational’—or unfamiliar. In this way, both groups of students can continue to advance their ability to measure surface area, but at appropriately different degrees of difficulty” (235).**

28. Present:

- **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.
- **You can find this Equalizer on page 11 of your Participant's Guide.**
- **In a differentiated classroom, our goal is to find just the right balance between success and effort . . . for ALL children. Students who consistently fail lose their motivation to learn. Students who succeed too easily also lose their motivation to learn and are at risk for falling victim to the twin threats of lethargy and perfectionism. We can use the continua on the Equalizer to think of a variety of ways to adjust the "Effort-Success Ratio."**

PG-11: *The Equalizer*

The Equalizer (PG-11)

Tomlinson, 1995

Guided Practice: Analyzing a Differentiated Task

Slide: *Guided Practice*

29. Show slide: Guided Practice.

Guided Practice

THE TASK: In your table groups, analyze the differentiated tasks provided on the Guided Practice handout (PG-12).

THE TOOLS: *How* do we differentiate—content, process, product, learning environment; *Why* do we differentiate—access, motivation, efficiency; *The Equalizer*.

THE TIME: 15 minutes and then group share.

30. Present:

PG-12: *Guided Practice*

- **Now it's time to begin to apply what we've learned about differentiation. On pages 12 - 21 of the Participant's Guide, you will find several standards and elements along with a suggested task. In addition, the handout includes differentiated tasks for each set of standard/element(s)/suggested task.**
- **Your job is to analyze these differentiated tasks to determine how they have been differentiated [content, process, product, environment] as well as the facets of the tasks that have been differentiated [the continua on the Equalizer].**
- **Is the content different? If so how?**
- **Are the processes different? If so how?**
- **Are the products different? If so how?**
- **Is the learning environment different? If so how?**
- **How might these differentiated tasks address the whys of differentiation: access, motivation, and efficiency?**
- **What continua on the Equalizer do you see differentiated?**
- **You will have approximately 15 minutes in your table groups to analyze these differentiated tasks. At the end of that time, you will share your analyses with the whole group.**

[Facilitator's Note: If time allows, each group may analyze several of the examples. Or you may divide the tasks and allow each group to discuss only one. Several are provided to allow instructional leaders to see the tasks with which their content area representatives are working.]

- Provide 5 and 2 minute warnings. At the end of the allotted time, ask table groups to share their analyses. Discuss possible reasons for any different conclusions.

Guided Practice (PG-12)**Example 1: Secondary English Language Arts**

ELA10RL3 The student deepens understanding of literary works by relating them to contemporary context or historical background, as well as to works from other time periods. The student

- a. Relates a literary work to non-literary documents and/or other texts from its literary period.
- b. Relates a literary work to non-literary documents and/or other texts relevant to its historical setting.

Sample Task for ELA10RL3

The student researches an archetypal story (e.g., Cinderella, or Little Red Riding Hood) as it changes over time and across cultures, relates the various versions to their contemporary contexts and/or historical backgrounds, classifies the various versions as to their purpose (e.g., to entertain, to instruct, to promote/support cultural or societal values) then presents the results of this research in a verbal or written form.

The Differentiated Tasks:

1. Using a teacher-prepared graphic organizer, the student works with two peers to analyze the characters and events in three, pre-selected versions of an archetypal story (e.g., Cinderella, or Little Red Riding Hood). Still working in the group, the student matches these stories to three historical and/or cultural scenarios provided in his/her learning packet. Each student in the group then takes one of the stories and explains to the others why it is representative of the period or culture in the chosen scenario. Next, the students determine the purpose of each of the three stories (e.g., to entertain, to instruct, to promote/support cultural or societal values). Finally, each student individually rewrites one of the stories so that it reflects one or more characteristics of the time and place in which s/he lives.
2. The student meets with two peers, and each selects three different versions of the same story from a number of versions provided by the teacher. Each student then uses a number of resources provided by the teacher to research the time and place of production for each of his/her versions of the story. The students then meet together to select from several sample graphic organizers the one that can best represent the connections between the stories they read and the results of their research. Next the students categorize all their stories according to purpose (e.g., to entertain, to instruct, to promote/support cultural or societal values) and specify the reason(s) why each story best fits in the specified category. Finally, each student composes a dialogue between a character or characters from two different versions of the story; this dialogue should

demonstrate the student's understanding of the cultural and/or historical differences between the two versions of the story.

3. The student independently researches an archetypal story (e.g., Cinderella, or Little Red Riding Hood) in three different versions that s/he selects. These versions may be from different time periods or from different parts of the world. The student then prepares an original chart or diagram to compare and contrast the major elements of each story. Next, the student researches the time and place in which each of the stories was written. The student then meets with two peers to discuss connections between the time and place of their stories' production and the differing characteristics of the stories, including the reasons why each was written (e.g., to entertain, to instruct, to promote/support cultural or societal values). Finally, each student focuses on one or more characters from the story s/he researched and creates a cartoon or a comic strip that parodies some event from the time in which s/he lives.

Example 2: Seventh-grade Science**S7L3: Students will recognize how biological traits are passed on to successive generations.**

- a. Explain the role of genes and chromosomes in the process of inheriting a specific trait.

Sample Task for S7L3: Scientists have found that certain traits tend to be more dominant than others. Some traits are dominant and others are recessive. A dominant trait has a greater probability of showing up in successive generations. Gregor Mendel studied peas and used charts to explain his findings. Research Mendel and other individuals who study genetics to find out more about their findings. Also, include an explanation of how Punnett squares can be used to explain the probability of inheriting a specific trait. Present the results of your research in verbal or written form.

The Differentiated Tasks:

1. The student independently researches the work of Gregor Mendel and other scientists that have contributed to the study of genetics. The student prepares a report highlighting the contributions of these scientists and presents the research in the form of a power point presentation to his/her peers. The student prepares several examples of Punnett squares and illustrates how they can be used to reveal inherited traits and probabilities of offspring. Then, each student will design another project designed to explore some aspect of genetics in which he/she has developed an interest in greater depth. The students will submit a project proposal to the teacher. Each student will be responsible for determining the assessment criteria for the project and developing a rubric to be approved by the instructor.
2. Using a student generated graphic organizer, the pupil will work with two peers to compare the contributions of Gregor Mendel to two other scientists in the field of genetics. Each student will choose one scientist and prepare a report to present to the class. The students will also be given several Punnett square scenarios to determine the likelihood of a receiving a particular trait. Then, the student will prepare a science fiction story about the passing of traits to successive generations. Students will use the fictional stories to create a story book that would help a younger student understand the most important concepts of how traits may be passed from one generation to another.
3. Using a teacher prepared graphic organizer, the student will work with one or more peers to analyze the contributions of Gregor Mendel and one other geneticist. Each student will answer questions pertaining to a specific scientist. Then, the students will be given a table to complete illustrating the similarities and differences between the scientists. Also, each student will fill in the offspring correctly for a labeled Punnett square that contains the mother's genes and the father's genes. Finally, each student will create a cartoon related to inheriting specific traits.

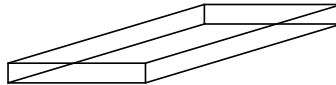
Example 3: Sixth-grade Mathematics**Standards****Summary**

<i>M6M4</i>	<i>Determine surface area of solid figures.</i>
<i>M6M3c</i>	<i>Estimate the volumes of simple geometric solids.</i>
<i>M6M4d</i>	<i>Solve application problems.</i>
<i>M6M3d</i>	<i>Solve application problems involving the volume of fundamental solid figures.</i>
<i>M6M4</i>	<i>Determine surface area of solid figures.</i>
<i>M6A3</i>	<i>Students will evaluate algebraic expressions, including those with exponents.</i>
<i>M6P1a</i>	<i>Build new mathematical knowledge through problem solving.</i>
<i>M6P1b</i>	<i>Solve problems that arise in mathematics and in other contexts.</i>
<i>M6P1c</i>	<i>Apply and adapt a variety of appropriate strategies to solve problems.</i>
<i>M6P1d</i>	<i>Monitor and reflect on the process of mathematical problem solving.</i>
<i>M6P2b</i>	<i>Make and investigate mathematical conjectures.</i>
<i>M6P2c</i>	<i>Develop and evaluate mathematical arguments and proofs.</i>
<i>M6P2d</i>	<i>Select and use various types of reasoning and methods of proof.</i>
<i>M6P3a</i>	<i>Organize and consolidate their mathematical thinking through communication.</i>
<i>M6P3b</i>	<i>Communicate their mathematical thinking coherently and clearly to peers, teachers, and others.</i>
<i>M6P3d</i>	<i>Use the language of mathematics to express mathematical ideas precisely.</i>
<i>M6P4a</i>	<i>Recognize and use connections among mathematical ideas.</i>
<i>M6P4b</i>	<i>Understand how mathematical ideas interconnect and build on one another to produce a coherent whole.</i>
<i>M6P4c</i>	<i>Recognize and apply mathematics in contexts outside of mathematics.</i>
<i>M6P5a</i>	<i>Create and use representations to organize, record, and communicate mathematical ideas.</i>
<i>M6P5b</i>	<i>Select, apply, and translate among mathematical representations to solve problems.</i>
<i>M6P5c</i>	<i>Use representations to model and interpret physical, social, and mathematical phenomena.</i>

Sample Task

1. Explain what is meant by surface area. What steps would you take to find the surface area of a cylinder?
2. One of the major expenses in manufacturing a can is the amount of metal that goes into it. How many square centimeters of metal would be required to manufacture a can that has a diameter of 8 cm and a height of 20 cm? Estimate and then solve.
3. Draw a net (pattern) for the manufacturer to use to make the can.

4. Use your work in parts a – c to write a rule *in words* for finding the surface area of a cylinder. Now write your rule using letters, numbers and mathematical symbols (a formula).
5. Michael bakes a round two-layer birthday cake that is to be covered with frosting on the top, sides, and in between the layers. Each layer has a height of 4 cm and diameter of 24 cm. The label on the can of frosting he bought claims that the contents will cover the top and sides of a one-layer rectangular sheet cake that is 32 cm by 22 cm by 4 cm. Will Michael have enough frosting? Show how you know.



The Differentiated Tasks:

For Advanced Math Students

1. Relate surface area to volume:
 - a) A company wants to build individual storage units that are unattached from other units. One of the costs related to the task is painting the units. The management would like to limit the amount of paint needed, thus minimizing surface area, while the customers want the most square footage for storage (volume). Explore different three dimensional shapes to find the best relation between higher volume for customers and lower surface area for management.
 - b) Using the skills and knowledge gained from the previous exercise, explore the relationship between cylindrical surface area and cylindrical volume to determine the best ratio between r and h so that you maximize volume while minimizing surface area.
 - c) Make a chart of cylindrical formations defined by $r + h = 30$. (For example, start with $r = 1$ and $h = 29$, and the do $r = 2$ and $h = 28$ until you get to $r = 29$ and $h = 1$.) Calculate the surface area and volume for each cylinder, and then calculate the quotient of the volume and the surface area. What configuration has the highest quotient value? What does this mean? What patterns do you see in the quotient? Why does this pattern exist?
 - d) Place the algebraic equation for cylindrical volume over the algebraic equation for cylindrical surface area. Factor out common factors and simplify the equation. What does the simplified polynomial fraction tell you about your results from part c? Can you draw any conclusions from the new equation?

For English Language Learners

1. Explain what is meant by surface area. What steps would you take to find the surface area of a cylinder?

In the case of English Language Learner (ELL) always provide the illustration for the word problem and include the placement of the measurements with the illustration. Explain key words and numbers that tell them what to do with the problem i.e. words like explain, surface area, cylinder and "can" which may be problematic due to multiple meanings; can should be recognized by the student as the cylinder and not the verb for ability. For the content area of Math; key words would be, square centimeters, diameter, height, estimate and any other words the teacher finds problematic during pre-assessment. It is an intense problem, probably difficult for all students but a good problem because it hits all facets-the math computation, the concept of the algorithm & formula, direct reference to the concrete

and real world basis. Teachers need to make sure these connections are thoroughly addressed. You will find more suggestions below:

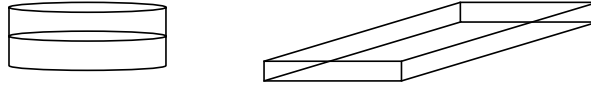
- i) Language characteristics of NEPs
 - (1) minimal comprehension
 - (2) no verbal production
 - (3) communicates with
 - (4) actions and gestures
- ii) Performance indicators for Level 1 "Non English Proficiency (NEP)" students (See Stages of Language Acquisition, FG – 84, PG – 36).
 - (1) Listen / draw
 - (2) Point / act
 - (3) Move / copy
 - (4) Mime / circle
 - (5) Match / choose

After introducing the concept in class using rich contextual realia; (making input comprehensible by the use of concrete resources i.e. manipulatives, advanced organizers, illustrations and other), when an English language learner is at the pre-production stage (NEP), the student may show evidence of learning through the kind of behaviors described in the performance indicators above which are silent verbs. For the characteristics of English language learners at other proficiency stages, please see pages of GPS Day 6 Module Participant's Guide. *Depending on the information gathered; the task may look similar to this:*

- (1) Explain task in native language and accept response in native language for NEPs if at all possible, i.e. In your native language explain what is meant by surface area. What steps would you take to find the surface area of a cylinder?
 - (2) Student may be allowed to choose the right answers by circling an answer from a multiple choice exercise. Instructions in native language may be needed.
 - (3) Student may draw other figures and calculate their surface area to indicate understanding of concept.
 - (4) Student may be allowed to measure surface area of other physical figures in the classroom.
 - (5) Teacher may need to accept units of measurement for surface area in the metric system due to its prevalence across the world.
 - (6) Student may not have had the opportunity to learn (OTL) this concept or may have gone beyond such concepts in native academic setting. Math diagnostic measures that utilize computation measures, instead of application, may provide the teacher a general idea of the student's math prior knowledge. Math is a developmentally sequenced subject; teachers need to know the student's math level to determine the differentiation strategies that may apply.
2. One of the major expenses in manufacturing a "can" is the amount of metal that goes into it. How many square centimeters of metal would be required to manufacture a can that has a diameter of 8 cm and a height of 20 cm? Estimate and then solve.

- i) Determine English language proficiency, prior Math academic knowledge and culture of the ELL student. According to the information gathered determine the differentiation strategies that apply.
 - ii) For an intermediate ELL (See Stages of Language Acquisition, FG – 84, PG – 36) the following performance indicators apply:
 - (a) recall summarize
 - (b) retell describe
 - (c) define role-play
 - (d) explain restate
 - (e) compare contrast
 - iii) For an intermediate ELL (See Stages of Language Acquisition, FG – 84, PG – 36) the following language characteristics apply:
 - (a) increased comprehension
 - (b) simple sentences
 - (c) some errors in speech
 - iv) Teacher may need to assess the student for his/her prior knowledge on the subject.
 - v) The student may be able to engage with this task if exposed to concept in native language school setting. Students from some parts of the world may have difficulties showing evidence of their work since in many countries students are encouraged to solve mathematical problems in their heads.
 - vi) Teacher may need to accept units of measurement in the metric system due to its prevalence across the world.
 - vii) Teacher may need to determine better differentiation strategies based on specific student learning characteristics, taking into consideration the student's English language proficiency stage, the student's prior knowledge and the student's culture.
3. Draw a net (pattern) for the manufacturer to use to make the can.
- i) Teacher needs to determine differentiation strategies based on specific student learning characteristics, taking in consideration the student's English language proficiency stage, the student's prior knowledge and the student's culture.
 - ii) Buddy assistance may be provided to explain the task.
 - iii) Task may be appropriate for ELLs once initial understanding of task is achieved.
4. Use your work in parts a – c to write a rule *in words* for finding the surface area of a cylinder. Now write your rule using letters, numbers and mathematical symbols (a formula).
- i) Teacher needs to determine better differentiation strategies based on specific student learning characteristics taking in consideration the student's English language proficiency stage, the student's prior knowledge and the student's culture.

- ii) Buddy assistance may be provided to explain the task.
5. Michael bakes a round two-layer birthday cake that is to be covered with frosting on the top, sides, and in between the layers. Each layer has a height of 4 cm and diameter of 24 cm. The label on the can of frosting he bought claims that the contents will cover the top and sides of a one-layer rectangular sheet cake that is 32 cm by 22 cm by 4 cm. Will Michael have enough frosting? Show how you know.



- ii) In addition to suggestions provided above, teacher may need to explain or illustrate potentially difficult vocabulary for ELLs i.e. two-layer cake, frosting, label and/or sheet cake.
- iii) Teacher needs to determine better differentiation strategies based on specific student learning characteristics taking in consideration the student's English language proficiency stage, the student's prior knowledge and the student's culture.
- iv) Buddy assistance may be provided to explain the task.
- v) Student may be advanced in English proficiency and gifted in math and then gifted differentiation may apply.

Example 4: Fourth-grade English Language Arts

ELA4R1 The student demonstrates comprehension and shows evidence of a warranted and responsible explanation of a variety of literary and informational texts. For literary texts, the student identifies the characteristics of various genres and produces evidence of reading that:

- g. Identifies similarities and differences between the characters or events and theme in a literary work and the actual experiences in an author's life.

Sample Task for ELA4R1

The student reads excerpts from a biography/autobiography of an author (such as Beverly Cleary's *A Girl From Yam Hill*) and discusses how an author (such as Beverly Cleary) draws on her personal experiences when writing her fictional texts.

The Differentiated Tasks:

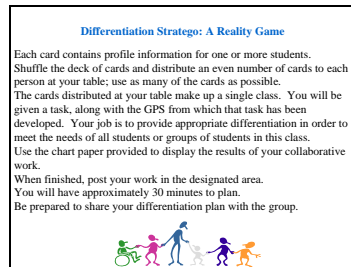
1. Working in cooperative groups, the students will use graphic organizing software, teacher-made graphic organizers, and/or three dimensional "foldables" to identify the similarities and differences in the literary work and the author's life. Students may use words, pictures, figures, or clip-art to complete their graphic organizers.
2. Author Cube – Once the cube (See page 21) has been constructed, students will roll it like a die and then complete the task that comes up on the top of the cube. This Author Cube gives students a choice of six different activities in which they identify similarities and differences between the characters, events, and/or themes in a literary work and the actual experiences in the author's life.

<p>Write a letter to the author of your story. Explain to him/her why you've enjoyed reading his/her work. Ask three questions that you'd like to have answered about the author's choice of words, setting, or plot.</p>	<p>Write an interesting dialogue between the author of your story and the author of another story you've read. Make your dialogue reflect ways in which each author's background affected his/her work.</p>	<p>As an editor of the book you're reading, it's your responsibility to write a blurb about the author for the book jacket. What would you include in this brief (not more than 6 sentences) bio? What are the most important things about your author that a reader would need to know?</p>
	<p>Locate the web site of the author of your story. Read your author's autobiography or biography. Then create a triple Venn diagram to compare and contrast the author, a character in the story, and yourself. Be sure to include likenesses as well as differences.</p>	<p><i>To assemble this cube, cut around the outside of the figure. Fold between each block and then tape or glue tabs to sides to form a cube.</i></p>
	<p>Where did your author get the ideas for the story you're reading? Explore the author's website and find out. Then, present your information to your class in an interesting way. What events, people, pets, etc. in your life might provide you with inspiration for a book of your own?</p>	
	<p>Select three quotations from the story you're reading. Explain why your author wrote these statements. How do they relate to the life of your author? What events in the author's life might have caused him/her to write these words?</p>	

Differentiation Strategy: A Reality Game

Slide:
*Differentiation
Strategy: A Reality
Game*

31. Show slide: Differentiation Strategy: A Reality Game.



32. Present:

- **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.**

33. Present:

- **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.]

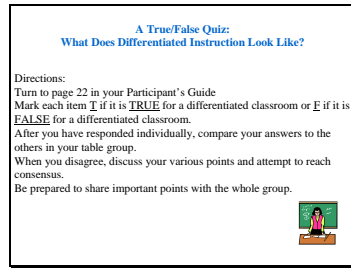
- **Remember, differentiation is not the same as individualized instruction. We often differentiate for groups of students in a mixed-ability classroom.**
- **You will have approximately 30 minutes to work in your table groups to prepare your differentiation plan. Obviously this isn't enough time to 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.

[Trainer's Note: Several of the activities in this module were designed for table-sized groups. However, depending on your group composition and facility, you may want to vary the grouping arrangements – time for individual reflection, think-pair-share, triads, small group, whole group, etc. Using a variety of grouping strategies would allow you to more effectively address the variety of learning styles in your group, as well as model a key principle of curriculum differentiation.]

What Does Differentiation Look Like


Slide: *True/False Quiz*

34. Show slide: True/False Quiz.



A True/False Quiz:
What Does Differentiated Instruction Look Like?

Directions:
Turn to page 22 in your Participant's Guide
Mark each 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.
Be prepared to share important points with the whole group.



35. Present:

- **To conclude this section, we're going to take a brief True/False Quiz.**
- **You will find this quiz on pages 22-23 of your Participant's Guide [FG-63-64].**
- **Follow the directions on the slide to complete the quiz. No cheating! Tomlinson's responses to these items are on the next slide; but remember there may be more than one way of looking at a particular item. Context is significant when discussing aspects of differentiation.**
- **You have 10-12 minutes for this activity and then we will compare our answers.**
- Allow time for participants to discuss, compare, and provide reasons for their answers BEFORE revealing the next slide with one person's "right" answers.

PG-22-23:
True/False Quiz

What Does Differentiation Look Like: A True/False Quiz (PG-14-15)

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. All students in the class completing 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. Providing 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. Students participating in respectful work.
- _____ 15. Putting students in situations where they don't know the answer- often.
- _____ 16. 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. Including a blend of whole class, group, and independent learning.
- _____ 22. Using individualized instruction.

Slide: *What Does Differentiated Instruction Look Like?*

36. Show slide: What Does Differentiated Instruction Look Like?

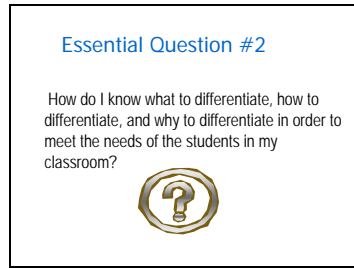
What Does Differentiated Instruction Look Like?	
Differentiated instruction is...	Differentiated instruction is not...
1. Assessing students before a unit of instruction to determine what they already know	1. Let students in the class complete the same work for a unit/quarter
2. Adjustment of the core curriculum by content (before to above grade level, process (process to abstract) and product (change to compare)	2. Teaching 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 with 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 either	9. Providing low-level challenge activities
10. Offering the pace of instruction	10. Using capable students as tutors
11. A blend of whole class, group, and independent learning	11. Using individualized instruction

37. Present:

- **Take a minute to compare the answers we came up with to the “correct” answers, remembering that, depending on context, there may be more than one way to approach an item.**

Slide: *Essential Question 2*

36. Show slide: Essential Question 2.



- 37. Transition: **Reaching a conceptual understanding of the what, how, and why of differentiation is the first step toward providing every student with the opportunity to learn. In the final hour of today's workshop, we'll look at the role of the teacher in a differentiated classroom and set some goals for differentiating our own classrooms.**

The Role of the Teacher in a Differentiated Classroom

Time 1 hour

Overview In this section we will focus on the various roles and responsibilities of the teacher in a differentiated classroom. We will examine areas in which teachers and instructional leaders may need to rethink traditional ways of doing in order to maximize every student's opportunity to learn. We will look at a number of ways of differentiating that require low levels of preparation, as well as other means that require more preparation. Finally, we will develop individual action plans for moving toward differentiated classrooms.

Objectives

- Describe the roles of the teacher in a differentiated classroom.
- Set individual goals for helping teachers more effectively differentiate instruction in each classroom.

Activities

- Comparing and Contrasting Teachers in Traditional and Differentiated Classrooms
- Analyzing and Creating Teacher Metaphors
- Developing an Individual Action Plan for Differentiation
- Assignments for Days 7 and 8

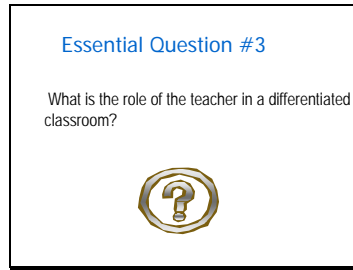
Materials

- Chart paper and markers
- Transparencies or PowerPoint presentation
- Traditional and differentiated comparison chart
- Participant's Guide
- Cards with teacher metaphors

Rethinking Our Roles

Slide: *Essential Question 3*

1. Show slide: Essential Question 3.



2. Present:

PG-24-25:
*Traditional vs.
Differentiated
Comparison Chart*

- **On pages 24-25 of your Participant's Guide, you will find a chart that compares a traditional classroom to a differentiated classroom. Please turn to that chart.**
- **In your table groups, read through the characteristics of a traditional classroom and compose a brief description of the teacher you visualize in that classroom.**
- **Next, read through the characteristics of the differentiated classroom and compose a brief description of the teacher you visualize in that classroom.**
- **You have 7-10 minutes for this activity.**

[Trainer's Note: Instructions for this activity are on the next slide.]

Several of the activities in this module were designed for table-sized groups. However, depending on your group composition and facility, you may want to vary the grouping arrangements – time for individual reflection, think-pair-share, triads, small group, whole group, etc. Using a variety of grouping strategies would allow you to more effectively address the variety of learning styles in your group, as well as model a key principle of curriculum differentiation.]

A Traditional Classroom Compared with a Differentiated One (PG-24-25)

Traditional Classroom	Differentiated Classroom
1. Student differences are masked or acted upon when problematic.	1. Student differences are studied as a basis for planning.
2. Assessment is most common at the end of learning to see "who got it."	2. Assessment is ongoing and diagnostic to understand how to make instruction more responsive to learner needs.
3. A relatively narrow sense of intelligence prevails.	3. Focus on multiple forms of intelligence is evident.
4. A single definition of excellence exists.	4. Excellence is defined by individual growth from a starting point.
5. Student interest is infrequently tapped.	5. Students are frequently guided in making interest-based learning choices.
6. Relatively few learning profile options are taken into account.	6. Many learning profile options are provided.
7. Whole class instruction dominates.	7. Many instructional arrangements are used.
8. Coverage of texts and/or curriculum guides drives instruction.	8. Student readiness, interest, and learning profile shape instruction.
9. Mastery of facts and skills out-of-context is the focus of learning.	9. Use of essential skills to make sense of key concepts and principles is the focus of learning.
10. Single-option assignments are the norm.	10. Multi-option assignments are frequently used.
11. Time is relatively inflexible.	11. Time is used flexibly in accordance with student needs.
12. A single text prevails.	12. Multiple materials are provided.
13. Single interpretations of ideas and events may be sought.	13. Multiple perspectives on ideas and events are routinely sought.

14. The teacher directs student behavior.

14. The teacher facilitates students' skills at becoming more self-reliant learners.

15. The teacher solves problems.

15. Students help one another and the teacher solve problems.

16. A single form of assessment is often used.

16. Students are assessed in multiple ways.

Carol Tomlinson, 1998.

Slide: *Traditional vs. Differentiated*

3. Show slide: Traditional vs. Differentiated.

Traditional vs. Differentiated

Turn to page 24 of your Participant's Guide.

In your table groups, read through the characteristics of a traditional classroom and compose a brief description of the teacher you visualize in that classroom.

Next, read through the characteristics of the differentiated classroom and compose a brief description of the teacher you visualize in that classroom.

You have 7-10 minutes for this activity.

Slide: *Traditional vs. Differentiated*

4. Show slide: Traditional vs. Differentiated.

Traditional vs. Differentiated

How are the teachers you visualized in the two classrooms similar?

How are the teachers you visualized in the two classrooms different?

What conclusions might we draw from these similarities and differences?

5. Allow time for participant's to complete the activity, then ask:

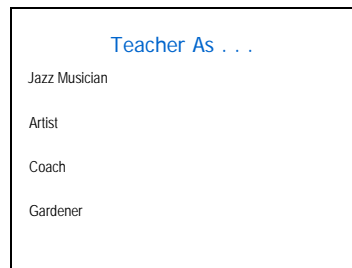
- **How are the teachers you visualized in the two classrooms similar?** [Allow time for participants to respond.]
- **How are the teachers you visualized in the two classrooms different?** [Allow time for participants to respond.]
- **What conclusions might we draw from these similarities and differences?**
- 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.

6. Present:

- **Earlier today I said that differentiated instruction is more a philosophy than a particular strategy or bag of tricks.**
- **This philosophy involves a change in mindset, a new vision of the role of the teacher in a classroom.**
- **One of the ways we might begin to develop this new vision of the role of the teacher is to think metaphorically.**
- **Let's begin by looking at four possible metaphors: teacher as jazz musician, teacher as artist, teacher as coach, and teacher as gardener.**
- **I'm placing visuals around the room to represent these metaphors. I'd like for you to move to the metaphor that seems most relevant to you as you think about differentiating classroom instruction.**

[Trainer's Note: The graphics for these signs are reprinted in grayscale in the appendix to this Facilitator's Guide.]

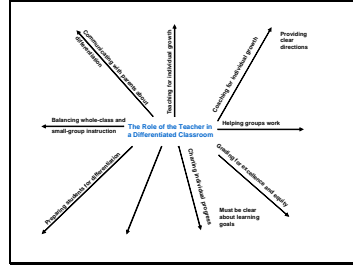
Slide: *Teacher As...* 7. Show slide: Teacher As



8. Present:
- **Working together with others who chose the same metaphor, create a list of attributes that a teacher as jazz musician, artist, coach, or gardener might have.**
 - Allow a few minutes, then ask: **How might these attributes contribute to the establishment of a differentiated classroom?**
 - **Now move back to your table groups and create at least one additional metaphor for an instructional leader in a school district where effectively differentiated classrooms are the norm. In other words, what role(s) must YOU play to help your teachers more consistently and powerfully differentiate instruction? Think quickly, we only have a few minutes for this activity.**
 - Allow no more than 5 minutes, then ask the groups to share their metaphors.

Slide: *The Role of the Teacher in a Differentiated Classroom*

9. Show slide: The Role of the Teacher in a Differentiated Classroom.



10. Present:

- Tomlinson lists 8 teacher roles in a differentiated classroom:
 - Preparing students for differentiation
 - Balancing whole-class and small-group instruction
 - Communicating with parents about differentiation
 - Teaching for individual growth
 - Coaching for individual growth
 - Helping groups work
 - Grading for excellence and equity
 - And charting individual growth
- One arrow on this chart is blank. That's because we can all think of other roles. What are some of the other roles you can add?
- Tomlinson also specifies that teachers must provide clear directions and must be clear about learning goals.
- As we move to the last activity of the day—setting personal goals for differentiation—keep Tomlinson's list in mind.

Setting Personal Goals for Differentiating

1. Present:

- **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!**
- **To help teachers begin, Tomlinson has developed a list of what she calls "low-prep" and "high-prep" differentiation possibilities.**

PG-26: Low-Prep and High-Prep Differentiation

- **Tomlinson's list is reprinted on page 26 of your Participant's Guide. Please turn to that page now.**

2. Present:

PG-27: Action Plan

- **Using Tomlinson's chart and the Action Plan form on page 27 of your Participant's Guide, begin working on your individual action plan.**

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

Low-Prep and High Prep Differentiation (PG-26)

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.

Action Plan (PG-27)

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

- What are my teachers already doing to differentiate? How do I know? How can I help them examine their own practices?
- How can I help teachers assess and use student readiness, interests, and learning profiles to maximize learning growth for every student?
- How can I assist teachers as they work to differentiate content, process, products, or the learning environment?
- How can I employ Tomlinson's Equalizer with my teachers to help them create tiered assignments, activities, tasks, and products?
- What low-prep differentiations might they start with?
- What higher-prep differentiations do I want them to work toward?

Differentiation:			
What	How	Why	By When

3. Present:

- **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 resources listed in your Day 6 materials.**

4. Present:

- **Day 7 of training will focus on Examining Student Work, Fairness, and Grading.**
- **You'll find assignments for Days 7 and 8 listed in the appendix to your Participant's Guide.**

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

- **For Day 7, 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.]

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

Slide: *Give Yourself a Hand* 6. Show slide: Give Yourself a Hand.
a Hand



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

Glossary

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

Adjusting Questions—A teacher (in class discussions, tests, and/or homework) adjusts the sorts of questions posed to learners based on their readiness, interests, and learning profile. This strategy is an excellent "get your feet wet" differentiation strategy because it builds on strengths and abilities readily used by most teachers.

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.

Carousel Brainstorming—A strategy where students brainstorm responses to prompts or questions written on butcher paper and placed at five different stations around the room. Students rotate from station to station and discuss their responses with others in their group. Teachers may use carousel brainstorming as a pre-assessment tool or as a review opportunity.

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—Agreement reached between one or more students and their teacher; the contract specifies learning objectives, activities, resources, deadlines/timelines, assessment procedures, working conditions, and places for signatures. The teacher agrees to allow a student the freedom to pursue an area of special interest; and the student, in turn, agrees to follow certain independent learning conditions.

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.

Cubing—A versatile strategy, similar to a contract, which allows a teacher to plan different activities for different students or groups of students based on student readiness, learning style, and/or interests. The teacher creates a cube—usually different colored cubes—for different groups of students. On each of the cube's six faces, the teacher describes a different task related to the subject and/or concept being learned.

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.

4-MAT—Teachers plan instruction for each of four learning preferences: mastery, understanding, personal involvement, and synthesis. This is based on the hypothesis that students have one of these four learning preferences. All students participate in all learning formats in order to maximize learning strengths and strengthen the weaker preferences.

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 varying topics of interest.

Jigsawing—A type of collaborative work in which students read and examine a portion of a reading assignment and report what they've learned to the entire group; an effective way to vary content according to complexity or depth of content to match reading readiness levels; a great way to involve students in subject matter presented in text.

KWL Charts—A pre-assessment tool consisting of three vertical columns. Students list in one column what they know about a topic or idea and in another column, what they want to know about the topic or idea. Then, after a lesson or series of lessons, they return to the chart to list in the third column what they learned about the topic or idea.

Most Difficult First—A very simple first step to full-scale compacting. It is usually used with skill-type activities such as math, grammar, map reading, vocabulary, or spelling. A teacher allows students to demonstrate mastery of the five most difficult problems of an assignment and then to participate in alternate activities without having to do an entire assignment.

Orbital Studies—Independent investigations, generally of three to six weeks, which “orbit” or revolve around some facet of the curriculum. Students select their own topics for orbitals and work with guidance and coaching from the teacher to develop more expertise on both the topic and on the process of becoming an independent investigator.

Personal Agendas—A personalized list of tasks that a particular student must complete in a specified time; student agendas throughout a class will have similar and dissimilar elements on them.

Plus-Minus-Interesting Charts—A device developed by DeBono in which students summarize their findings about a particular topic or idea by listing what's good about it, what's possibly negative about it, and what's interesting about it.

Product/Project Options—Students choose the way that they will provide evidence of learning from a variety of options. 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., and ends 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 tasks 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 content or difficulty 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.

Think-Tac-Toe Extension Menu or Choice Board—A collection of activities from which a student can choose. It is generally presented in the form of a 3x3 or a 4x4 grid, similar to a tic-tac-toe board, with the center square often allowing for student choice. This format can be applied to

extension activities, contracts, study guides, or independent studies. They allow a teacher to differentiate content, process and product according to different levels of student performance/readiness, interests, and learning styles.

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.

Vocabulary Web—A graphic organizer based on a single vocabulary word. The word goes in the center circle; students then define the word, find synonyms and antonyms, write a sentence using the word, create analogies, and analyze the word according to word families, origin, stems, and parts of speech.

WebQuest—A programmed, self-contained activity on the Internet that allows students to perform authentic, independent tasks while using the computer. WebQuests give individuals or small groups of learners the opportunity to use research, problem solving, and basic skills as they move through a process of finding out, drawing conclusions about, and developing a product related to a topic or question. Each WebQuest consists of the same five parts: introduction, task, process, resources, and evaluation rubric.

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.

Appendix

An Announcement: SAT Prep Online Course

The Georgia Department of Education (GDOE) is pleased to announce the availability of the College Board's **Official SAT Prep Online Course™ for all students in grades 9-12**. The Online SAT Prep Course is another component of our continuing efforts to assist local systems in improving the quality of education for students in Georgia. Available twenty-four hours a day, seven days a week, this program can be integrated into classroom instruction or may be used as a self-paced independent study for students.

The College Board will send specific information regarding the registration of students and educators to each high school principal. The online course is very user-friendly and does not require special training. However, in order to encourage all high schools to fully utilize the course, educators may attend a training session. There will be at least 10 training sessions available throughout the state, and at least one Web cast. The training will include an online demonstration of the course and instruction on maximizing usage of this valuable resource.

By August 1, 2005, the College Board, the facilitators of the Online SAT Program, will provide information for each high school in your district about the following items:

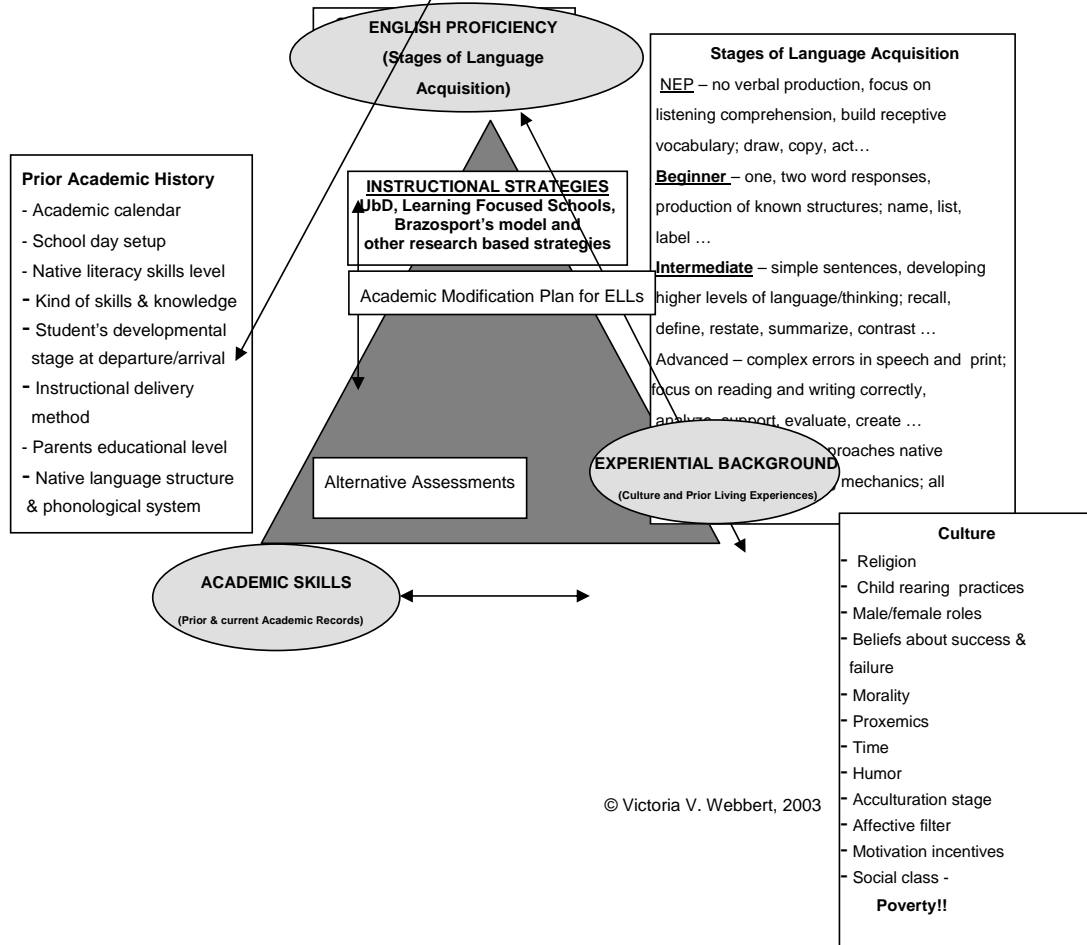
1. Personal access codes for each student in grades 9-12 in each high school
2. 18 interactive lessons that focus on critical reading, math, and writing
3. 600+ practice questions in critical reading, mathematics, writing
4. Explanations of answers to practice test items
5. Three full-length timed practice tests for the SAT
6. Personalized score reports on tests and quizzes for each student
7. Test Reports for the following categories:
 - (A). practice test score by student
 - (B). practice test question and answer by student and by class
 - (C). practice test item type by student
 - (D). practice college success skills by student
 - (E). practice test summary by student and by class
 - (F). practice test current performance by school and by district
 - (G). practice test progress by class, by school, and by district
 - (H). practice test roster by class
8. Online essay scoring service
9. Twelve-month subscription service for all students and educators.

You will receive information soon from representatives of the GDOE and/or College Board about professional learning classes for facilitators of the SAT Prep Online course in your high schools. We urge each of you to take advantage of this opportunity to improve student achievement on the SAT at no cost to local systems. Thank you for continuing to work toward our goal of leading the nation in improving student achievement. If you have any questions, please contact:

Charlotte Robinson
404-656-6854
crobinso@doe.k12.ga.us

Pre-Assessing the English Language Learner

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



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 s/he passes/emphasize mastery**

Georgia Department of Education, GPS Differentiation Menu**[Exceptional Children/Special Education]****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
- break work into manageable parts
- provide time to respond
- ask “yes/no” questions

- allow students to indicate 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 of 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 organization/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/transliterator
- 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></p> <p>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 riddle</p>	<p>riddle role-play song speech story telling survey</p> <p><u>Visual</u></p> <p>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</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</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></p> <p>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</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 weaving</p>
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wire sculpture	dictionary	limerick	pen pal	satire
Written	editorial	list	petition	science fiction
advertisement	essay	log	plan	scroll
autobiography	fairy tale/tall tale	lyrics	play	short story
book report	field manual	magazine	poem	skit
booklet	free verse	magazine article	prediction	slogan
brochure	friendly letter	manual	profile	speech
business letter	glossary	metaphor	puppet show	story
characterization	guidebook	myth	questionnaire	story problems
classified ad	handbook	new story ending	questions	survey
comic book	handout	newsletter	radio script	telegram
comparison	interview script	newspaper	rating scale	TV script
computer prog.	job description	newspaper article	rationale	term paper
couplet	joke book	notes	recipe	test
creative writing	jot list	novel	reference	travel log
critique	journal article	oath	report	vocabulary list
database	label	outline	research paper	yearbook
description	law	pamphlet	review	
	lesson plan	parody	rewritten ending	

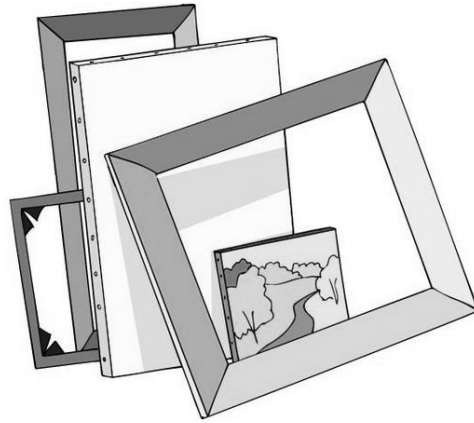
from GA Dept. of Education *Curriculum Guide for the Education of Gifted Students*, by Jim Curry and John Samara

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.

Teacher As . . . Graphics



Assignments for Days 7 and 8 of GPS Training

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

Each participant should bring a student work sample to Day 7 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 6 of the training.

For Day 8 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 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.

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 (GPS). 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"

Signature:

Print

"GDOE"

Georgia Department of Education

By:

Name: _____

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 (GPS), 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

Print Guardian's

Name: _____

By:

Relationship to

Title: _____

Title:

Print Minor's

Name: _____

Date:

Sample Tasks for "Differentiation Stratego: A Reality Game"

Sample Task 1:

The Standard

ELA9RL1 The student demonstrates comprehension by identifying evidence (e.g., diction, imagery, point of view, figurative language, symbolism, plot events and main ideas) in a variety of texts representative of different genres (e.g., poetry, prose [short story, novel, essay, editorial, biography], and drama) and using this evidence as the basis for interpretation.

The student identifies, analyzes, and applies knowledge of the structures and elements of fiction and provides evidence from the text to support understanding; the student:

- a. Locates and analyzes such elements in fiction as language (e.g., diction, imagery, symbolism, figurative language), character development, setting and mood, point of view, foreshadowing, and irony.
- b. Identifies and analyzes patterns of imagery or symbolism.
- c. Relates identified elements in fiction to theme or underlying meaning.

The Task

The student reads a novel and prepares a guide for that novel that will help other students read for understanding.

Sample Task 2:***The Standard***

ELA10RL2 The student identifies, analyzes, and applies knowledge of theme in literary works and provides evidence from the works to support understanding. The student

- a. Applies knowledge of the concept that the theme or meaning of a selection represents a universal view or comment on life or society and provides support from the text for the identified theme.
- d. Analyzes and compares texts that express a universal theme, and locates support in the text for the identified theme.
- e. Compares and contrasts the presentation of a theme or topic across genres and explains how the selection of genre affects the delivery of universal ideas about life and society.
 - i. Archetypal Characters (e.g., hero, good mother, sage, trickster, etc.)
 - ii. Archetypal Patterns (e.g., journey of initiation, search for the father, etc.)
 - iii. Archetypal Symbols (e.g., colors, water, light/dark, etc.)
 - iv. Universal Connections (e.g., making choices, winning/losing, relationships, self and other, etc.)

The Task

The student identifies a universal theme or archetypal meaning in a literary work and illustrates the connection of the theme or meaning to a different work of literature, to life experiences, or to a work of popular culture.

Sample Task 3:

ELABLRL3 The student deepens understanding of literary works by relating them to their contemporary context or historical background, as well as to works from other time periods.

The student relates a literary work to primary source documents of its literary period or historical setting; the student:

- a. Relates a literary work to the seminal ideas of the time in which it is set or the time of its composition.
- b. Relates a literary work to the characteristics of the literary time period that it represents.

The student compares and contrasts specific characteristics of different genres as they develop and change over time for different purposes (e.g., heroic elegy, satirical essay, serial novel, etc.).

The Task

The student compares and contrasts three poems from different literary periods and creates a product, presentation, or composition to illustrate the connections between the poems and the times during which they were written.

Sample Task 4:***The Standard***

ELA4R1 The student demonstrates comprehension and shows evidence of a warranted and responsible explanation of a variety of literary and informational texts.

For informational texts, the student reads and comprehends in order to develop understanding and expertise and produces evidence of reading that:

- a. Identifies and uses knowledge of common textual features (e.g., paragraphs, topic sentences, concluding sentences, glossary).
- b. Identifies and uses knowledge of common graphic features (e.g., charts, maps, diagrams, illustrations)
- c. Identifies and uses knowledge of common organizational structures (e.g., chronological order, cause and effect).
- f. Summarizes main ideas and supporting details.
- h. Distinguishes fact from opinion or fiction..

The Task

The student reads an informational text such as Jean Fritz's *And Then What Happened, Paul Revere?* In pairs, students summarize the important facts about Revere's famous ride and the events that followed. The students revise, edit, rewrite, and illustrate their reports and display them in the classroom or library.

Sample Task 5:***The Standard***

ELA5R3 The student understands and acquires new vocabulary and uses it correctly in reading and writing. The student

- a. Reads a variety of texts and incorporates new words into oral and written language.
- b. Determines the meaning of unfamiliar words using context clues (e.g., definition, example).
- c. Determines the meaning of unfamiliar words using knowledge of common roots, suffixes, and prefixes.
- d. Determines pronunciations, meanings, alternate word choices, and parts of speech of words using dictionaries and thesauruses.
- a. Identifies and applies the meaning of the terms antonym, synonym, and homophone.

The Task

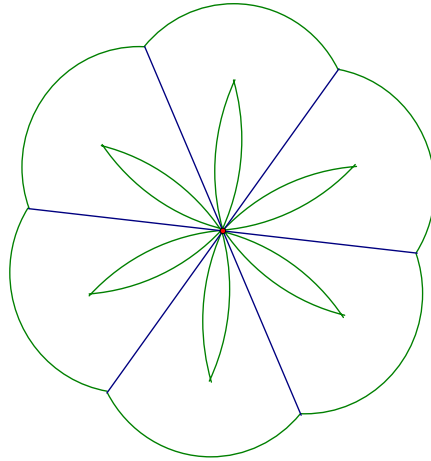
The student reads a political speech, making a list of words or phrases that are exaggerated or intended to cause listeners to react. S/he substitutes synonyms that are not inflammatory (e.g., 'said' for 'ranted', 'walk' for 'stride') and analyzes how the vocabulary changes impact meaning.

Sample Task 6:***The Standard***

<i>Questions</i>	<i>Standards</i>	<i>Summary</i>
<i>a-c</i>	<i>M6G1a</i>	<i>Determine and use lines of symmetry.</i>
	<i>M6G1b</i>	<i>Investigate rotational symmetry, including degree of rotation.</i>
	<i>M6P1a</i>	<i>Build new mathematical knowledge through problem solving.</i>
	<i>M6P1b</i>	<i>Solve problems that arise in mathematics and in other contexts.</i>
	<i>M6P1c</i>	<i>Apply and adapt a variety of appropriate strategies to solve problems.</i>
	<i>M6P1d</i>	<i>Monitor and reflect on the process of mathematical problem solving.</i>
	<i>M6P2d</i>	<i>Select and use various types of reasoning and methods of proof.</i>
	<i>M6P3a</i>	<i>Organize and consolidate their mathematical thinking through communication.</i>
	<i>M6P3b</i>	<i>Communicate their mathematical thinking coherently and clearly to peers, teachers, and others.</i>
	<i>M6P3c</i>	<i>Analyze and evaluate the mathematical thinking and strategies of others.</i>
	<i>M6P3d</i>	<i>Use the language of mathematics to express mathematical ideas precisely.</i>
	<i>M6P4a</i>	<i>Recognize and use connections among mathematical ideas.</i>
	<i>M6P4b</i>	<i>Understand how mathematical ideas interconnect and build on one another to produce a coherent whole.</i>
	<i>M6P4c</i>	<i>Recognize and apply mathematics in contexts outside of mathematics.</i>
	<i>M6P5a</i>	<i>Create and use representations to organize, record, and communicate mathematical ideas.</i>
<i>M6P5b</i>	<i>Select, apply, and translate among mathematical representations to solve problems.</i>	
<i>M6P5c</i>	<i>Use representations to model and interpret physical, social, and mathematical phenomena.</i>	

The Task

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



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

Sample Task 7:

The Standard

ELA3R2 The student acquires and uses grade-level words to communicate effectively.

- a. Reads literary and informational texts and incorporate new words into oral and written language.
- b. Uses grade-appropriate words with multiple meanings.
- f. Determines the meaning of unknown words on the basis of context.

The Task

The students will be divided in groups and given dry erase boards. The teacher will offer clues, synonyms, antonyms, and questions to the students challenging them to be the first to write the appropriate vocabulary word on the dry erase board. After completing the activity, the students will continue working with a “buddy” reviewing the vocabulary words.

Sample Task 8:***The Standard***

S6E4 - Students will understand how the distribution of land and oceans affects climate and weather.

- a. Demonstrate that land and water absorb and lose heat at different rates and explain the resulting effects on weather patterns.
- b. Relate unequal heating of land and water surfaces to form large global wind systems and weather events such as tornados and thunderstorms.
- c. Relate how moisture evaporating from the oceans affects the weather patterns and weather events such as hurricanes.

The Task

Demonstrate the location of large global wind systems on a map or globe. Use what you know about the unequal heating of the surface of the earth to explain these patterns. Find out what large global wind system affects the weather patterns of Georgia

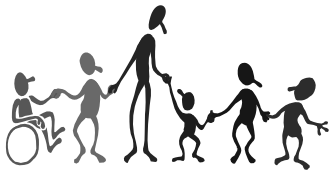
Student Scenarios for "Differentiation Stratego: A Reality Game" Cards

<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 he 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 they 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 he 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 he is a mediocre student. Stephen reads sports magazines incessantly. He is not a discipline problem, but he 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 he shows potential when he tries to complete the work he is given.</p>

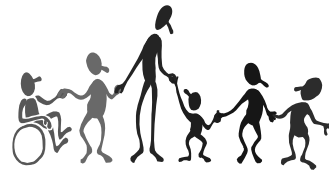
<p>Carla likes to write poetry and listen to music. She often looks up her favorite artist's lyrics on the internet and attempts to memorize them. During class sessions it is not unusual for Carla to hum or sing to herself. Recently, her CD player was collected in class while she was listening to her 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 she 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 that he take a different type of test or 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 that he may be using 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>Joseph exhibits a superior attitude toward his classmates. He wants everyone to know how smart he is. He displays a competitive behavior and it may develop into confrontations with other pupils. Joseph also makes fun of peers who don't know he answers to certain questions. He doesn't allow other classmates to provide input, and he uses his knowledge to get attention.</p>	<p>Demetrius always put things off. He has no sense of urgency regarding his assignments. He never gets anything done on time, and always possesses a "going to get it done tomorrow" attitude. However, he does enjoy nature. His hobbies include collecting rocks, insects, and leaves. He has expressed to his teacher he would like to become an ecologist or an entomologist.</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 she 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 she 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>

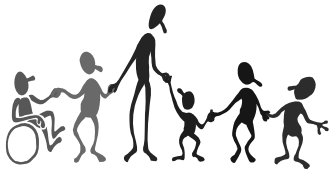
<p>Heather makes strange sounds or noises in the classroom. Some of her common odd noises include: hums, whistles, throat noises, and tapping on her desk. Heather plays the violin in the orchestra, and loves listening to classical music. Sometimes the noise she makes prevents her from completing her 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 who 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 he has yet to reach his full potential. He doesn't work up to his ability level, and he 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. 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 "I don'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>



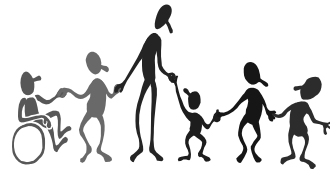
DIFFERENTIATION STRATEGO: A Reality Game



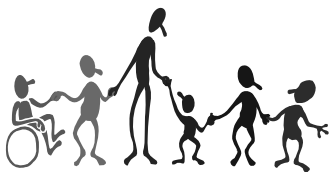
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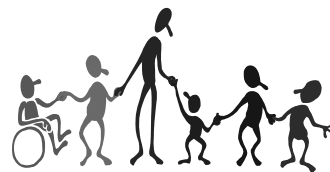
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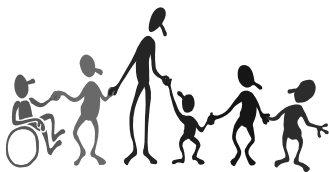
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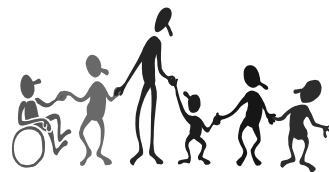
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