

## Through the Looking Glass: Differentiation in a New Light



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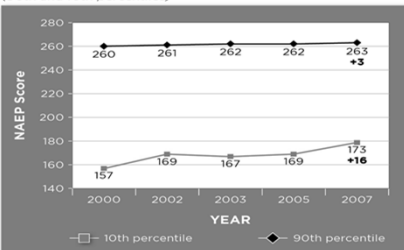
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## Mad as a Hatter???

Figure A—4th Grade Reading NAEP Scores, 2000-2007  
(90th and 10th percentiles)



Note: National means: 2000=215, 2007=222, a change of +7  
Source: Main NAEP data explorer, National Public sample

([http://www.edexcellence.net/detail/news.cfm?news\\_id=732&id=](http://www.edexcellence.net/detail/news.cfm?news_id=732&id=))



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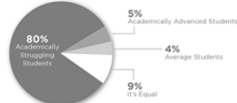
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## Mad as a Hatter???

Figure D:  
Who is Most Likely to Get One-on-One  
Attention from Teachers?



Source: FDI National Teacher Survey, Question 17



([http://www.edexcellence.net/detail/news.cfm?news\\_id=732&id=](http://www.edexcellence.net/detail/news.cfm?news_id=732&id=))

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**"Divide a loaf by a knife: what's  
the answer to *that*?"**

- Acceleration AND Enrichment
- Academic Challenge AND Love of Learning
- Content- AND Standards-Based
- Academic Achievement AND Engagement



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**Why Differentiate?**

- Multifaceted Nature of Giftedness
- Heterogeneous Classrooms
- Identification vs. Programming
- Cognitive/Affective/College & Career Planning
- Students' Learning Profiles
- Emphasis on Rote Learning



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**"Oh dear! Oh dear! I shall be too late!"**

- Time, Time, Time
- Ability Grouping
- Preassessment
- Classroom Management
- Resources and Materials
- Colleagues
- District or state standards
- Lack of administrative support and school board policy



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## How Do I Know???

- ✓ Nature of the Objective
- ✓ Number of Students Needing Differentiation
- ✓ Time for Teaching/Planning
- ✓ Instructional Repertoire
- ✓ Student Behavior
- ✓ Parental/Administrative Support
- ✓ Power to Enhance Understanding

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## Gifted Kids a Homogeneous Bunch???

- ⇄ Prior Knowledge or Skill Expertise
- ⇄ Learning Rate
- ⇄ Cognitive Ability
- ⇄ Learning Style Preference
- ⇄ Motivation, Attitudes, and Effort
- ⇄ Interest, Strength, or Talent



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## Finding the Best Fit

- ⇄ Acceleration
- ⇄ Curriculum Compacting
- ⇄ Tiered Questions/Assignments
- ⇄ Interest Based Enrichment and Talent Development
- ⇄ Open-Ended Activities and Products
- ⇄ Alternatives and Choices



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## Curriculum Compacting

60% of fourth graders in the school districts studied were able to achieve a score of 80% or higher on a test of the content of their math texts **before they opened their books** in September.

(Reis & Westberg, 1994)

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## Curriculum Compacting

78% to 88% of fifth- and sixth-grade average and above-average readers could pass pretests on basal comprehension skills before they were covered by the basal reader.

(Taylor & Frye, 1988)

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## Selecting a Preassessment Technique

- What is the most powerful difference you expect to see among students?
- How might you identify these potential differences in your students?



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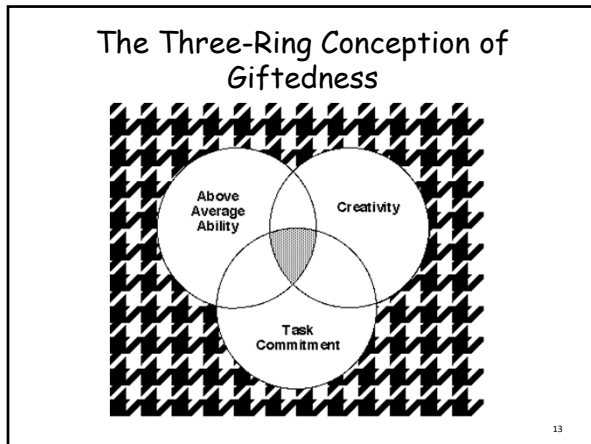
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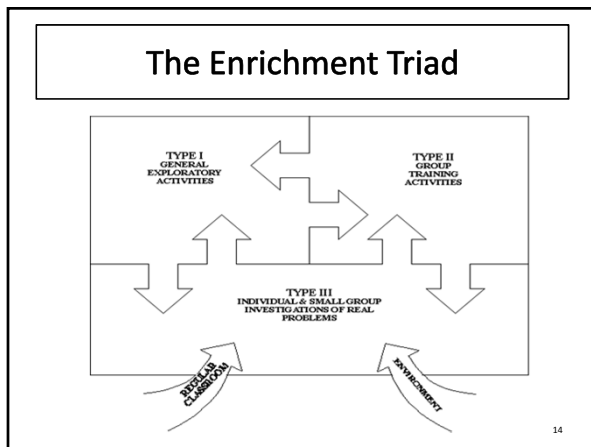
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### The Compactor

Curriculum Areas to be Considered for Compacting	Procedures for Compacting Basic Material	Acceleration and/or Enrichment
<i>Name it.</i>	<i>Prove it.</i>	<i>Change it.</i>
<i>What material needs to be covered?</i>	<i>Exactly what material is to be excluded?</i>	<i>What enrichment and/or acceleration activities will be included?</i>
<i>What evidence shows a need for compacting?</i>	<i>How will you demonstrate mastery?</i>	<i>Independent study</i> <i>Acceleration Mini-courses</i> <i>Mentorships</i>
		<i>Small Group Investigations</i>

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An Example...MT Grade 7		
Curriculum Areas to be Considered for Compacting	Procedures for Compacting Basic Material	Acceleration and/or Enrichment
<i>Name it.</i>	<i>Prove it.</i>	<i>Change it.</i>
What material needs to be covered?	Exactly what material is to be excluded?	What enrichment and/or acceleration activities will be included?
<b>MSSS 4.6.8:</b> Explain how and why events (e.g., American Revolution, Battle of the Little Big Horn, immigration, Women's Suffrage) may be interpreted differently according to the points of view of participants, witnesses, reporters, and historians.	Students will score 90% or better on a pretest of content related to Conflict: American Revolution: Founders or Traitors?	Problem-based scenario: Who's to Blame?

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The Teaching Strategies Continuum*	
Direct	
<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Drill and recitation</li> <li>• Direct instruction</li> <li>• Concept development</li> <li>• Socratic Seminar</li> <li>• Synectics</li> <li>• Demonstration</li> <li>• Visualization</li> </ul>	<ul style="list-style-type: none"> <li>• Role playing</li> <li>• Mock Trial</li> <li>• Simulations</li> <li>• Inquiry-based instruction</li> <li>• Problem-based learning</li> <li>• Mentorships</li> <li>• Research and investigations</li> </ul>
	Indirect

\*adapted from (Tomlinson, Kaplan, Renzulli, Purcell, Leppien, & Burns, 2002).

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Talent Development: History			
Has no response; dislikes	Asks questions	Likes to look at historical things	Chooses projects with an historical slant
1	2	3	4
Chooses classes about history	Seeks out friends who love history	Thinks about being an historian	Makes plans for professional growth
5	6	7	8
Enjoys finding unanswered historical questions	Affinity	Collaborative research	Self-actualization
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### Forwarding Talent Development in History

<p><b>1</b> Find an entrée through the student's current interests</p> <p><b>2</b> Read books, etc. about historical people and events</p> <p><b>3</b> Investigate local and historical sites</p> <p><b>4</b> Enlist the support of the library media specialist to get additional resources</p> <p><b>5</b> Provide extension activities on projects that the student enjoys</p> <p><b>6</b> Discuss the discipline with the student; explore course offerings; select appropriate courses</p>	<p><b>7</b> Engage the support of local resources</p> <p><b>8</b> Locate shadowing and internship experiences</p> <p><b>9</b> Locate a mentor; help the students become involved as a member in related organizations</p> <p><b>10</b> Support student's intense work; locate resources; solicit professionals to give the student feedback</p> <p><b>11</b> Locate grants and fellowships</p> <p><b>12</b> Nurture the student's research; encourage publishing <sup>19</sup></p>
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### The ten components of a comprehensive curriculum unit, lesson, or task\*

<p> Content</p> <p> Assessment</p> <p> Introduction</p> <p> Teaching Strategies</p> <p> Learning Activities</p>	<p> Grouping Strategies</p> <p> Products</p> <p> Resources</p> <p> Enrichment Activities</p> <p> Differentiation</p>
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\*adapted from (Tomlinson, Kaplan, Renzulli, Purcell, Leppien, & Burns, 2002). 20

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### Open-Ended Strategies\*

- Constructivism
  - Connect new learning to students' own individual experiences and interpretations
- Higher level or inductive questioning
- Open-ended questions/assignments
- Problem-based learning
- Creative thinking skills

\*Adapted from (Gubbins, Westberg, Reis, Dinnocenti, Tieso, Muller, Park, Emerick, Maxfield, & Burns, 2002) 21

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## Creative Thinking Skills

- SCAMPER
- Talents Unlimited
- Synectics
- Creative Dramatics
- Creative Problem Solving
- DeBono's Six Thinking Hats
- What else???



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## Alternative Activities

Purpose: to increase the breadth by increasing the use of options and alternatives within lesson and unit plans.



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## Alternatives and Choices

The teacher provides whole group introduction and instruction and launches individual students on alternative missions

- Choice of resources
- Product options
- Varying goals
- Alternative activities



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**Tiered Activities**  
**To Alter the Depth of a Lesson**

- Key Features
  - Whole group introduction
  - Whole group initial instruction
  - Identification of developmental differences

Increase/Decrease:

- Abstraction
- Extent of Support
- Sophistication
- Complexity of Goals/resources/activities/products

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**Differentiation Techniques** 

- Vary the depth
- Adjust the abstraction
- Change the complexity
- Make contexts and examples more or less novel or familiar
- Adjust the pace
- Use more/less advanced materials and text
- Provide more/less scaffolding
- Provide frequent/intermittent feedback
- Provide/let students infer related strategies
- Infer concepts from applications and problem solving
- Provide more/fewer examples
- Be more/less explicit/inductive
- Provide simpler/more complex problems and applications
- Vary the sophistication level!
- Provide lengthier/briefer texts
- Provide more/less text support
- Require more/less independence or collaboration
- Require more/less evidence
- Ask for/provide analogies
- Teach to concepts before/after examples
- Teach principles before/after examples or concepts

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*Selecting a Preassessment Technique*

- What is the most powerful difference you expect to see among students?
- How might you identify these potential differences in your students?



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## Preassessment Techniques



- K-W-L Charts
- Journals
- Parent Letters
- Lists, Surveys
- Products
- Performances
- Conferences
- Concept Maps

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## Flexible Small Groups: A Definition

- Group membership varies
  - By prior knowledge, interests, preferences
- Group longevity varies
- Group varies by purpose
  - Instruction, learning activities, topic, resources, product development
- Group varies by size
  - 2-10 students

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## Scheduling and Rotations

### Three Group Paradigm

- ✓ Instruction (A, B, C, Free)
- ✓ Learning Activities (Open, A, B, C)
- ✓ Centers (C, Open, A, B)
- ✓ Anchoring Activities (B, C, Open, A)



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## Anchor Activities

- Portfolio management
- Journal writing
- Routine rehearsal tasks
- Math facts
- Problems-of-the-day
- Centers or stations
- Silent reading
- Manipulatives
- Hands-on Equations



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## An Example: Project *Civis*

<b>What?</b>	<b>Project <i>Civis</i>: A research demonstration project for underachieving promising learners, funded by the Jacob K. Javits Gifted and Talented Students Education Act, USDOE.</b>
<b>Who?</b>	Researchers from the School of Education, the Center for Gifted Education, and the US History department from The College of William and Mary and historians/educators from Colonial Williamsburg, Teaching Tolerance, and Street Law.

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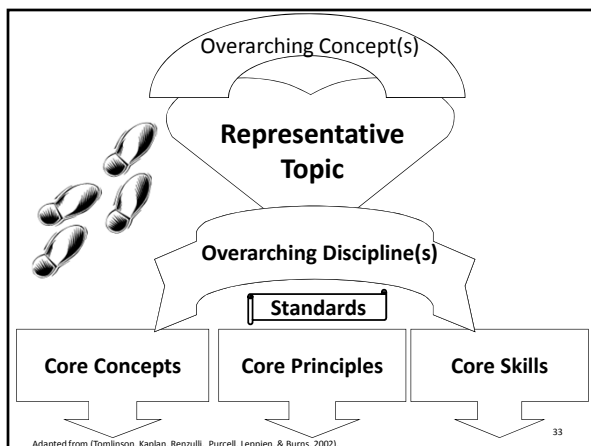
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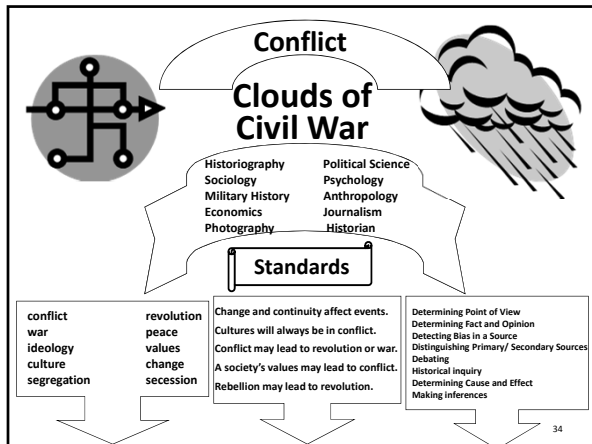
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Grades 4-8 Clouds of Civil War	
<b>Content Knowledge</b>	<i>Social studies programs should include experiences that provide for the study of how people create and change structures of power authority, and governance (NCSS, 2004).</i>
<b>Assessment</b>	PBL: The Civil War: Who's to Blame?
<b>Introduction</b>	Ask students if they're familiar with the story of The Three Little Pigs; solicit ideas
<b>Teaching Methods</b>	Socratic Seminar; Discussion
<b>Learning Activities</b>	Determining Point of View Determining Fact and Opinion
<b>Resources</b>	<i>The True Story of the 3 Little Pigs</i> ; primary documents on point of view
<b>Products</b>	Photo essay, political cartoon, diary entry
<b>Grouping</b>	Whole group, Small group based on choice
<b>Extensions</b>	Read journal entries based on role choice
<b>Differentiation</b>	Editorial on who has caused all wars.

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**A National Crisis!**

- The year is 1865. President Lincoln has been assassinated and President Johnson has convened a special committee to look into who was to blame for five years of brutal civil war. He has asked you to sit on the committee and present your findings (based on your personal experiences) to the committee and the entire Congress.

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**One Last Thought...**



“If you don't know where you are going, any road will get you there.”

*Lewis Carroll*

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