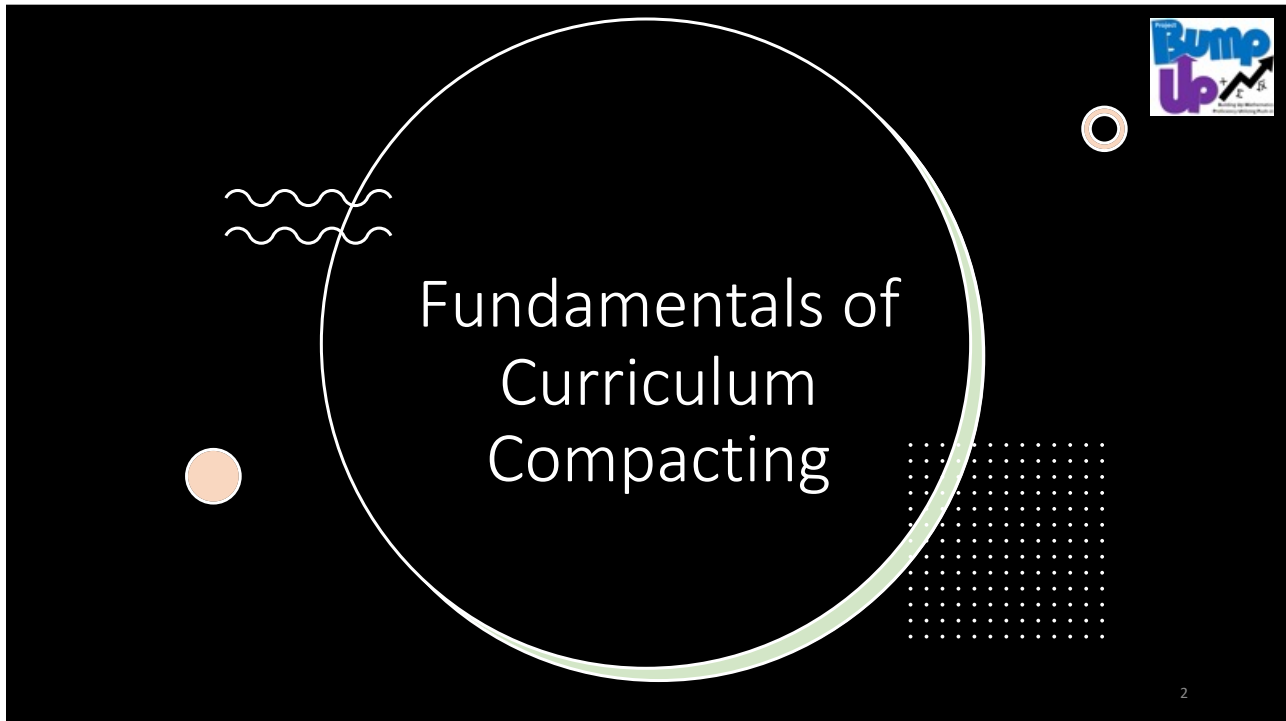


1



2



MEETING THE NEEDS OF EVERY STUDENT?

Imagine a professional development training.

- The presenter starts and you realize you have already had this training.
- How do you feel?
- What do you do?
- Imagine if this happened to you every day?

Our high ability students feel this frustration everyday, sitting in class, waiting to learn.

Reis et al. (1998) found that elementary and middle school teachers who implemented compacting could eliminate between 40%-70% of the regular curriculum for 10%-15% of students in their mixed ability classes



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STUDENT A

STUDENT B



Instructor:	Carpenter	Total Possible:	21	Student Score:	13.0 - 61.9%
Exam Name:	Physical 1 pre generic	Highest Score:	21 - 100.0%	Class Average:	17.1 - 81.3%
Exam Date:	Monday, May 9, 2016	Lowest Score:	6 - 28.6%	Weighted Proficiency Level:	>= 80%
Standard	Description	Correct	Total	Proficiency	Total
SC.7.P.11. Energy Transfer and Transformations - A. Waves involve a transfer of energy without a transfer of matter. B. Water and sound waves transfer energy through a material. C. Light waves can travel through a vacuum and through matter. D. The Law of Conservation of Energy: Energy is conserved as it transfers from one object to another and from one form to another.					
SC.7.P.11.1.	Recognize that adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.	3	5	60%	15
SC.7.P.11.2.	Investigate and describe the transformation of energy from one form to another.	6	8	75%	21
SC.7.P.11.3.	Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.	1	3	33%	9
SC.7.P.11.4.	Observe and describe that heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature.	3	5	60%	15
Overall Proficiency		13	21	62%	15
Proficiency Level		13	21	62%	15

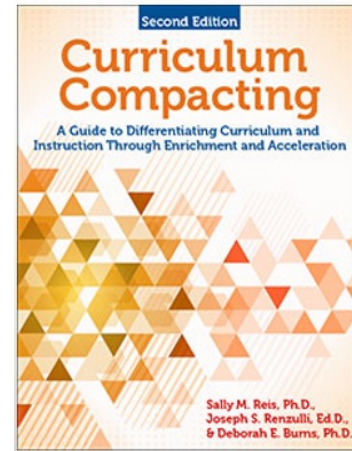
Instructor:	Carpenter	Total Possible:	21	Student Score:	19.0 - 90.5%
Exam Name:	Physical 1 pre generic	Highest Score:	21 - 100.0%	Class Average:	17.1 - 81.3%
Exam Date:	Monday, May 9, 2016	Lowest Score:	6 - 28.6%	Weighted Proficiency Level:	>= 80%
Standard	Description	Correct	Total	Proficiency	Total
SC.7.P.11. Energy Transfer and Transformations - A. Waves involve a transfer of energy without a transfer of matter. B. Water and sound waves transfer energy through a material. C. Light waves can travel through a vacuum and through matter. D. The Law of Conservation of Energy: Energy is conserved as it transfers from one object to another and from one form to another.					
SC.7.P.11.1.	Recognize that adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.	5	5	100%	15
SC.7.P.11.2.	Investigate and describe the transformation of energy from one form to another.	7	8	87.5%	21
SC.7.P.11.3.	Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.	3	3	100%	9
SC.7.P.11.4.	Observe and describe that heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature.	4	5	80%	15
Overall Proficiency		19	21	90.5%	15
Proficiency Level		19	21	90.5%	15

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What is compacting?

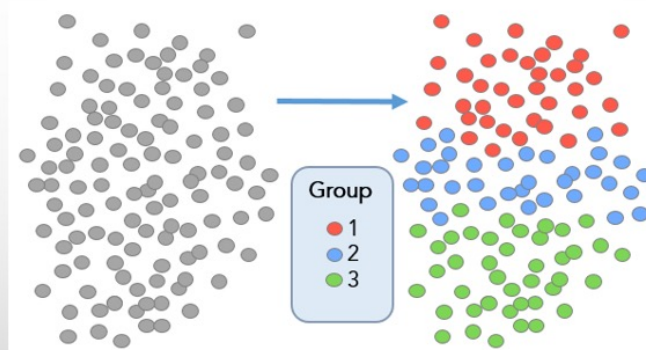
- “A strategy that streamlines and eliminates previously mastered regular curriculum for students who are capable of completing content at a faster pace.”
- Saves time by eliminating content mastered that can be used to provide enrichment or acceleration.
- A differentiation strategy for high ability learners with less work for you.



Reis et al., 2016

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GROUPING



ABILITY GROUPING IS BEST PRACTICE

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INDIVIDUAL EDUCATIONAL PROGRAMMING GUIDE
The Compactor

Prepared by: Joseph S. Rencault
Linda M. Smith

NAME _____ AGE _____ TEACHER(S) _____ Individual Conference Dates And Persons Participating in Planning Of IEP _____


SCHOOL _____ GRADE _____ PARENT(S) _____

CURRICULUM AREAS TO BE CONSIDERED FOR COMPACTING Provide a brief description of basic material to be covered during this marking period and the assessment information or evidence that suggests the need for compacting.	PROCEDURES FOR COMPACTING BASIC MATERIAL Describe activities that will be used to guarantee proficiency in basic curricular areas.	ACCELERATION AND/OR ENRICHMENT ACTIVITIES Describe activities that will be used to provide advanced level learning experiences in each area of the regular curriculum.
Name it	Prove it	Change it

Check here if additional information is recorded on the reverse side.

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Step 1: Name it

- What is in the unit?
 - Standards, benchmarks, objectives, concepts, vocabulary
- Deconstruct the standard(s)
 - What is/not included?
 - What level of knowledge is the content?
 - Example assessment items

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For Teachers			OR					For Students							
Number Sense and Operations			For each objective, check off and date how much you feel you know at this point.												
	Pre	Post		All	Most	Some	None								
MA.4.NSO.1.1 Express how the value of a digit in a multi-digit whole number changes if the digit moves one place to the left or right.															
MA.4.NSO.1.2 Read and write multi-digit whole numbers from 0 to 1,000,000 using standard form, expanded form and word form.															
MA.4.NSO.1.3 Plot, order and compare multi-digit whole numbers up to 1,000,000.															
MA.4.NSO.1.4 Round whole numbers from 0 to 10,000 to the nearest 10, 100 or 1,000.															
MA.4.NSO.1.5 Plot, order and compare decimals up to the hundredths.															

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Word Wall


- Expanded Form
- Multi-digit
- Standard Form
- Value
- Whole number
- Word Form


Essential Questions

- How do I express various forms of numbers for different purposes?
- What is the role of place value in our system of math?

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Step 2: Prove it


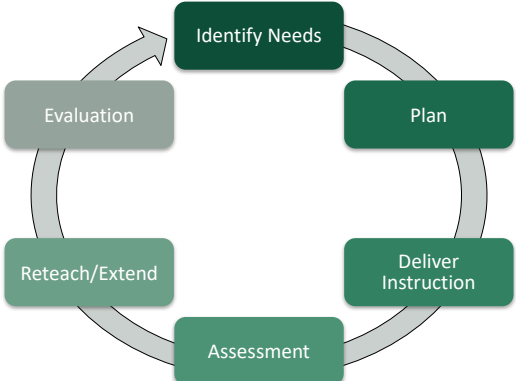
- Identify students for compacting math
- Measure student mastery level of content and skills of the unit
- Mastery does not mean they know everything

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GOAL OF ASSESSMENT

- **Determine student's needs:**
 - Ability to
 - recall information
 - apply concepts/perform a skill
 - use knowledge to think strategically
 - extend thinking about a concept
- **Guide Instruction**
 - Before (Pre-Assessment)
 - During (Formative Assessment)
 - After (Summative Assessment)

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Skills and/or Content

- Already mastered?
- Can master quickly?

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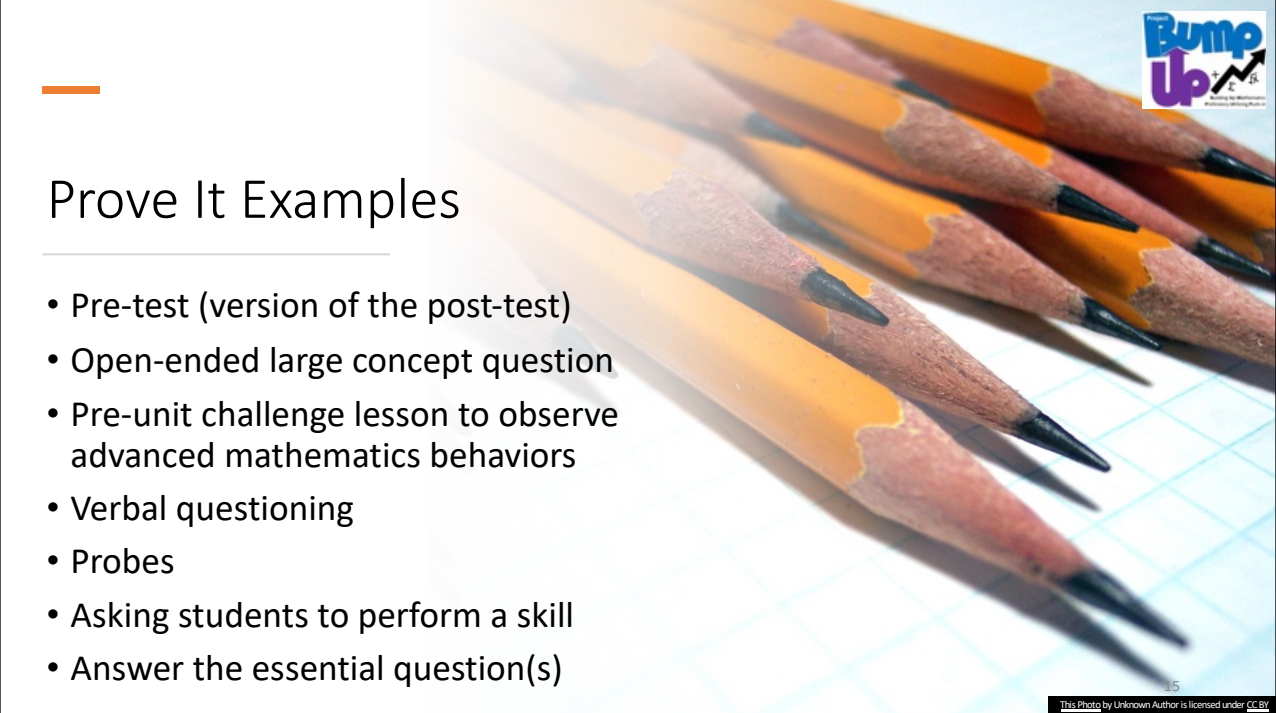
			
Students Who Know:	Little of the unit's concepts and skills prior to instruction	Some of the unit's concepts and skills prior to instruction AND/OR can learn the rest quickly, once shown	Almost all or all the unit's concepts and skills prior to instruction
Are Students Who Need:	Standard curriculum and instruction	To be taught what they do not know and allowed to skip repetitions if they quickly master the new content or skill	Something new and different



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Prove It Examples

- Pre-test (version of the post-test)
- Open-ended large concept question
- Pre-unit challenge lesson to observe advanced mathematics behaviors
- Verbal questioning
- Probes
- Asking students to perform a skill
- Answer the essential question(s)

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One way the data could present

- 60% or above on all standards
 - Would benefit from instruction and practice for those elements they need
 - Formative assessment success – go on to something else
 - Formative assessment not yet – full curriculum and instruction

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Another way the data could present

- Over 60% or above on 3 out of 5 standards
 - Compact out of those 3 standards
 - Provide instruction and limited practice for the additional 2 standards
 - Formative assessment success – go on to something else
 - Formative assessment not yet – full curriculum and instruction

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A choice of ways...

- Have students do an alternative activity or lesson focusing on standards 1–3 while everyone else does lessons for 1–3, and then join the class for 4 and 5.



OR

- Have students accelerate to standards 4 and 5 while everyone works on 1–3. Then, they can join the students who already compacted out of the unit.



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Step 3 – Change it

Alter the regular curriculum for those students in various ways

- Accelerate to concepts or units you do not traditionally have time to cover
- Excuse students from sections mastered; streamline the rest
- Real-world, problem-based learning
- Alternative unit
- A higher grade's related standards

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In the Classroom


- Class goals
 - Show mastery of all benchmarks
 - Provide differentiated learning for students according to their knowledge level
- Meeting students' needs
 - Pre-tests before each unit to guide instruction
 - Students who show mastery will compact out of the unit and receive alternative math instruction
 - Compacted students receive grades based on their demonstrated mastery and alternative work.

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Pacing Guide Differentiation Log



Unit: _____ Lesson: _____	Date: _____	Grouping of Advanced Students <input type="checkbox"/> Whole Class <input type="checkbox"/> Flexible Group <input type="checkbox"/> Individual
Standard(s) for Today's Lesson		
Standard(s) <input type="checkbox"/>		
Differentiation		
Content From a Supplemental Source Topic _____ Source _____ DOK Level 3 __ or Level 4 __? Brief description of differentiated activity:	Differentiation of the Standard Selected Above <input type="checkbox"/> Math differentiation option from the textbook for this lesson.* Page _____ Activity Number(s) _____ DOK Level 3 __ or Level 4 __? and/or <input type="checkbox"/> DoK Differentiated to: Level 3 __ Level 4 __? Brief description of differentiated activity:	Alternative Standard Grade __ Standard _____ DOK Level 3 __ or Level 4 __? Brief description of differentiated activity:
Other/Notes		

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