Putting it all Together
Unpacking a Differentiated Unit

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.
## Gr. 4 Geometry – 17 Days

### 1. Points, Lines, Angles, Rays (5 Days)
- **1.1:** Using your knowledge...
  pp. 238-39
- **1.2:** Points, Lines, and Rays
  pp. 240-43
- **1.3:** Parallel, Perpendicular Lines
  pp. 244-45
- **1.4:** Identifying Points, Lines, Rays, and Angles Together
  pp. 246-47
- **1.5:** Identifying Points, Lines, Rays, and Angles Independently
  pp. 248-49

### 2. Classify 2D Figures (5 days)
- **2.1:** What do you know?
  pp. 350-351
- **2.2:** Sorting Shapes Based on Side and Sorting Shapes Based on Angles
  Modeled and Guided Instruction
  pp. 352-355
- **2.3:** Sorting Triangles
  Modeled and Guided Instruction
  pp. 356-357
- **2.4:** Practice Classifying Two Dimensional Figures
  Guided Practice
  pp. 358-359
- **2.5:** Practice Classifying Two-Dimensional Figures
  Independent practice
  pp. 360-361

### 3. Symmetry (5 Days)
- **3.1:** What do you know?
  pp. 362-363
- **3.2:** Finding Lines of Symmetry
  Modeled and guided instruction
  pp. 364-365
- **3.3:** Drawing a Line of Symmetry
  Modeled and guided instruction
  pp. 366-367
- **3.4:** Practice Finding and Drawing Lines of Symmetry
  Guided practice
  pp. 368-369
- **3.5:** Practice Finding and Drawing Lines of Symmetry
  Independent practice
  pp. 370-371

### 4. Classify Shapes and Angles (2 days)
- **4.1:** Introduction, modeled and guided practice
- **4.2:** Independent Practice

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### Curriculum Guide Differentiation Log

<table>
<thead>
<tr>
<th>Content from a Supplemental Source</th>
<th>Differentiation of the Standard</th>
<th>Alternatives Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic: __________________________</td>
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<tr>
<td>Source __________________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOK Level 3 or 4 ______?</td>
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<td></td>
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<tr>
<td>Brief description of differentiated math activity:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Math differentiation option from the textbook for this lesson: Page ______ Activity Number(s):</td>
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<td></td>
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<tr>
<td>Brief description of differentiated math activity: DOK Level 3 or 4 ______?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and/or □ DOK differentiated math to Level 3 and/or Level 4 ______</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brief description of differentiated math activity:</td>
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</tbody>
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Other Information or Additional Comments: __________________________

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Curriculum Compacting

INDIVIDUAL EDUCATIONAL PROGRAMMING GUIDE
The Compactor

NAME________________________ AGE__________ TEACHER(S)________________________
SCHOOL_________________________ GRADE_________ PARENT(S)________________________

Curriculum areas to be considered for compacting:
- Provide a brief description of basic material to be covered during the teaching period and the evidence that suggests the need for compacting.

Procedures for compacting basic material:
- Describe activities that will be used to generate proficiency in basic curriculum areas.

Acceleration and enrichment activities:
- Describe activities that will be used to provide advanced learning opportunities in each area of the regular curriculum.

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
Unit Description

Grade 4
• Students will describe lines and angles and look for different kinds of lines and angles in 2D figures. Also, students will identify shapes that have symmetry.

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
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)

Pre-Assessment

1. Identify points, lines, line segments, rays, and perpendicular and parallel lines.
2. Draw and identify angles (rights, acute, obtuse).
3. Classify 2D figures based on sides and angles.
4. Draw and identify lines of symmetry in shapes.
Pre-assessment

60% or above on all standards

Or

60% or above on most standards

Points of Promise Checklist

Co-teach the Points of Promise Geometry Lesson

- Scout: One teach/one observe
- Look for some (not all) POP behaviors
- Keep the checklist in mind throughout future lessons
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
<table>
<thead>
<tr>
<th>Content From a Supplemental Source</th>
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<tbody>
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<tr>
<td>Source___________________________</td>
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<td></td>
</tr>
<tr>
<td>DOK Level 3 or 4?</td>
<td></td>
<td>Grade_________________</td>
</tr>
<tr>
<td>Brief description of differentiated math activity:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Math Differentiation option from the textbook for this lesson.**
- **Page ______ Activity Number(s):**
- **Brief description of differentiated math activity:**
  - DOK Level 3 or 4? or DOK Level 3 or 4?
  - and/or
  - DOK Differentiated math to: Level 3 or Level 4
  - Brief description of differentiated math activity:

| Other Information or Additional Comments ______________________________ |

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**Enrichment**

**Acceleration**
Selecting Standards

• Higher Standards or Those You Do Not Normally Reach
### Advanced Resources Units

<table>
<thead>
<tr>
<th>Grade</th>
<th>K-1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>Thinking Like A Mathematician</td>
<td></td>
<td></td>
<td></td>
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<td>x</td>
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<tr>
<td>Concept-Based Units</td>
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<tr>
<td>Splash</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Spatial Reasoning</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polygons Galore!</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beyond Base Ten</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Moving Through Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6-8</td>
</tr>
<tr>
<td>Math Curriculum for Gifted Students</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

https://education.wm.edu/centers/cfge/curriculum/mathematics/materials/index.php

### Open-ended, Real-world Project-based Learning

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**Advanced Resources Units**

- Thinking Like A Mathematician
- Concept-Based Units
- Splash
- Spatial Reasoning
- Polygons Galore!
- Beyond Base Ten
- Moving Through Dimensions
- Math Curriculum for Gifted Students

---

**Open-ended, Real-world Project-based Learning**

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https://projectbumpup.education.uconn.edu/
**Math Content Standards & Math Practices**

<table>
<thead>
<tr>
<th>Depth + Thinking</th>
<th>Level 1: Recall &amp; Reproduction</th>
<th>Level 2: Skills &amp; Concepts (routine applications)</th>
<th>Level 3: Strategic Thinking (support with data, equations, models, etc.)</th>
<th>Level 4: Extended Thinking (across domains)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Remember</strong></td>
<td>Know math facts, terms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Understand</strong></td>
<td>Attend to precision, evaluate expressions, plot point</td>
<td>Model with mathematics, estimate, predict, observe, explain relationships</td>
<td>Construct viable arguments, geometry proof</td>
<td>Integrate concepts across domains</td>
</tr>
<tr>
<td><strong>Apply</strong></td>
<td>Calculate, measure, make conversions</td>
<td>Make sense of routine problems, non-routine problems</td>
<td>Design &amp; conduct a project</td>
<td></td>
</tr>
<tr>
<td><strong>Analyze</strong></td>
<td>Identify a pattern, locate information in table</td>
<td>Use tools strategically, classify, organize data, extend a pattern</td>
<td>Reason abstractly, generalize a pattern, analyze multiple sources of evidence</td>
<td></td>
</tr>
<tr>
<td><strong>Evaluate</strong></td>
<td>Critique the reasoning of others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Create</strong></td>
<td>Design a complex model</td>
<td></td>
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</tr>
</tbody>
</table>

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**Steps for Leveling-up DOK**

1. **Analyze**
   - What is being asked of the students?
   - What is the DOK level?

2. **Determine**
   - **Where** do we see a similar concept in future standards?
   - Where can we provide less scaffolding?
   - What other questions can we ask about this problem?

3. **Construct**
   - **Select** from the standards and/or additional questions created.
   - **Rewrite** the problem to remove scaffolding and insert updated elements.

4. **Re-Evaluate**
   Now that you have leveled-up the question, re-evaluate what students are being asked to do at the new DOK level.
Deciding on advanced options...

---

**Curriculum Guide Differentiation Log**

<table>
<thead>
<tr>
<th>Content From a Supplemental Source</th>
<th>Differentiation for BUMP UP Students</th>
<th>Differentiation of the Standard</th>
<th>Alternative Standard</th>
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<tbody>
<tr>
<td>Topic____________________________</td>
<td>Grade______________________________</td>
<td>Math differentiation option from the textbook for this lesson.</td>
<td>Grade____________________________</td>
</tr>
<tr>
<td>Source___________________________</td>
<td>Page ______ Activity Number(s)______</td>
<td>DOK level 3 _____ or 4 _____?</td>
<td>DOK Level 3 _____ or 4 _____?</td>
</tr>
<tr>
<td>DOK Level 3 _____ or 4 _____?</td>
<td>Brief description of differentiated math activity:</td>
<td>and/or</td>
<td>Brief description of differentiated math activity:</td>
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</table>

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**Gr. 4 Geometry – 17 Days**

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**Deciding on advanced options...**
1. Examine the activity.

2. Decide if the activity is advanced. 
   If it is not...

3. Advance!
   - Increase complexity
   - Select an advanced standard
   - Choose from a supplemental source

---

<table>
<thead>
<tr>
<th>Textbook Activity</th>
<th>Is the the activity advanced?</th>
<th>What could I do or choose to make it more challenging?</th>
</tr>
</thead>
<tbody>
<tr>
<td>pp. 238-39 Write directions on how to draw a rectangle</td>
<td>No! There are 6 scaffolds that provide students with important details regarding rectangles. It makes it too easy.</td>
<td>Reduce scaffolding provided in parts a-f</td>
</tr>
</tbody>
</table>
# Curriculum Guide Differentiation Log

## Differentiation for JUMP UP Students

<table>
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<th>Content From a Supplemental Source</th>
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<tr>
<td>Source:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOK Level: 3, 4 or 4?</td>
<td></td>
<td></td>
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<tr>
<td>Brief description of differentiated math activity:</td>
<td></td>
<td></td>
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</tbody>
</table>

* Math differentiation option from the textbook for this lesson.*

Page 5 Activity Number(s) 30

Brief description of differentiated math activity:

1. DOK Level 3 X or 4 ?

   and/or

2. DOK Differentiated math to: Level 3 and/or Level 4

   Brief description of differentiated math activity:

   Lesson 1 - Removed scaffolding

---

## Textbook Activity

<table>
<thead>
<tr>
<th>Textbook Activity</th>
<th>Is the activity advanced?</th>
<th>What could we do or choose to make it more challenging?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorting Shapes Based on Side and Sorting Shapes Based on Angles – Modeled and Guided Instruction pp. 352-355</td>
<td>Parallel and perpendicular sort: The questions on p. 353 are lower level and repetitive of the sorting activities on pp. 352 and 354</td>
<td>2.2 Advanced Activity: Gr. 5 Ready Textbook pp. 323-324</td>
</tr>
</tbody>
</table>

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## Examine

<table>
<thead>
<tr>
<th>?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decide</td>
</tr>
<tr>
<td>“”</td>
</tr>
<tr>
<td>Advance</td>
</tr>
<tr>
<td>!</td>
</tr>
</tbody>
</table>

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27

28
Examine

Is the activity advanced?

Decide

Textbook Activity


Questions involve describing and recognizing features of a shape. Students are not developing or discovering new information to deepen their learning.

Advance

What could we do or choose to make it more challenging?

W&M Grade 4 Lesson 5.2 pp. 207-209 - develop methods for finding the area of a trapezoid
## Symmetry

**W&M Beyond Polygons**

**DOK Level**: X or 4?  
**Brief description of differentiated math activity**:  
Lesson 3 Gr. 3 Lesson 5.2 pp. 207-209: Analyzing lines of symmetry and formulating a pattern/rule about lines of symmetry and the number of sides shapes have.

<table>
<thead>
<tr>
<th>Content From a Supplemental Source</th>
<th>Differentiation for JUMP UP Students</th>
<th>Alternative Standard</th>
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</thead>
<tbody>
<tr>
<td><strong>Topic</strong>: Symmetry</td>
<td>□ Math differentiation option from the textbook for this lesson.</td>
<td>Grade ___ Standard ____________________</td>
</tr>
<tr>
<td><strong>Source</strong>: W&amp;M Beyond Polygons</td>
<td>Page ____ Activity Number(s)</td>
<td>DOK Level 3 ___ or 4 ____?</td>
</tr>
<tr>
<td><strong>DOK Level</strong>: X or 4?</td>
<td><strong>Brief description of differentiated math activity</strong>:</td>
<td>and/or</td>
</tr>
<tr>
<td><strong>Brief description of differentiated math activity</strong>:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction, modeled and guided practice of folding shapes.</td>
<td>□ DOK Differentiated math to: Level 3 ___ and/or Level 4 ___</td>
<td><strong>MiA Advanced Activity</strong>: Georgia Culminating Task Geometry Town pp. 90-97</td>
</tr>
<tr>
<td><strong>Is the the activity advanced?</strong>:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A quick exploration of folding shapes to see if they “fit exactly on top of each other,” which is an introduction to symmetry. Not much opportunity for students to understand symmetry in a real-world example.</td>
<td><strong>What could we do or choose to make it more challenging?</strong>:</td>
<td></td>
</tr>
<tr>
<td><strong>Independent Practice of polygon question</strong>:</td>
<td>Questions are regular-polygon specific and involve identification.</td>
<td></td>
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</tbody>
</table>
## Multiple differentiation options in one topic/unit:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Georgia Curriculum Frameworks</th>
<th>DOK Level 3 or 4 X</th>
<th>Brief description of differentiated math activity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>polygons</td>
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</tr>
<tr>
<td>Multiples</td>
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### Lesson 5.2 pp. 207-208:
Analyze lines of symmetry and formulating a pattern/rule about lines of symmetry and the number of sides shapes have.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Standard</th>
<th>G.2.3</th>
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</thead>
<tbody>
<tr>
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Lesson 2 - Gr. 5
Ready Textbook
pp. 323-324
thank you!