Learning Something New Matters

Del Siegle, Susan Dulong Langley, D. Betsy McCoach, Ashley Carpenter, Kenneth J. Wright, Kelly Kearney, & Sarah D. Newton

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Push-in Collaboration
Co-planning
Co-teaching

Math Differentiation
Pre-Assess
Differentiate by Unit

4th and 5th grade classrooms
- Increase identification of gifted students from underrepresented/underserved groups
- Increase math achievement
- Develop math talent
- Improve student motivation and attitude towards math
Collaborative Teaching Model

Reflect (Intrapersonal)
1. Reflect on my beliefs and values about teaching gifted learners.
2. Consider my strengths and areas of growth.

Engage (Interpersonal)
1. Build trust.
2. Establish norms.
3. Recognize and build on strengths.
4. Align philosophies.

Co-Plan
1. Review existing student data.
2. Set a purpose.
3. Establish roles and responsibilities.
4. Determine a co-teaching plan.
5. Select and prepare materials

Co-Teach
1. Implement co-teaching plan.
2. Adjust to student needs.

Fine Tune
1. Reflect on the co-teaching experience.
2. Review student outcomes.
3. Revise for next steps.

Stretch
(One teach, one assist)

Safari
(Alternative teaching)

Carousel
(Station teaching)

Tango
(Teaming)

Tier
(Parallel teaching)

Scout
(One teach, one observe)
### Differentiation Planning Guide

#### Standard(s) for Today's Lesson
- [ ]

#### Differentiation for BUMP UP Students

<table>
<thead>
<tr>
<th>Source</th>
<th>DOK Level</th>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Georgia Curriculum Frameworks</td>
<td>Level 3</td>
<td>30</td>
<td>Math differentiation option from the textbook for this lesson.</td>
</tr>
<tr>
<td>Symmetry W&amp;M Beyond Polygons Lesson 3 Gr. 3 Lesson 5.2 pp. 207-209</td>
<td>Level 4</td>
<td></td>
<td>Brief description of differentiated math activity:</td>
</tr>
</tbody>
</table>

- Page 5 Activity Number(s): 30
- DOK Level 3: X or 4

#### Alternative Standard

- Grade 5 Standard: G.2.3
- DOK Level 3: X or 4?

#### Other/Notes

- Lesson 2 - Gr. 5 Ready Textbook pp. 323-324
- Lesson 1 - Removed scaffolding

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- Unit: ___________________________
- Lesson: _________________________
- Date: __________________________
- Grouping of Advanced Students:
  - [ ] Whole Class
  - [ ] Flexible Group
  - [ ] Individual

- Topic: Polygons
- Source: Georgia Curriculum Frameworks
- X

- Symmetry W&M Beyond Polygons 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 orientation of riders of zebra leaves.
## Differentiation for BUMP UP Students

<table>
<thead>
<tr>
<th>Content From a Supplemental Source</th>
<th>Differentiation of the Standard</th>
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<tr>
<td><strong>Topic</strong> polygons</td>
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<tr>
<td><strong>Source</strong> Georgia Curriculum Frameworks</td>
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<tr>
<td><strong>DOK Level 3</strong> or 4 ✔️</td>
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**Brief description of differentiated math activity:**

- Lesson 4 - Geometry Town pp. 90-97
- Symmetry W&M Beyond Polygons
  - 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 rotation of sides across leaves

### Differentiation of the Standard

<table>
<thead>
<tr>
<th>Grade</th>
<th>Standard</th>
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<tbody>
<tr>
<td>5</td>
<td>G.2.3</td>
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**Brief description of differentiated math activity:**

- DOK Level 3 ✔️ or 4 🔴
  - and/or
- DOK Differentiated math to: Level 3 ___ and/or Level 4 __

**Alternative Standard**

- DOK Level 3 ✔️ or 4 🔴?

**Other/Notes**

- Lesson 2 - Gr. 5 Ready Textbook pp. 323-324
- Lesson 1 - Removed scaffolding
# Differentiation Planning Guide

**Unit:**

**Lesson:**

**Date:**

### Grouping of Advanced Students
- [ ] Whole Class
- [ ] Flexible Group
- [ ] Individual

### Standard(s) for Today’s Lesson
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<td>and/or</td>
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**Other/Notes**

- Lesson 2 - Gr. 5 Ready Textbook pp. 323-324
CHALLENGE: Move the slider on the number line below to rate how challenging math class was for you this week.

NEW MATH CONCEPTS: Select a rating star below to tell us how much you learned during math class this week.

INTEREST: Select a rating star below to tell us how interesting you thought math class was this week.

ENGAGEMENT: Select a rating star below to tell us how engaged you were during math class this week.

Very Easy/Muy Fácil - Very Hard/Muy Difícil

1 star = Nothing was new to me. / 1 estrella = Nada era nuevo para mí.
10 stars = Everything was new to me. / 10 estrellas = Todo era nuevo para mí.

1 star = Not at all engaged. / 1 estrella = Sin ningún compromiso
10 stars = Extremely engaged. / 10 estrellas = Con extremo compromiso
CHALLENGE: Move the slider on the number line below to rate how challenging math class was for you this week.

DESAFIO: Mueva el control deslizante en la línea numérica para calificar el nivel de desafío de la clase de matemáticas para usted esta semana.

Very Easy/Muy Fácil -- Just Right/ Nivel Correcto -- Hard/Muy difícil

-5 -4 -3 -2 -1 0 1 2 3 4 5

INTEREST: Select a rating star below to tell us how interesting you thought math class was this week.

INTERÉS: Seleccione una estrella de calificación para decírnos qué tan interesante estuvo la clase de matemáticas esta semana

1 star = Nothing was interesting to me / 1 estrella = Nada me interesó
10 stars = Everything was interesting to me / 10 estrellas = Todo me interesó.

Engagement:

1 star = Not at all engaged / 1 estrella = Sin ningún compromiso
10 stars = Extremely engaged / 10 estrellas = Con extremo compromiso
NEW MATH CONCEPTS: Select a rating star below to tell us **how much you learned during math class this week.**

NUEVOS CONCEPTOS

MATEMÁTICOS: Seleccione una estrella de calificación para decírnos **qué tan aprendiste durante la clase de matemáticas hoy.**

1 star = Nothing was new to me. / 1 estrella = Nada era nuevo para mi.

10 stars = Everything was new to me. / 10 estrellas = Todo era nuevo para mi.
INTEREST: Select a rating star below to tell us how interesting you thought math class was this week.

INTERÉS: Seleccione una estrella de calificación para decirnos qué tan interesante estuvo la clase de matemáticas esta semana.

1 star = Nothing was interesting to me / 1 estrella = Nada me interesó 10 stars = Everything was interesting to me / 10 estrellas = Todo me interesó.
CHALLENGE: Move the slider on the number line below to rate how challenging math class was for you this week.

DESAFÍO: Mueva el control deslizante en la línea numérica para calificar el nivel de desafío de la clase de matemáticas para usted esta semana.

NEW MATH CONCEPTS: Select a rating star below to tell us how much you learned during math class this week.

NUESOS CONCEPTOS MATEMÁTICOS: Seleccione una estrella de calificación para decirnos qué tan aprendiste durante la clase de matemáticas hoy.

1 star = Nothing was new to me. / 1 estrella = Nada era nuevo para mí.
10 stars = Everything was new to me. / 10 estrellas = Todo era nuevo para mí.

INTEREST: Select a rating star below to tell us how interesting math class was this week.

INTERÉS: Seleccione una estrella de calificación para decirnos qué tan comprometido estuvo durante la clase de matemáticas hoy.

1 star = Not at all engaged. / 1 estrella = Sin ningún compromiso
10 stars = Extremely engaged. / 10 estrellas = Con extremo compromiso

ENGAGEMENT: Select a rating star below to tell us how engaged you were during math class this week.

COMPROMISO: Selecte una estrella de calificación para decirnos qué tan comprometido estuvo durante la clase de matemáticas hoy.

1 star = Not at all engaged. / 1 estrella = Sin ningún compromiso
10 stars = Extremely engaged. / 10 estrellas = Con extremo compromiso
# Descriptive Statistics

*N = 248*

<table>
<thead>
<tr>
<th>Construct</th>
<th>M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenge</td>
<td>-0.316 (2.765)</td>
</tr>
<tr>
<td>New Math Concepts</td>
<td>5.717 (2.809)</td>
</tr>
<tr>
<td>Interest</td>
<td>6.386 (2.856)</td>
</tr>
<tr>
<td>Engagement</td>
<td>7.016 (2.464)</td>
</tr>
</tbody>
</table>
## Correlations

<table>
<thead>
<tr>
<th></th>
<th>New</th>
<th>Challenge</th>
<th>Interest</th>
<th>Engage</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Math Concepts</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Challenge</td>
<td>0.23</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest</td>
<td>0.46</td>
<td>-0.06</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Engagement</td>
<td>0.29</td>
<td>-0.18</td>
<td>0.50</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Interest as a Function of the “New” Rating
Engagement as a Function of the “New” Rating
Challenge as a Function of the “New” Rating
## Mediation Model

\( R^2 = .30 \)

<table>
<thead>
<tr>
<th>Effect</th>
<th>Standardized Regression Coefficient</th>
<th>( p )-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Effect: New → Engage</td>
<td>.12</td>
<td>.048</td>
</tr>
<tr>
<td>Indirect Effect: New → Engage</td>
<td>.18</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Total Effect: New → Engage</td>
<td>.30</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
Future Plans with the Data...

• Explore within and between person variance and correlations
• Explore whether relationships differ depending on the math content of the unit
• Explore the four constructs’ relationships with math achievement
• Explore between teacher/classroom differences
Comments? Questions? Suggestions?