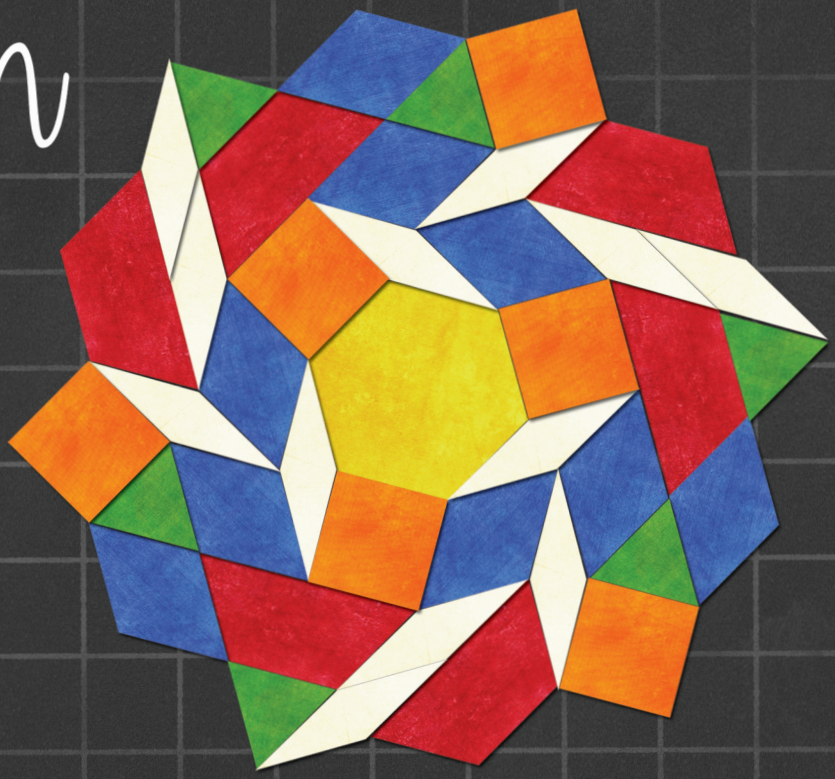
36 fun logic riddles that can be used independently or in groups of 4.

Grades 4-7

Problem Solving with Pattern Blocks



Activate critical thinking and problem solving skills, while reinforcing critical math skills.

Problem Solving *with* Pattern Blocks

Pattern blocks are not just for primary students! This resource will provide your leaners with engaging puzzle tasks that require critical thinking and problem solving skills. Students must analyze four clues in order to correctly arrange six different Pattern Blocks in a specific order. These tasks are designed to activate and expand students' logical reasoning skills while reinforcing various geometry concepts. The 36 non-routine activities are available in two different formats: "Task Cards"- for independent work, as well as "Group Clues"- for students to work in groups of four.

What's Included:

- Organizational and instructional tips
- "Five-Frames" for students to place Pattern Block pieces on
- 36 "Task Cards": Perfect for independent work
- 36 "Group Clues": Allows students to work in groups of four
- Student answer sheets for recording solutions
- Answer Key
- Printable Pattern Block Shapes (in color and black-and-white)

Skills Covered:

- Geometry concepts and vocabulary: acute, obtuse, right, congruency, polygons, etc.
- Spatial reasoning
- Visual awareness
- Cooperative learning and communication
- Problem solving and critical thinking

Questions or comments? Please email me at info@teacherthrive.com

Thank you for your purchase,

Melissa Tallman

preview

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Problem Solving with Pattern Blocks

Organizing Materials (Task Cards):

- Make a class set of the "Five-Frames" by printing on cardstock and laminating.
- Print the task card pages on card stock, cut in half, and laminate. You might consider making multiple sets in order to ease access for your students. For example, in my classroom, each table has its own set of task cards. I label the back of each task card with the table number to help keep them organized.
- If the task cards are going to be used independently, then you will also want to make sets of Pattern Blocks for each student. Each student will need one of each of the following 6 shapes: large rhombus (blue), small rhombus (white/beige/natural), trapezoid, triangle, square, and hexagon.
- Copy the "Answer Sheet" for each student: side one is for problems 1-18 and side two is for problems 19-36. Students can either record their answers by drawing the shapes on their answer sheets or using the abbreviations, which are provided on the answer sheet.

Organizing Materials (Group Clues):

- Make a "Five-Frame" for each group by printing on cardstock and laminating.
- The same exact clues from the task cards are also formatted so that students can work in groups of four to solve the problems. These clues are on separate smaller cards that can be printed on card stock, laminated, and cut to size. You can, however, simply print on copy paper and use as is.
- The procedures for students are provided on a half-sheet card that should also be given to the groups of students when working with the clues. You can print one of these for each set of clues and store in numbered (1-36) manila envelopes, along with the laminated clues from above.
- Each group will need one of each of the following 6 shapes: large rhombus (blue), small rhombus (white/beige/natural), trapezoid, triangle, square, and hexagon.
- Copy one "Answer Sheet" for each group: side one is for problems 1-18 and side two is for problems 19-36. Group members can either record their answers by drawing the shapes on their answer sheet or using the abbreviations, which are provided on the answer sheet.

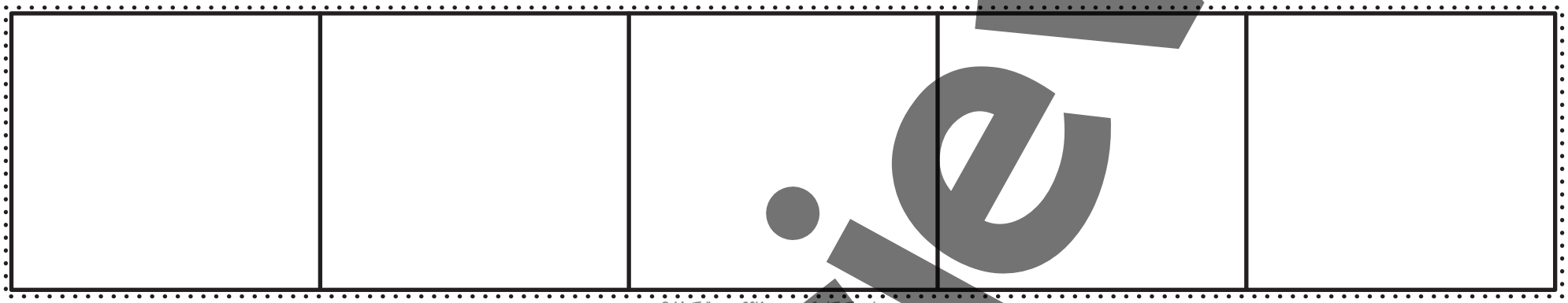
Instructional Tips:

- Vocabulary and/or concepts that may need to be "front-loaded": adjacent, obtuse, acute, right/90 degrees, congruent, consecutive, rhombus/rhombi, properties of equilateral triangles, area, perimeter, and fractional relations.
- The order of clues is always "left-to-right," so if a clue says "first space" or "beginning" that would be the furthest space to the left in the "Five-Frame."

Preview

Problem Solving *with* Pattern Blocks

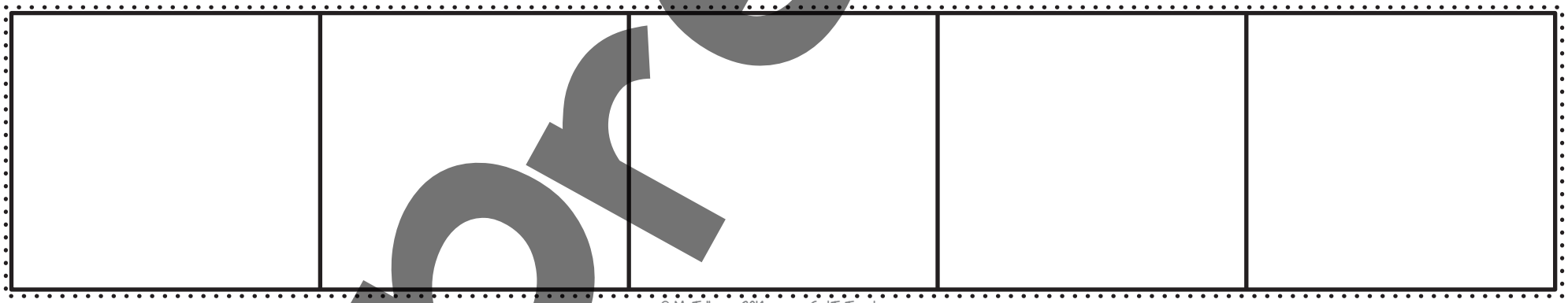
Use the four clues to correctly place the Pattern Block pieces in the "Five-Frame" below.



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Problem Solving *with* Pattern Blocks

Use the four clues to correctly place the Pattern Block pieces in the "Five-Frame" below.



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preview

Problem Solving with Pattern Blocks

~ Five-Frame ~

1. The last two shapes have the same perimeter, but different areas.

2. The center shape has all obtuse angles and is adjacent to the large rhombus.

3. The second shape has $\frac{1}{3}$ the area of the first shape.

4. None of the shapes have right angles.

? Which shape is not in the frame?

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Problem Solving with Pattern Blocks

~ Five-Frame ~

1. The shapes at both ends are not parallelograms.

2. The square is in the center.

3. The large rhombus is between the square and the trapezoid.

4. The first shape is $\frac{1}{6}$ the area of the second shape.

? Which shape is not in the frame?

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preview

Group Clues!

Problem Solving with Pattern Blocks

~ Five-Frame ~

1. Your group must have all six pattern block pieces; small rhombus, large rhombus, trapezoid, triangle, square, and hexagon.
2. Place all 4 clues face down and shuffle them around.
3. Each member will randomly draw a clue to share aloud with the group.
4. One at a time, each member must place at least one piece on the "Five-Frame" according to the clues.
5. Once all spaces of the "Five-Frame" have been filled, reread the clues to double check the solution.
6. Record the solution on the answer sheet. You can either draw the shapes on the answer sheet or use the abbreviations provided at the top of the answer sheet.

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Group Clues!

Problem Solving with Pattern Blocks

~ Five-Frame ~

1. Your group must have all six pattern block pieces; small rhombus, large rhombus, trapezoid, triangle, square, and hexagon.
2. Place all 4 clues face down and shuffle them around.
3. Each member will randomly draw a clue to share aloud with the group.
4. One at a time, each member must place at least one piece on the "Five-Frame" according to the clues.
5. Once all spaces of the "Five-Frame" have been filled, reread the clues to double check the solution.
6. Record the solution on the answer sheet. You can either draw the shapes on the answer sheet or use the abbreviations provided at the top of the answer sheet.

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Preview

~ Five-Frame ~

The last two shapes have the same perimeter, but different areas.

17

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~ Five-Frame ~

The shapes at both ends are not parallelograms.

18

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~ Five-Frame ~

The center shape has all obtuse angles and is adjacent to the large rhombus.

17

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~ Five-Frame ~

The square is in the center.

18

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~ Five-Frame ~

The second shape has $\frac{1}{3}$ the area of the first shape.

17

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~ Five-Frame ~

The large rhombus is between the square and the trapezoid.

18

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~ Five-Frame ~

None of the shapes have right angles.

17

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~ Five-Frame ~

The first shape is $\frac{1}{6}$ the area of the second shape.

18

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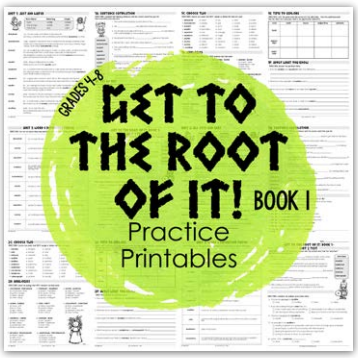
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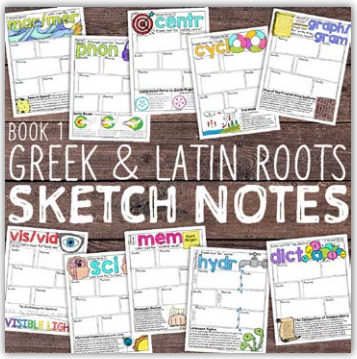
TEACHER thrive

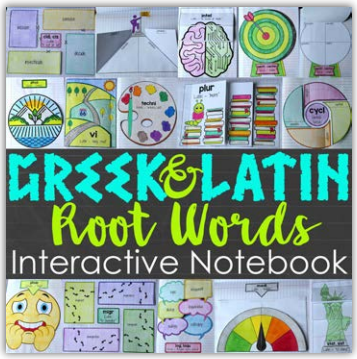
Helping teachers thrive, not just survive, in education

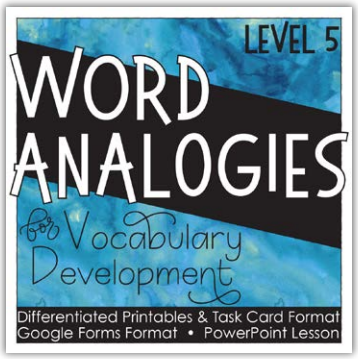
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VOCABULARY RESOURCES

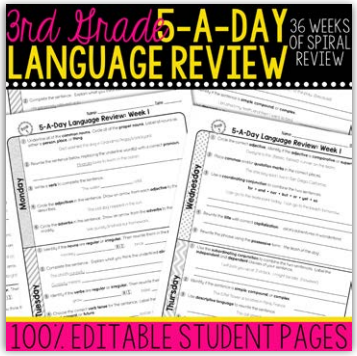


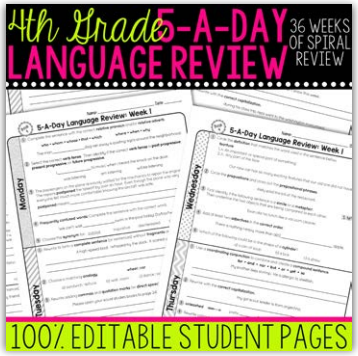


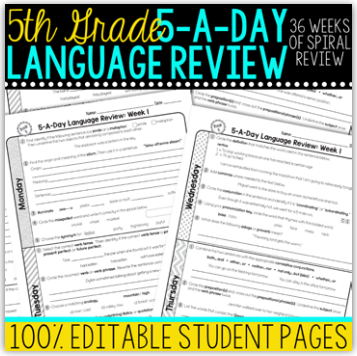


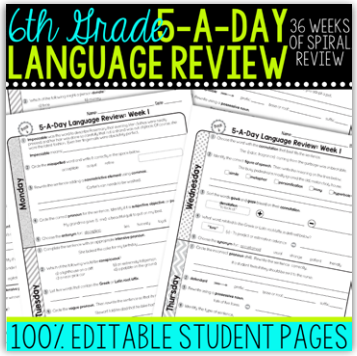


DAILY LANGUAGE REVIEWS (GRADES 3-8)

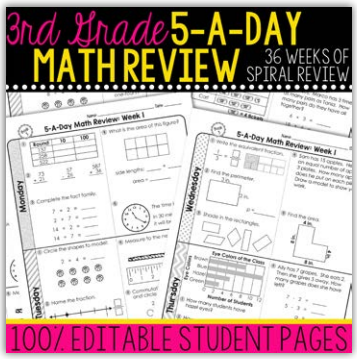


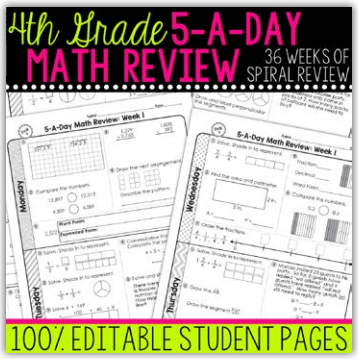


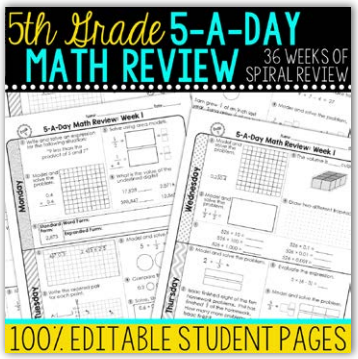


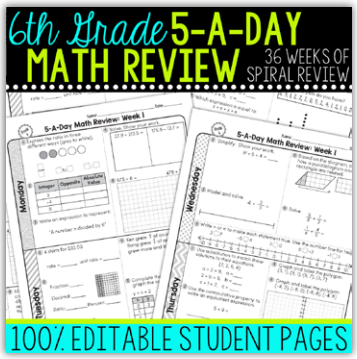


DAILY MATH REVIEWS (GRADES 3-6)









HANDS-ON MATH TILES



