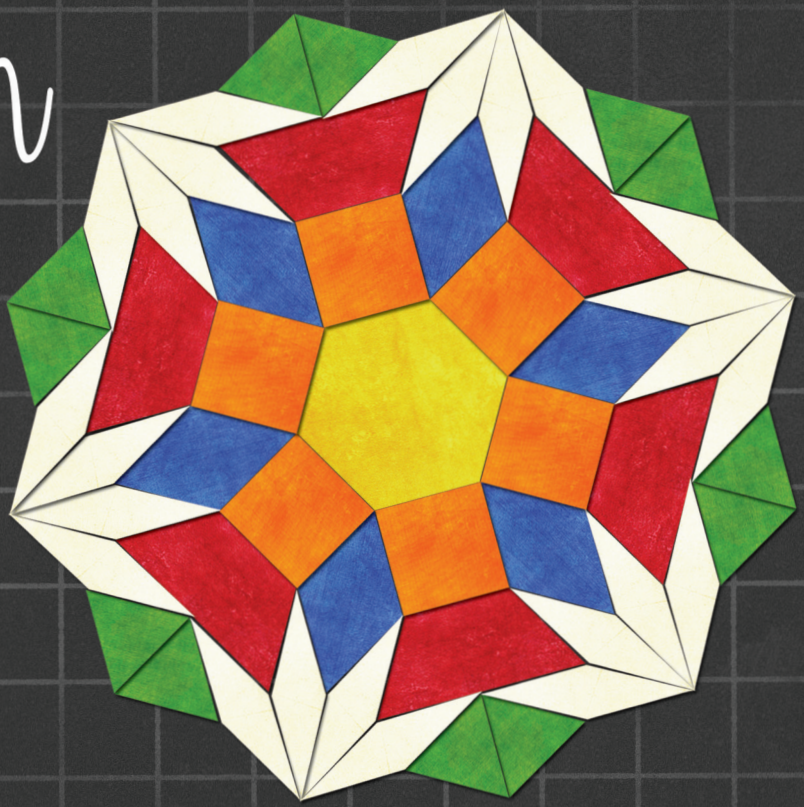
36 fun logic riddles that can be used independently or in small groups.

Grades 4-7

Problem Solving with Pattern Blocks 2



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

Problem Solving with Pattern Blocks 2

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 five clues in order to correctly arrange six different Pattern Blocks in a specific arrangement within a 5 x 4 "Matrix-Frame." These tasks are designed to activate and expand students' logical reasoning skills while reinforcing various math 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 up to five.

What's Included:

- Organizational and instructional tips
- "Matrix-Frame" 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 three to five
- 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

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preview

Problem Solving with Pattern Blocks 2

Organizing Materials (Task Cards):

- Make a class set of the "Matrix-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 "Matrix-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 3 to 5 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.

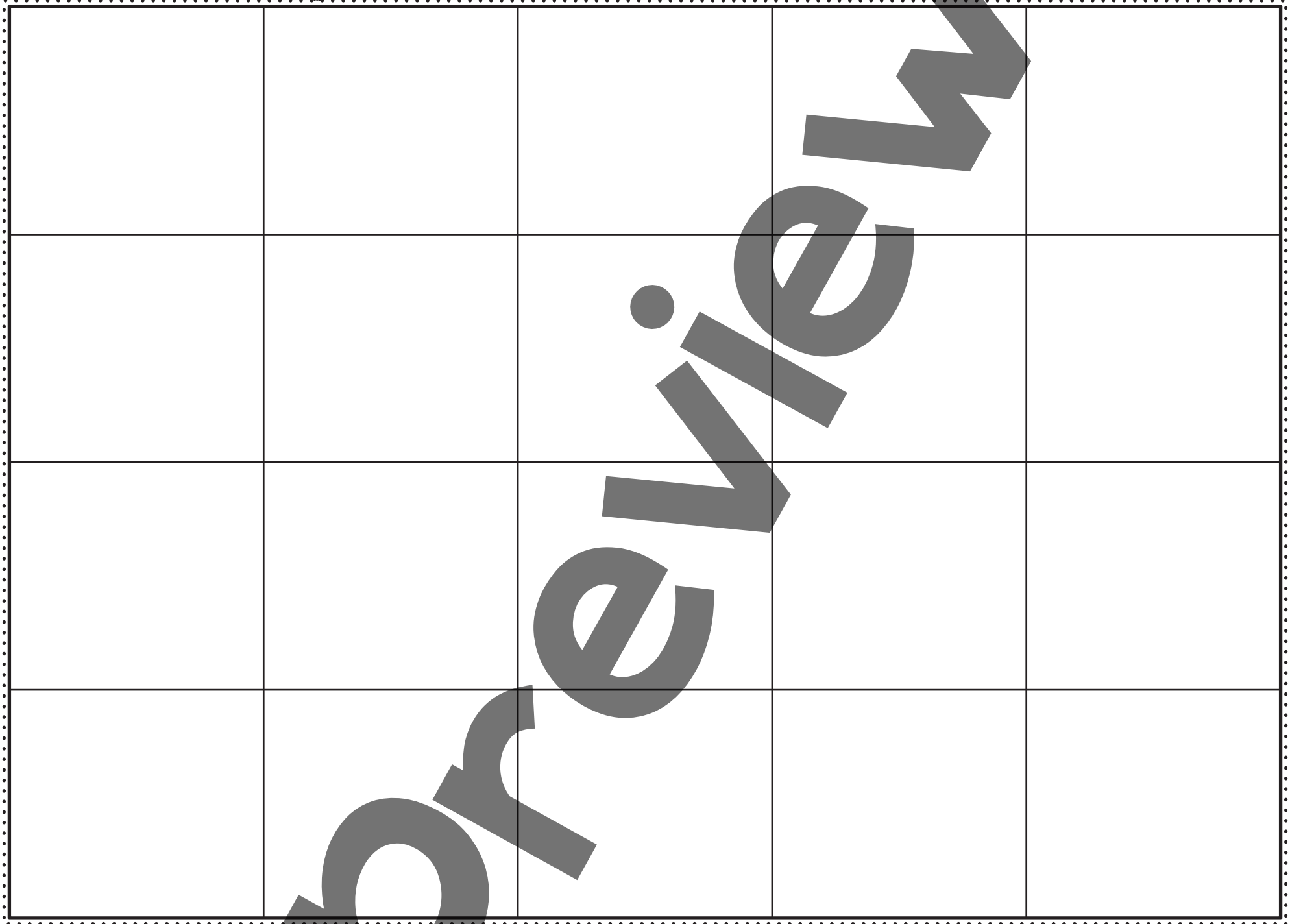
Instructional Tips:

- 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 "Matrix-Frame."

Preview

Problem Solving *with* Pattern Blocks 2

Use the five clues to correctly place the pattern block pieces in the "Matrix-Frame" below.



preview

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Problem Solving with Pattern Blocks 2

~ Matrix-Frame ~

1. The triangle is in the center of the second row. No other shapes are in the same row or column.

2. The four quadrilaterals are arranged in a 2 x 2 grid some place to the right of the triangle.

3. The hexagon is in the same column as the square and the small rhombus.

4. The large rhombus is directly above the trapezoid.

5. The square is on a corner.

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Problem Solving with Pattern Blocks 2

~ Matrix-Frame ~

1. The shapes that have the same perimeters are all in the first column.

2. The trapezoid is in the center column, directly to the right of the shape that is $\frac{1}{3}$ its size.

3. Four of the shapes are in the second row; half of these shapes are quadrilaterals.

4. The large rhombus is the only shape in the fourth row. There are no shapes in the fifth column.

5. The square is adjacent to the small rhombus and the triangle.

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preview

Group Clues! Problem Solving with Pattern Blocks 2

~ Matrix-Frame ~

1. Your group must have all six pattern block pieces: small rhombus, large rhombus, trapezoid, triangle, square, and hexagon.
2. Place all 5 clues face down and shuffle them around.
3. Each member will randomly draw a clue to share aloud with the group. If there are less than 5 people in the group, some students will have two clues.
4. One at a time, each member must place at least one piece on the "Matrix-Frame" according to the clues.
5. Once all six pieces have been placed on the "Matrix-Frame," 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 2

~ Matrix-Frame ~

1. Your group must have all six pattern block pieces: small rhombus, large rhombus, trapezoid, triangle, square, and hexagon.
2. Place all 5 clues face down and shuffle them around.
3. Each member will randomly draw a clue to share aloud with the group. If there are less than 5 people in the group, some students will have two clues.
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Preview

~ Matrix-Frame ~

The shapes that have the same perimeters are all in the first column.

20

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~ Matrix-Frame ~

The trapezoid is in the center column, directly to the right of the shape that is $\frac{1}{3}$ its size.

20

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~ Matrix-Frame ~

Four of the shapes are in the second row; half of these shapes are quadrilaterals.

20

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~ Matrix-Frame ~

The large rhombus is the only shape in the fourth row. There are no shapes in the fifth column.

20

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~ Matrix-Frame ~

The square is adjacent to the small rhombus and the triangle.

20

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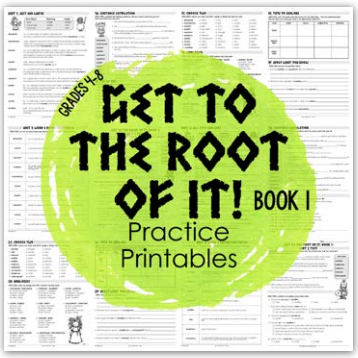
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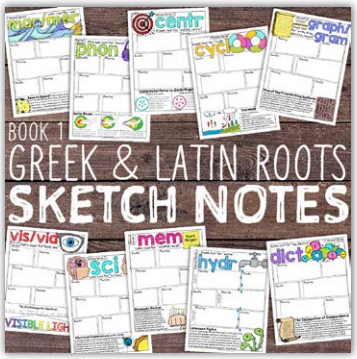
TEACHER thrive

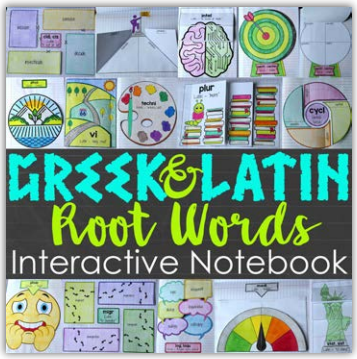
Helping teachers thrive, not just survive, in education

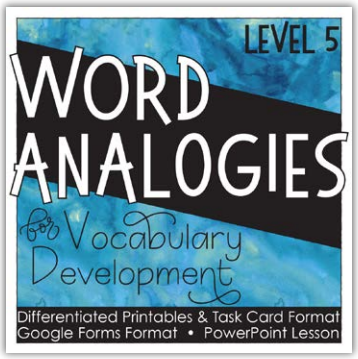
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VOCABULARY RESOURCES

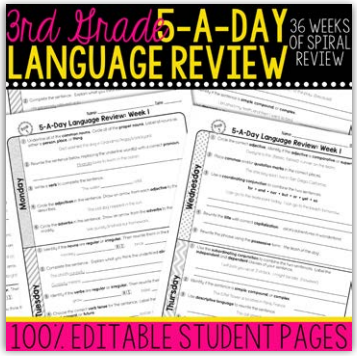


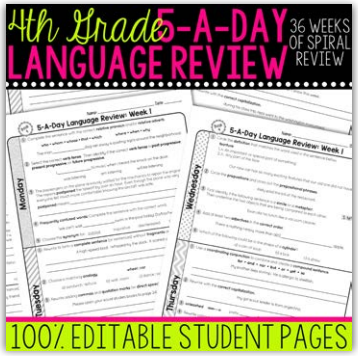


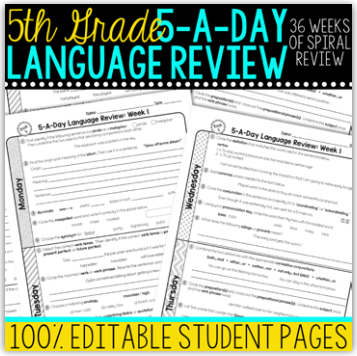


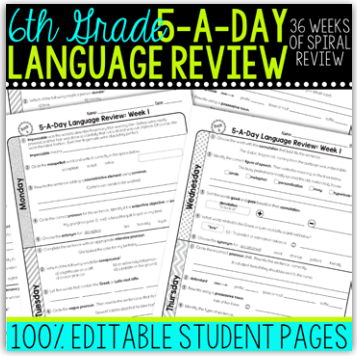


DAILY LANGUAGE REVIEWS (GRADES 3-8)

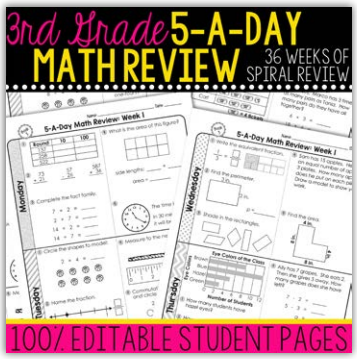


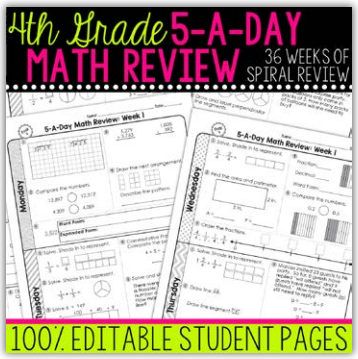


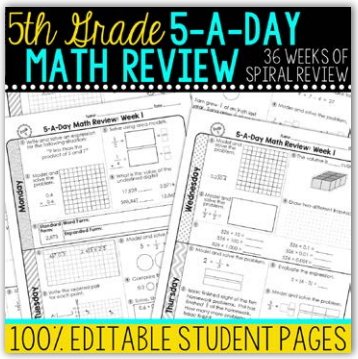


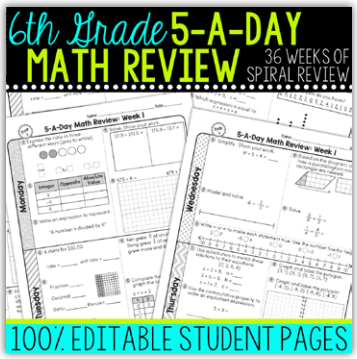


DAILY MATH REVIEWS (GRADES 3-6)









HANDS-ON MATH TILES



