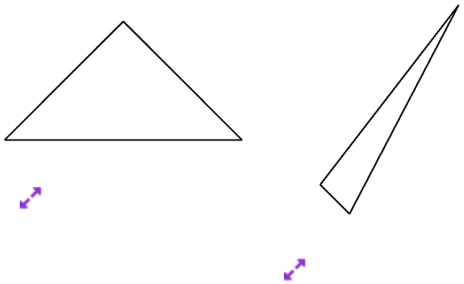
Course Title: Mathematics	Full Year	Required
Course Description: The mathematical work for kindergarten is partitioned into 8 units: ● Math in Our World ● Numbers 1–10 ● Flat Shapes All Around Us ● Understanding Addition and Subtraction ● Composing and Decomposing Numbers to 10 ● Numbers 0–20 ● Solid Shapes All Around Us ● Putting it All Together In these materials, particularly in units that focus on addition and subtraction, teachers will find terms that refer to problem types, such as Add To, Take From, Put Together or Take Apart, Compare, Result Unknown, and so on. These problem types are based on common addition and subtraction situations, as outlined in Table 1 of the Mathematics Glossary section of the Common Core State Standards.		
Additional Course Information: The big ideas in Kindergarten include: ● Representing and comparing whole numbers, initially with sets of objects; ● Understanding and applying addition and subtraction; and ● Describing shapes and space. ● Deeply understanding the concept that counting up is an addition process (+1/adding one more) More time in kindergarten is devoted to numbers than to other topics.	**Core Resources:** **Illustrative Mathematics** **Instructional Routines and Math Language Routines** **Glossary - Student-friendly** **Required Materials** **IM en Español** **Developing a Mathematical Community** **Counting on Counting Collections Blog**	**Are there any attachments at the course level that teachers will need?** Scope and Sequence - This document should be reviewed at the start of the year and each unit for information on language routines, expectations, and possible misconceptions. Pacing Guide and Dependency Diagrams K-5

Unit 3: Flat Shapes All Around Us	Duration: 15 Days
Unit Overview - FOCUS: This unit introduces students to the foundational concepts of geometry, with a focus on familiar flat (two-dimensional) shapes. Students may initially associate names of shapes with everyday objects. For example, a rectangle is a shape that looks like a door. Students need to see and interact with many examples of a shape to accurately relate what's in their environment to the geometric term. For instance, students may say that only one of these two shapes is a triangle—the isosceles triangle sitting on its base—because they have seen examples like it being referred to as triangles. They may not consider a scalene triangle sitting on a vertex as a part of the same shape category because, in their experience, a shape like it hasn't been associated with the term "triangle."  Students explore differences in shapes and use informal language to describe, compare, and sort them. Circle, triangle, rectangle, and square are four shapes that students study and name here. (They will not describe what makes each shape so until grade 1.) Students also learn a key idea, that congruent shapes are still "the same" even if they are in different orientations. Later in the unit, students use pattern blocks to make larger shapes. They reinforce their counting and comparison skills as they count and compare the pattern blocks used to create larger shapes. Students	**Topic Titles:** ● **Section A: Exploring Shapes in Our Environment** ○ Recognize and describe shapes in the environment ○ Use informal language to describe and compare shapes and their attributes ● **Section B: Making Shapes** ○ Explore Shapes

also use positional words (above, below, next to, beside) to describe the shapes they compose.	

Coherence: How does this unit build on and connect to prior knowledge and learning?

Students may have previously been exposed to shapes at home or in early childhood education settings. Students may be familiar with common two-dimensional shapes such as circles, rectangles, squares and triangles. Some students may have seen these shapes or had some time to explore them informally without knowing the name of the shape. Students may initially associate names of shapes with everyday objects. For example, a rectangle is a shape that looks like a door. Students need to see and interact with many examples of a shape to accurately relate what's in their environment to the geometric term.

Essential Questions:

1. How can I describe shapes in my environment?
2. How can I compare and compose shapes?

Enduring Understanding:

We can describe shapes in our environment by identifying and comparing their different attributes. Shapes have different attributes that allow us to tell what is the same or different about two or more shapes. These attributes include: the number of sides, position to describe location, congruency, lengths of sides, and the orientation of shapes.

We can compose larger geometric figures by using what we know about shapes and their attributes. Shapes can be compared by their attributes, and composed using those same attributes. Even though shapes may have a different orientation, they are still the same.

What Students Will Know:

- Shapes have different attributes that allow us to compare and contrast two or more shapes
- Names of shapes including circles, triangles, rectangles, squares
- Lengths of objects can be compared
- Pattern blocks have a variety of purposes
- Positional words that can be used to describe the location of shapes

What students will do:

- Use informal language to describe shapes
- Tell what is the same or different about two or more shapes
- Sort shapes into groups
- Compare the length of objects
- Identify circles, triangles, rectangles and squares
- Name circles, triangles, rectangles, and squares
- Identify the pattern blocks needed to fill a puzzle
- Count the number of pattern blocks used to make a shape
- Compare the number of pattern blocks used to make a shape

Unit Specific Vocabulary:

Above
Below
Beside
Circle
Fewer
Less
Longer
More
Next to
Rectangle
Shorter
Triangle
Same length
Not a _____ (non-example)

<table>
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<td>

Recognize shapes that are the same regardless of orientation
Identify the pattern blocks needed to fill a puzzle
Count the number of pattern blocks used to make a shape
Describe shapes made from pattern blocks
Use positional words to describe the location of shapes

</td>
<td>
Green triangle
Blue rhombus
Orange square
Yellow hexagon
Tan rhombus

Academic Vocabulary:
Sort
Groups
Pattern block
Describe
Compare
Missing
Same
</td>
</tr>
<tr>
<td>Entry Level Assessment and Connection to Unit:</td>
<td colspan="2">Unit Materials, Resources and Technology:

Unit 3 Teacher Guide
Illustrative Mathematics
Instructional Routines and Math Language Routines
Glossary - Student-friendly
Required Materials
IM en Español
Pacing Guide and Dependency Diagrams K-5

</td>
</tr>
<tr>
<td colspan="3">Opportunities for Interdisciplinary Connections:

☐ Grandma´s Purse by Vanessa Brantlet-Newton
☐ My Heart Fills with Happiness by Monique Gray Smith
☐ Pablo´s Tree by Pat Mora
☐ Saturday by Oge Mora
☐ There is a Bird on Your Head by Mo Willems
☐ Last Stop on Market Street by Matt de la Pena
☐ Miss Bindergarten Gets Ready for Kindergarten by Joseph Slate
☐ Big Red Lollipop by Rukhsana Khan

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</table>

- ☐ Count on Me by Miguel Tanco
- ☐ The Girl with the Parrot on Her Head by Daisy Hirst
- ☐ "Stitchin' and Pullin': A Gee's Bend Quilt" by Patricia McKissack

Any links, attachments and resources:	**Planning Ideas:**
Instructional Routines Document **Family Support Materials**	Components of a Typical IM Lesson What To Know About IM When Planning Where to Find the Mathematical Practices in the Units Assessing the Mathematical Practices

Topic # 1: Section A	Topic Name: Section A - Exploring Shapes in Our Environment	Duration: Recommended: 9 days (9 lessons)

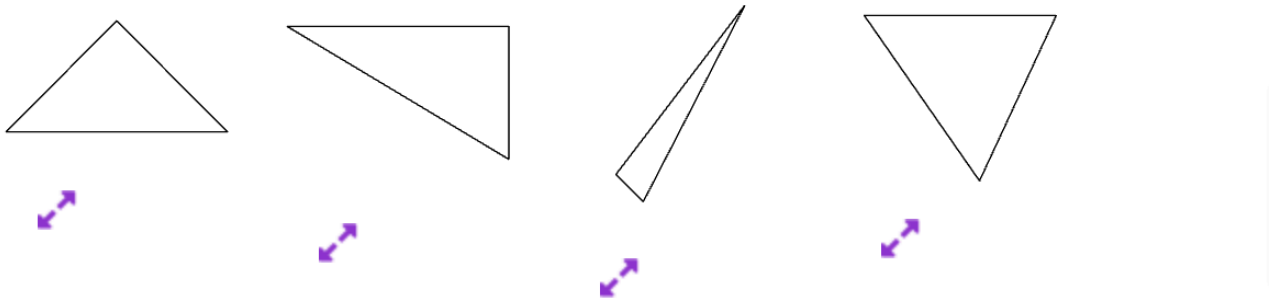
Topic Description:

In this section, students work to name, describe, and compare shapes in their environment more precisely. They focus on identifying circles, rectangles, squares, and triangles.

Students begin by identifying objects that look like flat shapes in books and in their surroundings. At this point, they are not yet expected to differentiate flat shapes from solid ones. For example, they may relate a tissue box to a rectangle. The difference between flat and solid shapes will be investigated in a later unit.

Likewise, students may not yet recognize distinctions in flat shapes with some similar features, such as a circle and an oval. Clarify that a shape is or is not as named, while acknowledging the connections students might be making. (“This shape is curved like a circle, but it is not a circle.”)

To help expand students’ mental image of shape categories, the shapes seen here are varied in size, type, and orientation.



When comparing shapes, students use their own language to describe how shapes are the same and different. They also consider the side length of rectangles and use “longer than” and “shorter than” to describe relative length. They learn that a square is a special kind of rectangle with all four sides having the same length (though are not required to know this definition).

Section Learning Goals

- Recognize and describe shapes in the environment.
- Use informal language to describe and compare shapes and their attributes.

Competencies Addressed:

Geometry

GEO.1: I can name shapes and identify whether they are two-dimensional or three-dimensional. (K.G.A.2-3)
GEO.2: I can use my understanding of positional words to describe objects in the environment. (K.G.A.1)
GEO.3: I can analyze and compare two- and three-dimensional shapes in order to describe their attributes. (K.G.B.4)
GEO.4: I can build and create simple shapes to form larger shapes. (K.G.B.5-6)

Understanding and Applying Number Systems

NS.1: I can tell the number of objects using counting and instant visual recognition. (K.CC.B.4-5)

NS.3 : I can count to 100 by ones and by tens and can count from a given number within 20. (K.CC.A.1-2)

NS.4: I can name and write numbers 0-20 to represent a group of objects. (K.CC.A.3)

Measurement and Data Investigations

MD.1: I can describe and compare measurable attributes. (K.MD.A.1-2)

MD.2: I can classify objects and count the number of objects in each category. (K.M.D.B.3)

Essential Question and Enduring Understanding Addressed in this Topic:

Essential Question:
How can I describe shapes in my environment?

Enduring Understanding:
We can describe shapes in our environment by identifying and comparing their different attributes.
Shapes have different attributes that allow us to tell what is the same or different about two or more shapes. These attributes include: the number of sides, position to describe location, congruency, lengths of sides, and the orientation of shapes.

In this Topic, students will know:

- 2-D shapes have their own attributes that we can use to compare and contrast shapes
- Shapes have special names that help us to identify similar shapes (squares, circles, triangles, rectangles)
- Positional words can be used to describe the location of shapes within our environment (above, below, beside, etc.)
- We can use 2-D shapes to model the world around us

Topic Vocabulary:
Above
Below
Beside
Circle
Fewer
Less
Longer

<table>
<tr>
<td></td>
<td>More
Next to
Rectangle
Shorter
Triangle
Same length
Not a _____ (non-example)

Academic vocabulary:
Sort
Groups
Describe
Compare</td>
</tr>
<tr>
<td rowspan="2">In this Topic, students will be able to:
● Use informal language to describe shapes
● Tell what is the same or different about two or more shapes
● Sort shapes into groups
● Compare the length of objects
● Identify circles, triangles, rectangles and squares
● Name circles, triangles, rectangles, and squares</td>
<td>Plan for Student Reflection:

Student Journal Prompts and Reflection Practices

Grade K Unit 3 I Can Self Assessment</td>
</tr>
<tr>
<td>Plan for Teacher Reflection:

● Reviewing formative assessments
● Developing scaffolds
● Collaborative scoring
● PLCs
● Planning for small groups

Teacher Journal Reflection Questions:
Lesson 1: Reflect on whose thinking was heard today. Reflect on whose thinking was not heard but could have enriched the conversations. What prompts or structures might better enable the latter to share their voices and reasoning?</td>
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</table>

	Lesson 2: What opportunities outside of math class do you have for encouraging students to see and describe the different shapes that make up objects in the environment? **Lesson 3**: Students shared their thinking multiple times in this lesson. What have you noticed about the language students use? What support can you offer to students who struggle to communicate their ideas orally? **Lesson 4**: In grade 1, students distinguish between defining and non-defining (color, orientation, size) attributes of shapes. How does the work of this lesson lay the foundation for the work that students will do in grade 1? **Lesson 5**: How did students think of triangles as they came into the lesson? In what ways did their understanding of triangles change upon completing the lesson? **Lesson 6:** Reflect on how comfortable your students are asking questions of you and of each other. What can you do to encourage students to ask questions? **Lesson 7:** How did the work of the previous lesson lay the foundation for students to be successful in the first activity of this lesson? **Lesson 8:** What language did students use to describe attributes of shapes in the second activity? When and how did you highlight the language that students use for the class? **Lesson 9:** What opportunities are you giving students to reflect on their understanding of the mathematical content?

Topic 1 Task Development

Each Topic has its own Task that serves as a roadmap for instruction during the unit. The task follows the Learning Cycle Model that drives teaching and learning in Naugatuck Public Schools.

Task Title: Topic 1 - Exploring Students in Our Environment	**Grade Level and Unit: Kindergarten, Unit 3**
Description of Task: Students will identify, describe, analyze, compare and compose two-dimensional shapes from their environment.	**Purpose of Task:** The purpose of this task is for students to use their environment to build their understanding of two-dimensional shapes (circles, squares, rectangles, triangles) and their attributes.
Background of Students/Learning Progression: In this unit, students continue to develop foundational concepts of geometry, focusing on familiar two dimensional shapes.	**Ensure all competencies are addressed in the task:** ▢ Yes, all competencies are addressed ▢ No - Task needs modification

Getting Started: In the lessons that make up Topic 1 - Section A of Unit 3, students will be asked:

- ☐ Which one doesn't belong? How do you know?

As students are engaging in the warm-up within Lesson 1, note which attributes of the teddy bear students have identified as why it does not belong. You can refer to this exercise as you continue exploring the ideas of shapes and attributes.

Section A

IM Lesson	**L1: What We Know About Shapes**	**L2: Match Shapes**	**L3: Describe and Compare Shapes**	**L4: Describe, Compare and Sort Shapes**	**L5: Circles and Triangles**	**L6: Rectangles and Squares**	**L7: Build with Straws**	**L8: Draw Shapes**	**L9: Shapes are Everywhere**
Learning Cycle Model	**Making Meaning**	**Making Meaning**	**Making Meaning**	**Making Meaning**	**Making Meaning**	**Making Meaning**	**Investigate**	**Investigate**	**Create and Produce**
Naugatuck Math Competency	K.G.3	K.G.1, K.G.2	K.G.3	K.NS.3, K.G.2, K.G.3, K.MD.2	K.NS.1, K.NS.4, K.G.3	K.MD.1, K.G.3	K.NS.3, K.G.4, K.MD.1	K.G.2, K.G.3, K.G.4	K.G.1, K.G.2, K.G.3, K.G.4
Math Practice Standards	MP 3	MP 4, MP 7	MP3, MP 8	MP6	MP5, MP6	MP3, MP6	MP6	MP 6, MP8	MP 4, MP6

Lesson Purpose	The purpose of this lesson is for students to use informal language to describe shapes and what they know about different shapes.	The purpose of this lesson is for students to identify shapes that are the same.	The purpose of this lesson is for students to describe and compare shapes.	The purpose of this lesson is for students to describe, compare, and sort shapes.	The purpose of this lesson is for students to identify, describe, and compare circles and triangles.	The purpose of this lesson is for students to identify, describe and compare rectangles and squares.	The purpose of this lesson is for students to build shapes from components.	The purpose of this lesson is for students to draw shapes.	The purpose of this lesson is for students to use what they know about shapes and their attributes to name and describe shapes in the environment.
Vocabulary Focus				Sort, straight sides, round sides, describe, compare	circle, triangle	Rectangle, square, longer, shorter, same length	Longer than, shorter than		
Lesson Materials/ Resources	Lesson 1 Slides Teacher Presentation Materials Student Pages **Activity 1:** ● Picture Books	Lesson 2 Slides Teacher Presentation Materials Student Pages	Lesson 3 Slides Teacher Presentation Materials Student Pages **Activity 1:** ● Picture Books **Activity 2:** ● Shape Cards ● Cut cards from the blackline master to create a	Lesson 4 Slides Teacher Presentation Materials Student Pages **Activity 2:** ● Each group of 2 needs a set of shape cards from the previous lesson.	Lesson 5 Slides Teacher Presentation Materials Student Pages **Activity 1:** ● Each student needs at least 2 different colored crayons or colored pencils. **Activity 2:**	Lesson 6 Slides Teacher Presentation Materials Student Pages **Activity 1:** ● Rectangle Sort Cards ● Cut out rectangle cards from the blackline master. Each	Lesson 7 Slides Teacher Presentation Materials Student Pages **Activity 1:** ● Each group of 2 needs a bag with at least 6 straws of each size.	Lesson 8 Slides Teacher Presentation Materials Student Pages **Activity 3:** ● Intro Build Shapes center (stage 2) ● Build Shapes (stage 1 & 2 cards)	Lesson 9 Slides Teacher Presentation Materials Student Pages **Activity 1:** ● clipboards **Activity 2:** ● Straws from previous lesson, pipe cleaners, string ● crayons/col

			set of cards for each group of 2. **Activity 3:** ● Intro Which One (Stage 1) center ● Which One Gameboard ● counters		● Cut out triangle cards from the blackline master. Each group of 4 needs 1 set of cards. ● Triangle Cards **Activity 3:** ● Intro Counting Collections (Stage 1) center ● 5-frames ● Collection of objects ● Counting mat	group of 4 needs 1 set of cards	● $2\frac{3}{4}$ inches ● $1\frac{1}{2}$ inch ● 1 inch ● $\frac{1}{2}$ inch **Activity 2:** ● Play dough or clay ● Straw bags from previous activity **Activity 3:** ● Intro Build Shapes center (stage 1) ● Build Shapes (stage 1 & 2 cards)		ored pencils
Assessment	**Formative Assessment Strategies: observation, questioning, student discourse.** **See Checkpoint A Document, Checkpoint A Teacher Guide, and Grade K Unit 3 I Can Self Assessment**								
									Section A - Practice Problems

Centers Materials	Picture Books (Stages 1-3) Bingo (Stages 1-2) Shake & Spill (Stages 1-2)	Picture Books (Stages 1-3) Bingo (Stages 1-2) Shake & Spill (Stages 1-2)	Picture Books (Stages 1-3) Bingo (Stages 1-2) Shake & Spill (Stages 1-2)	Which One (Stage 1) Picture Books (Stages 1-3) Bingo (Stages 1-2) Shake & Spill (Stages 1-2)	Which One (Stage 1) Picture Books (Stages 1-3) Bingo (Stages 1-2) Shake & Spill (Stages 1-2)	Counting Collections (Stage 1) Which One (Stage 1) Picture Books (Stages 1-3) Bingo (Stages 1-2) Shake & Spill (Stages 1-2)	Counting Collections (Stage 1) Which One (Stage 1) Picture Books (Stages 1-3) Bingo (Stages 1-2) Shake & Spill (Stages 1-2)	Build Shapes (Stage 1) Counting Collections (Stage 1) Which One (Stage 1) Picture Books (Stages 1-3) Bingo (Stages 1-2) Shake & Spill (Stages 1-2)	Build Shapes (Stage 1 & Stage 2) Counting Collections (Stage 1) Which One (Stage 1) Picture Books (Stages 1-3) Bingo (Stages 1-2) Shake & Spill (Stages 1-2)

Making Meaning:

This series of lessons allow students to make meaning through the exploration of shapes. Through Illustrative Mathematics' activities, students will begin to make connections between shapes and their attributes. As you monitor, keep note of the language students are utilizing to describe their shapes. You can bring this language to the Lesson Synthesis and provide more formal mathematical language for students to utilize.

Lesson 1: What We Know About Shapes

- The purpose of this lesson is for students to use informal language to describe shapes and what they know about different shapes.
- Lesson 1 Slides
- Teacher Presentation Materials

Lesson 2: Match Shapes

- The purpose of this lesson is for students to identify shapes that are the same.
- Lesson 2 Slides
- Teacher Presentation Materials

Lesson 3: Describe and Compare Shapes

- The purpose of this lesson is for students to describe and compare shapes.
- Lesson 3 Slides
- Teacher Presentation Materials

Lesson 4: Describe, Compare and Sort Shapes

- The purpose of this lesson is for students to describe, compare, and sort shapes.
- Lesson 4 Slides
- Teacher Presentation Materials

Lesson 5: Circles and Triangles

- The purpose of this lesson is for students to identify, describe, and compare circles and triangles.
- Lesson 5 Slides
- Teacher Presentation Materials

Lesson 6: Rectangles and Squares

- The purpose of this lesson is for students to identify, describe and compare rectangles and squares.
- Lesson 6 Slides
- Teacher Presentation Materials

Investigation:

Lesson 7: Build with Straws

- The purpose of this lesson is for students to build shapes from components.
- Lesson 7 Slides
- Teacher Presentation Materials

Lesson 8: Draw Shapes

- The purpose of this lesson is for students to draw shapes.
- Lesson 8 Slides
- Teacher Presentation Materials

Activities in Lesson 7 and 8 best represent investigation as students are using materials to create shapes and demonstrate their understanding of two-dimensional shape attributes. For example, using strays and clay to create squares, rectangles and triangles.

Create and Produce:

Lesson 9: Shapes are Everywhere

- The purpose of this lesson is for students to use what they know about shapes and their attributes to name and describe shapes in the environment.
- Lesson 9 Slides
- Teacher Presentation Materials

In lesson 9, Activity 2, students will create shapes from various materials from previous lessons and then will present their shape to peers during a gallery walk.

Monitor students as they share their descriptions as they create their shape.
Listen for students using the precise vocabulary sides, location, name of shape

Communicate and Present: **Lesson 9: Shapes are Everywhere** ● The purpose of this lesson is for students to use what they know about shapes and their attributes to name and describe shapes in the environment. ● Lesson 9 Slides ● Teacher Presentation Materials In lesson 9, Activity 2, students will share about the shape they created while answering "What shape did you make?", "Where did you see the shape in the school environment?" and "How many sides does your shape have?" during a gallery walk.	**Reflection:** ● IM Reflection Practices
Notes: **Follow lessons in numerical order.**	**Complete File with Resources and Task:**

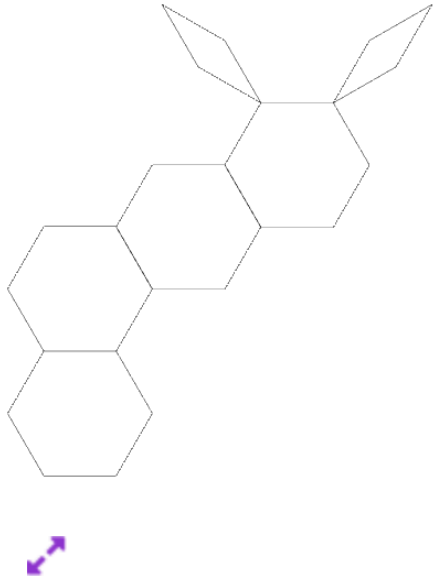
Topic # 2: Section B	Topic Name: Section B - Making Shapes	Duration: Recommended: 6 days (6 lessons)

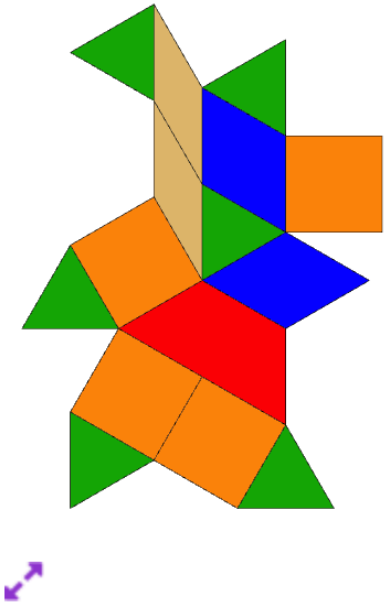
Topic Description:

In this section, students develop spatial reasoning by manipulating shapes and solving geometric puzzles while using geometric language from earlier work.

Students use pattern blocks to compose geometric figures, explore shapes in different orientations, find shapes that match exactly, and complete puzzles that require reorienting shapes.

Throughout the section, students use their own language to describe how the shapes they are working with are alike and different, including descriptions of the side lengths of shapes in their comparison.





Section Learning Goals

In this section, students explore shapes by putting shapes together to form larger shapes.

Competencies Addressed: **Geometry** **GEO.1**: I can name shapes and identify whether they are two-dimensional or three-dimensional. (K.G.A.2-3) **GEO.2**: I can use my understanding of positional words to describe objects in the environment. (K.G.A.1) **GEO.4**: I can build and create simple shapes to form larger shapes. (K.G.B.5-6) **Understanding and Applying Number Sense:** **NS.1**: I can tell the number of objects using counting and instant visual recognition. (K.CC.B.4-5) **NS.2** I can compare quantities and numbers. (K.CC.C.6-7) **NS.4**: I can name and write numbers 0-20 to represent a group of objects. **(**K.CC.A.3)	**Essential Question and Enduring Understanding Addressed in this Topic:** **Essential Question:** How can I compare and compose shapes? **Enduring Understanding:** **We can compose larger geometric figures by using what we know about shapes and their attributes.** Shapes can be compared by their attributes, and composed using those same attributes. Even though shapes may have a different orientation, they are still the same.
In this Topic, students will know: ● We can use language to describe shapes ● Attributes allow us to describe and compare two or more shapes ● We can sort shapes into groups by common attributes ● Circles, triangles, rectangles, and squares have unique names and unique attributes ● Comparing the lengths of objects helps us to determine specific shape's attributes	**Topic Vocabulary:** **Above** **Below** **Beside** Circle Fewer Less Longer More **Next to** Rectangle Shorter Triangle Green triangle Blue rhombus Orange square Yellow hexagon

	Tan rhombus **Academic vocabulary:** Pattern Blocks Missing Same
In this Topic, students will be able to: ● Identify the pattern blocks needed to fill a puzzle ● Count the number of pattern blocks used to make a shape ● Compare the number of pattern blocks used to make a shape ● Recognize shapes that are the same regardless of orientation ● Identify the pattern blocks needed to fill a puzzle ● Count the number of pattern blocks used to make a shape ● Describe shapes made from pattern blocks ● Use positional words to describe the location of shapes	**Plan for Student Reflection:** Student Journal Prompts and Reflection Practices Grade K Unit 3 I Can Self Assessment **Plan for Teacher Reflection:** ● Reviewing formative assessments ● Developing scaffolds ● Collaborative scoring ● PLCs ● Planning for small groups **Teacher Journal Reflection Questions:** **Lesson 10**: Revisit the norms you established as a class about doing mathematics. Which norms are working and which might need revision? Are there any norms you or your students might want to add? **Lesson 11**: In an upcoming lesson, students will put together pattern blocks to compose the same shape in more than one way. What do you notice in their work from today's lesson that you might leverage in that future lesson? **Lesson 12**: What do you love most about math? How are you sharing that joy with your students and

	encouraging them to think about what they love about math? **Lesson 13**: The standards ask students to describe the relative positions of objects using terms such as above, below, next to, and beside. When can you ask students questions involving positional worlds? How can you incorporate it into literacy time or transitions? **Lesson 14**: As you finish up this unit, reflect on the norms and activities that have supported each student in learning math. List ways you have seen each student grow as a young mathematician throughout this work. List ways you have seen yourself grow as a teacher. What will you continue to do and what will you improve upon in Unit 4? **Lesson 15:** What language did you hear students use to describe shapes in this lesson? How has the language that students use progressed since the beginning of the unit?

Topic 2 Task Development

Each Topic has its own Task that serves as a roadmap for instruction during the unit. The task follows the Learning Cycle Model that drives teaching and learning in Naugatuck Public Schools.

Task Title: Topic 2 - Making Shapes	**Grade Level and Unit: Kindergarten, Unit 3**
Description of Task: Students will use shape stampers to create an animal (larger shape).	**Purpose of Task:** The purpose of this task is for students to put shapes together to form larger shapes. They will describe their animals using shape names, positions of shapes, and the number of shapes.
Background of Students/Learning Progression: In this unit, students continue to develop their foundational understanding of shapes and can describe shapes in terms of shapes, quantities of shapes and positions of shapes. Previously, students demonstrated their understanding of common two-dimensional shapes (circles, squares, rectangles, and triangles) and built on these skills to compose new, larger shapes.	**Ensure all competencies are addressed in the task:** ☐ Yes, all competencies are addressed ☐ No - Task needs modification

Getting Started: In this lessons that make up Topic 2 - Section B of Unit 3, students will:
View the warm-up picture of lesson 10 and answer the question ¨What do you notice?”What do you wonder?¨

It may be helpful to provide students with additional examples of quilts created. Utilize the website:https://www.soulsgrowndeep.org/quilt-categories/patterns-geometry to provide students with more examples to identify different shapes that they see.

Section B

IM Lesson	**L10: Put Together Pattern Blocks**	**L11: Same Shapes**	**L12: More than One Way to Make a Shape**	**L13: Describe and Match Shapes**	**L14: Shapes in Art**	**L15: Animal Shape Stamp Art**
Learning Cycle Model	**Making Meaning**	**Making Meaning**	**Making Meaning**	**Making Meaning**	**Investigate**	**Create and Produce**

Naugatuck Math Competency	K.G.4, K.NS.1	K.G.1, K.NS.1, K.NS.2	K.G.4, K.NS.1, K.NS.2, K.NS.4	K.G.2, K.NS.1	K.G.1, K.G.2, K.G.4	K.NS.1, K.NS.2,K.G.1, K.G.2, K.G.4
Math Practice Standards	MP2	MP7	MP1, MP3	MP3	MP4	MP4
Lesson Purpose	The purpose of this lesson is for students to put together shapes to form larger shapes.	The purpose of this lesson is for students to identify shapes that are the same, regardless of orientation.	The purpose of this lesson is for students to put together shapes in multiple ways to form larger shapes.	The purpose of this lesson is for students to use positional words to describe the location of pattern blocks in a larger shape.	The purpose of this lesson is for students to put together shapes in a way that makes sense to them.	The purpose of this lesson is for students to put shapes together to form larger shapes.
Vocabulary Focus	Pattern blocks, more ____ than _____, put together	Missing, fewer, same, green triangle, blue rhombus, orange square, yellow hexagon, tan rhombus	More, fewer, same number, larger shapes, hexagon	**Above, below, next to, beside,** describe, match		
Lesson Materials/ Resources	Lesson 10 Slides Teacher Presentation Materials Student Pages **Activity 1:** ● Intro Pattern Blocks center (stage 4) ● Pattern blocks ● Pattern Blocks Stage 4 Recording Sheets **Activity 2:** ● Pattern blocks	Lesson 11 Slides Teacher Presentation Materials Student Pages **Activity 1:** ● Pattern blocks **Activity 2:** ● Pattern blocks ● Colored pencils/crayons	Lesson 12 Slides Teacher Presentation Materials Student Pages **Activity 1:** ● Pattern blocks ● Pattern blocks Stage 5 mat ● Pattern blocks Stage 5 recording sheet **Activity 2:** ● Pattern blocks	Lesson 13 Slides Teacher Presentation Materials Student Pages **Activity 1:** ● Colored pencils/crayons **Activity 2:** ● Pattern blocks ● Intro Match Mine Center (Stage 1)	Lesson 14 Slides Teacher Presentation Materials Student Pages **Activity 1:** ● Shapes in Art **Activity 2:** ● Colored pencils/crayons/ markers ● Construction paper ● Glue	Lesson 15 Slides Teacher Presentation Materials Student Pages **Activity 1:** ● Card stock ● Paint ● Paper ● Plates ● Tape ● Make shape stamps from strips of card stock for each

	● Pattern blocks puzzles					group of 4. ● Pour paint onto plates for each group of 4.
Assessment	**Formative Assessment Strategies: observation, questioning, student discourse.** **See Checkpoint B Document, Checkpoint B Teacher Guide, and Grade K Unit 3 I Can Self Assessment**					
	Section B - Practice Problems **End of Unit 3 Assessment** **End of Unit 3 Assessment Teacher Guide**					
Centers Materials	Geoblocks (Stages 1 and 2) Build Shapes (Stages 1 and 2) Pattern Blocks (Stages 1-4) Less, Same, More (Stages 1-4)	Geoblocks (Stages 1 and 2) Build Shapes (Stages 1 and 2) Pattern Blocks (Stages 1-4) Less, Same, More (Stages 1-4)	Geoblocks (Stages 1 and 2) Build Shapes (Stages 1 and 2) Pattern Blocks (Stages 1-5) Less, Same, More (Stages 1-4)	Match Mine (Stage 1) Geoblocks (Stages 1 and 2) Build Shapes (Stages 1 and 2) Pattern Blocks (Stages 1-5) Less, Same, More (Stages 1-4)	Match Mine (Stage 1) Geoblocks (Stages 1 and 2) Build Shapes (Stages 1 and 2) Pattern Blocks (Stages 1-5) Less, Same, More (Stages 1-4)	

Making Meaning:

Lesson 10: Put Together Pattern Blocks

- The purpose of this lesson is for students to put together shapes to form larger shapes.
- Lesson 10 Slides
- Teacher Presentation Materials

Lesson 11: Same Shapes

- The purpose of this lesson is for students to identify shapes that are the same, regardless of orientation.
- Lesson 11 Slides
- Teacher Presentation Materials

Lesson 12: More than One Way to Make a Shape

- The purpose of this lesson is for students to put together shapes in multiple ways to form larger shapes.
- Lesson 12 Slides
- Teacher Presentation Materials

Lesson 13: Describe and Match Shapes

- The purpose of this lesson is for students to use positional words to describe the location of pattern blocks in a larger shape.
- Lesson 13 Slides
- Teacher Presentation Materials

Investigation:

Lesson 14: Shapes in Art

- The purpose of this lesson is for students to put together shapes in a way that makes sense to them.
- Lesson 14 Slides
- Teacher Presentation Materials

Activities in Lesson 14 best represent investigation as students are recognizing shapes in different pieces of artwork from around the world. Students recognize shapes in each piece and discuss in the synthesis how they are alike and different. Students may notice that some artists put shapes together to create designs, while others use shapes to compose things we may recognize such as people, animals, and buildings. Then students investigate putting shapes together to form larger shapes. Students have opportunities to investigate different patterns and designs.

Create and Produce:

Lesson 15: Animal Shape Stamp Art

- The purpose of this lesson is for students to put shapes together to form larger shapes.
- Lesson 15 Slides

- Teacher Presentation Materials

In lesson 15, Activity 1, students will use shape stampers to compose animals. Students will describe their animals using shape names, positions of shapes, and the number of shapes.

Monitor students as they create their animal while listening for students using the precise vocabulary to describe shape names, positions of shapes, and number of shapes used.

Communicate and Present:
Invite students to share their animal creation and use math vocabulary to describe their composition. Students participate in a gallery walk and ask questions about the animals their classmates made.
If needed, prompt students to develop different types of mathematical questions. For example:
"What 'how many' questions can we ask about the animal?"
"Are there questions that we can ask using 'fewer'?"
"Do you have any questions about which shapes they used?"
"What questions can we ask about where we can find certain shapes in the animal?"
"As you walk around to see the animals that your classmates made, ask them at least 2 questions."

Lesson 15: Animal Shape Stamp Art

- The purpose of this lesson is for students to put shapes together to form larger shapes.
- Lesson 15 Slides
- Teacher Presentation Materials

In lesson 15, Activity 1, students will use shape stampers to compose animals.

Monitor students as they compose their animal while listening for students using the precise vocabulary to describe shape names, positions of shapes, and number of shapes used. Ask, "What is the same about the animals that they created and the shapes they used? What is different?"

Reflection:

- IM Reflection Practices

Utilize the picture from the warm-up. In their math journals, have students respond to the following questions:

- "Which of these animals do you think would be easiest to make with shapes? Why?
- Which animal would be the hardest to make?"
- "Which shapes would you use to make an elephant?"

This may be done as a whole group discussion as well.

Notes: Follow lessons in numerical order.	Complete File with Resources and Task: