Rider University Lesson Plan Rubric Template

Preliminary Information	
Candidate Name: Juliana Alusik	Date: May 8, 2019
Subject: Geometry *Select ELA, Math, SS, Sci, Art, PE/Movement , Health*	Lesson Title: Pattern Block Shapes
Grade: First Grade Number of Students: ____9____ male ___11____ female ___1____ Students with IEP/504 ____4_____ ELL	
Structure or Grouping included in this lesson (select all that apply): *Whole group* *Small group* *One-to-one* *Other (explain)*	

Lesson Component	Highly Effective	Effective	Developing	Ineffective
Development, Learning, and Motivation Through Content Knowledge				
1) **Central Focus/ Big Idea**. Provide rationale that shows content knowledge. **ACEI 1.0** **CAEP 1.1** **NJPST 4, 7** **InTASC 4, 7**	The rationale explains the relationship between the central focus of the lesson and the big idea(s) in the broader content/discipline.	The rationale identifies the central focus of the lesson and identifies the big idea(s) in the broader content/discipline.	The rationale identifies either the central focus of the lesson or the big idea(s) in the broader content/discipline, but not both.	The rationale identifies neither the central focus of the lesson nor the big idea(s) in the broader content/discipline.

Place this portion of your plan in the box that follows:

It is important for students to learn geometry since shapes are all around us and are used in our daily lives. By learning to identify shapes in their surroundings and build with these shapes, the students can apply their learning in a hands-on way. According to Ms. Baldrey, it was an important goal for students to be able to manipulate the shapes in any form and recognize them as this would aid in their recognition of shapes within their environment. (R. Baldrey, personal communication, April 14, 2019). Learning to manipulate and recognize shapes in the environment connects learning to the students' lives and has a beneficial impact of improving spatial awareness. Teaching shapes and their properties impacts students as "geometry involves developing and applying spatial sense...an intuition about shapes and their relationships between them" (de Walle, Karp & Bay-Williams, 2019, p. 501). "Spatial sense includes the ability to mentally visualize objects and spatial relationships--to turn things around in one's mind" (de Walle, Karp & Bay-Williams, 2019, p. 501). Learning to recognize and move shapes within areas is beneficial to real life events, such as moving, packing, storing and more. By applying their shapes knowledge, students become more efficient in their daily lives.

In addition to this, students are expected to learn shapes and properties in the first grade. According to the New Jersey Learning Standards, first grades are expected to "Reason with shapes and their attributes" (2016). Specifically, there are two main goals of this, the first goal is to "distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes" (New Jersey Learning Standards, 2016, p. 6). By identifying specific attributes of shapes, students begin to recognize shapes and label them as they develop through the van Hiele Theory of Geometric Thought. In this theory, this standard aligns with change from the level zero to level one. At the first level, level zero: visualization, students recognize and name shapes based on appearance and "the emphasis at level 0 is on shapes that students can observe, feel, build (compose), and take apart (decompose), or work with in some manner" (de Walle, Karp & Bay-Williams, 2019, p. 502). By mastering level zero, students can then move forward to level one. At the second level, level one: analysis, students begin to classify shapes and recognize shapes to have specific properties. "Although level one students continue to use physical models and drawings of shapes, they begin to see these individual shapes as examples of classes of shapes" (de Walle, Karp & Bay-Williams, 2019, p. 504). These standards involve the progression of student geometrical learning and further build on this with the second standard goal. First graders are also expected to "compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape" (New Jersey Learning Standards, 2016, p. 6). By learning to identify defining attributes of shapes and compose new shapes out of others, students create a foundation in shape recognition that enables them to further develop in geometric thinking and advance their spatial awareness.

Thus, it is important for students to learn how to identify shapes and their properties, as well as be able to compose and decompose shapes for their future geometric learning. This can advance their spatial awareness in the world around them as they recognize shapes in numerous colors, size, and orientations, as well as parts of other shapes. Due to these findings, this lesson is appropriate to teach after students have already been introduced to their shapes and their properties. This lesson is most effective for review and application of knowledge of the shapes specified and to enforce understanding of shapes in differing orientations, and for the composition and decomposition of shapes into other shapes.

2) **References/Supporting Research** Cite resources used to research and support the instructional planning. **ACEI 1.0** **CAEP 1.2** **NJPST 9** **InTASC 9**	The plan provides accurate and complete list of references for all cited work.	The plan provides a complete list of references for all cited work. Citations have some inaccuracies.	The plan provides inaccurate and incomplete list of references for cited work.	The plan does not list references.

Place this portion of your plan in the box that follows:

Ms. Rebecca Baldrey.

New Jersey State Board of Education. (2016). New Jersey Learning Standards for English Language Arts. Retrieved from https://www.state.nj.us/education/cccs/2016/ela/g01.pdf

Van de Walle, J. A., Karp, K. S. & Bay-Williams, J. M. (2019). *Elementary and Middle School Mathematics Teaching Developmentally* (10th ed.) New York: Pearson Education Inc.

3) **Curriculum/Content Standards** NJ Student Learning Standards (NJSLS) align with central focus and learning objective(s). **ACEI 2.1-2.7** **CAEP 1.1, 1.4** **NJPST4** **InTASC 4**	The full NJSLS is/are listed and aligned with the central focus and learning targets/ objectives.	The NJSLS is/are partially listed and aligned with the central focus and learning targets/ objectives.	The NJSLS is/are not accurately presented or is/are misaligned with the central focus and learning target/objective(s).	The NJSLS are either not accurately presented or missing.
Place this portion of your plan in the box that follows: "NJLA.M.1.G. A. Reason with shapes and their attributes. 1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. 2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape." (New Jersey Learning Standards, 2016, p. 6).				
4) **Learning Target(s)/Objectives**: List appropriate, observable, and measurable **objective(s)** describing what learners are expected to be able to do at the end of the lesson. **ACEI 3.1** **CAEP 1.1** **NJPST 4, 7** **InTASC 4, 7**	The objective(s) include a clear description of what learners will be able to do at the end of the lesson. Objective(s) are appropriate, observable, and measurable.	The objective(s) are generally appropriate, but not necessarily observable.	The objective(s) are listed but unrelated to standards or inappropriate.	The objective(s) are missing from the lesson plan.
Place this portion of your plan in the box that follows: Students will be able to identify the names of plane shapes by labeling these shapes on each outline with 90% accuracy. Students will be able to construct larger shape outlines out of plane shape manipulatives by altering shapes in different orientations with 3 out of 4 outlines complete.				
5) **Academic Language and Supports** - Teacher and student discourse uses the vocabulary, syntax, and representations specific to the content area to	The plan richly describes anticipated use and application of vocabulary, syntax, and representations specific to the content area to support student learning.	The plan describes anticipated use and application of vocabulary, syntax, and representations specific to the content area to support student learning. The lesson provides	The plan describes limited use and application of vocabulary, syntax, and representations specific to the content area to support student learning	The plan does not describe the use and application of vocabulary, syntax, and representations specific to the content area to

support student learning. **ACEI 2.1-2.7** **CAEP 1.1** **NJPST 4, 5, 7** **InTASC 4, 5, 7**	The lesson provides multiple opportunities for classroom discourse.	opportunities for classroom discourse.	although the lesson has few opportunities for classroom discourse.	support student learning and provides no opportunity for classroom discourse.

Place this portion of your plan in the box that follows:

Student discourse is implemented through whole and small group interactions at multiple times. During whole group instruction, students will have opportunities to answer questions asked by the teacher through the raising of their hands, turn and talks with partners, and placing a thumb on their knee. These interactions between students and teacher throughout whole group teaching will engage students by asking of their ideas and thoughts. Furthermore, these interactions will serve as a basis for students to build upon when working together in small groups. By having the background knowledge shared and discussed in the whole group setting, the students can apply these concepts when solving their outlines. This amount of social interaction between teacher and students is influenced by Psychologist Lev Vygotsky's findings. According to Lev Vygotsky's Sociocultural Theory, "Social interaction is essential for learning to occur. And, a community of learners is affected not only by culture the teacher creates, but by the broader social and historical culture of the members of the classroom" (de Walle, Karp & Bay-Williams, 2019, p. 26). Opening discussion between teacher and students allows the building of a learning community in the classroom and increases shared learning between all individuals.

Throughout this lesson, specific vocabulary terms will be mentioned as a connection to prior lessons and as a reinforcer of learning. To begin, the lesson will review several shapes, identifiable and described by the shape's vertices and sides. Although these terms are to be introduced prior to this lesson, they may be reviewed and defined as vertices are the points or corners where two edges meet, and sides are the edges of the shape. These may also be pointed to and displayed on the shapes by the teacher. Further, the following shapes are to be reviewed and identified during the lesson: square, triangle, trapezoid, hexagon, rhombus, and diamond. These vocabulary terms will be used throughout the lesson and practiced by the students as they review and learn.

6) **Materials-** List appropriate resources used to engage learners. **ACEI 2.1-2.7** **CAEP 1.1** **NJPST 5** **InTASC 5**	The plan lists all materials that connect to the learning targets/objectives. The materials are developmentally appropriate, and will engage learners.	The plan includes appropriate materials that connect to the learning targets/ objectives. The materials are developmentally appropriate or they will engage learners but not both. The list may be incomplete.	The plan lists materials that are not developmentally appropriate, nor will they engage learners.	The plan does not list materials.

Place this portion of your plan in the box that follows:

Math manipulatives: Pattern Blocks
Pattern Outline Graphic Organizers
Pencils
Projector and Large Screen
Math Anchor Chart with the Shapes (Each shape has the name written, a visual, and the number of sides and vertices)

7) **Technology** Describe how technology was considered for promoting learner engagement. **ACEI 3.1-3.5** **CAEP 1.5** **NJPST 8** **InTASC 8**	The plan fully explains how technology will be accessed and utilized to facilitate digital learning, as well as how technology will subsequently be used to track student performance data.	The plan either explains how technology will be accessed and utilized to facilitate digital learning or how technology will be used to track student performance data, leaving out one of the two items.	The plan lists the use of technology but it may not be used appropriately to enhance or track student learning.	The plan does not consider the use of technology.
Place this portion of your plan in the box that follows: During this lesson, technology will be used to display the fish outline as the teacher models the activity under a projector for all students to see. This may be in the form of a projector onto a smartboard or an iPad projector onto an Apple TV. By projecting the teacher's modeling, all students will be able to see what the teacher is doing during her think aloud and observe what is expected of them to do. The teacher will have the fish outline with the small shapes to fill in the outline and discuss what is correct and incorrect to complete the outline, as well as show how to trace and label the assignment. This projection ensures all students are able to follow along with the teacher and observe without hinderance of other students potentially blocking another's view of the teacher's modeling.				
8) **Prior Knowledge** Identify the knowledge, skills, and/or academic language necessary to prepare learners for this lesson. **ACEI 3.1-3.5** **CAEP 1.1** **NJPST 7** **InTASC 7**	The plan explicitly identifies necessary knowledge, skills, and/or academic language (addressed throughout the lesson) to prepare learners for this lesson.	The plan explicitly identifies necessary knowledge, skills, and/or academic language to prepare learners for this lesson.	The plan does not explicitly identify prior knowledge but it is incorporated through it.	The plan does not identify necessary knowledge, skills, and/or academic language necessary to prepare learners for this lesson.
Place this portion of your plan in the box that follows: As this lesson is to be conducted after the introduction of the geometry unit, it is expected for students to recognize the following shapes: square, triangle, trapezoid, hexagon, rhombus, and diamond. These shapes are expected to have been introduced and be simply recognized and reviewed throughout the lesson. Further, students are also expected to describe the shape by the number of sides and vertices in order to correctly label the shapes. In order to describe these shapes accurately, students must have learned that vertices are the points or corners where two or more lines/edges meet. Students must also understand the sides of a shape are the edges. Other prior knowledge that will be important for the lesson is that a shape remains the same shape even if it is turned, flipped, slid over, shrunken, or expanded. These understandings are learning goals that should be taught to and recognized by the students prior to this lesson so that students can simply review such facts and learn to compose and decompose these shapes.				
9) **Student Development, engagement, and content description** Indicate relevance of content concepts through pedagogy appropriate for content	The plan indicates relevance of content concepts through pedagogy appropriate for content as well as student development and engagement.	The plan indicates content concepts through pedagogy appropriate for content as well as student development and engagement.	The plan may indicate content concepts, but the pedagogy is inappropriate for the content and/or student development.	The plan is loosely related to content concepts, and the plan for pedagogy is missing and/or inappropriate for the content and/or

as well as student development and engagement **ACEI 1.0, 3.4** **CAEP 1.1** **NJPST 5** **InTASC 5**				student development.

Place this portion of your plan in the box that follows:

Student engagement will be guided through this lesson mostly through opportunities to share thinking and ideas with peers. Throughout the whole group discussions, students will strengthen their background knowledge and deepen their thinking on how they view and transform shapes. Then, during their small group work, students will have the opportunity to collaborate and communicate with others. To further enhance their engagement with the material, the students will also have a hands-on activity to provoke interest in the shapes and deepen understanding of how to move and transform shapes. In addition, their levels of development will increase due to the opportunities to review various shapes and identify them. By doing so, the students will build a deeper understanding for shapes and how they can be composed and decomposed into various other shapes. Overall, the engagement and development throughout the lesson will improve student interactions with shapes and provide deeper understanding to be applied to future lessons.

10) **Classroom Learning Environment and Differentiation** Creates a classroom environment that promotes learning for diverse learners. **ACEI 3.2, 3.4** **CAEP 1.1, 1.4** **NJPST 3, 6** **InTASC 3, 6**	The plan details and justifies differentiation of instruction and/or assessment variation(s) to support a range a learners. The plan promotes diversity through cross-disciplinary methods and collaboration.	The plan details differentiation of instruction and/or assessment variations to support a range a learners. No rationale for variation(s) or differentiation is provided. The plan promotes diversity through either cross-disciplinary methods or collaboration.	The plan provides insufficient and/or inappropriate variation(s) and differentiation to support a range of learners. No collaboration or cross-disciplinary methods are incorporated in the plan.	The plan does not make provisions for instructional differentiation or assessment variations to support a range of learners.

Place this portion of your plan in the box that follows:

Students will be placed in groups mixed based on student math levels. For higher level students, they will be mixed with higher level middle range students into small groups to help challenge some students and reinforce information for the high performing students. Struggling students and the rest of the middle range students will be mixed to provide middle range students opportunities to apply their knowledge when supporting others and struggling learners can be more supported. Further, the packets handed out will challenge students in various ways. The higher groups will receive the outline without any internal lines for creative problem-solving to occur. The lower and struggling students will receive lines to guide their outline completion as to support their learning of composing and decomposing shapes as well as the identification of the shapes. Finally, student groups will increase collaboration and understanding with individuals with different learning styles and needs throughout the classroom.

The student with an IEP will receive specific support throughout the lesson by being allowed to move around as he works and be checked in on more frequently.

The English Language Learners will receive support in terminology during the review of terms and have opportunities to communicate with others to support learning.

Planning and Instruction

11) **Lesson Beginning** How will the lesson start and engage learners? **ACEI 3.1-3.5** **CAEP 1.1** **NJPST 1, 2, 3, 7, 8** **InTASC 1, 2, 3, 7, 8**	The plan includes a detailed description of the lesson start and indicates how learners will be engaged through questions, action, and content.	The plan includes a brief description of the lesson start and indicates how learners will be engaged through questions, action, and content.	The plan includes a description of the lesson start and minimally indicates how learners will be engaged.	The plan includes minimal and/or no description of the lesson start and minimal and/or no indication of how learners will be engaged.

Place this portion of your plan in the box that follows:

Teacher: “For math, please bring a pencil to the carpet and pick a spot to sit.”
Students: Pick a pencil and sit on the carpet.
Teacher: “As we have been working on geometry and our shapes, today we are going to start making bigger shapes out of our small shapes.” Teacher pulls out a triangle pattern block basket. “Who can remind me what this shape is named?” Teacher calls on a student to label.
Student: “Triangle!”
Teacher: Asks the same student, “and how many sides does the triangle have?”
Student: “Three.”
Teacher: Continuing with this student, “Three sides, correct. How many vertices?”
Student: If unsure of what vertices are, teacher can wait 5-10 seconds then interject, “how many vertices, or corners, does the triangle have?”
Student: “Three.”
Teacher: Continues this question and answer format with different students to review square, trapezoid, hexagon, rhombus, and diamond. If students do not remember the names, sides, or vertices, when answering the teacher may ask, “would you like to call on a friend” after waiting at least 10 seconds of thinking time per student question.

Teacher: “Now that we have reviewed our shapes, sides, and vertices, we are going to make other shapes out of these.”
Teacher: Pulls out fish outline and small bucket of pattern block shapes. “Today we will use our plane shapes to fill in the outline of the big shape. Look at our paper, what is the shape you see?” Teacher displays fish outline for students to see. “Turn and talk to a partner about what this looks like.”
Students: Turn and talk to label the outline as a fish.
Teacher: “Eyes back on me, I heard some friends say it looks like a fish! So, with our fish outline, we are going to take some of our shapes to fill it in.” Teacher begins placing shapes on the outline under the iPad projector for students to see on the television.
Teacher: Begins demonstrating and think-aloud for directions:
Teacher: Places shapes to fill in the outline that do and do not fit in places. “Look how my shapes must fit inside the outline. If I put the hexagon on the tail, it is too big and goes outside the lines. And if I put the diamond and a triangle, there is still small space that I can’t fill. You need your shapes to fill the whole space and are inside the outline. Let’s see if I turn my rhombus if that will fill the tail. See, that fits perfect, so I can place it.”
Teacher: fills in the fish outline, “Now that my fish outline is complete, I want to trace the shapes I put. So, I can move on shape at a time to trace. If I start at the head, I can move the hexagon out and trace along the trapezoids and triangles by holding them with my other hand. See how it leaves the shape? We need to do each shape.” After doing about three or four shapes, “okay, I would keep tracing but I want to show you the next step so we can start having each of your groups making shapes. Now I need to label my shapes. I can write hexagon in here, diamond on the small end, and I want to write triangle. Since they are small and inside, I will draw a line from the triangle out and label where I have space. Who can tell me what I did first?” Call on a student.
Student: “You filled in the whole shape.”
Teacher: “First I filled it in, right. Now did I have any spaces or go over the line?” Call on a student.
Student: “No you didn’t.”
Teacher: “I had to stay inside the lines and have no spaces. So, after I fill in my shape, what did I do? Turn and talk to a partner.”
Students: Discuss tracing the shape.
Teacher: “Eyes back on me, what did I do after filling my shape?”

Student: May respond label the shape or trace the shape. If trace the shape, move to the next step. If student says to label the shapes, teacher can move a few shapes off the fish under projector, and ask “how can I label them? Do I need to do something first?” Teacher guides student to understand to trace the shapes.
Teacher: “Now that I traced my shape, what is the final step?” Call on a student.
Student: “Label the shapes you used.”
Teacher: “Now that we are ready, I would like each of my math groups to pick a spot to sit together in the classroom as I call you.” Call each group to go and sit in a location in the classroom.

12) **Lesson Body** Instructional strategies outlined to facilitate student learning **ACEI 3.1-3.5** **CAEP 1.1** **NJPST 1, 2, 7, 8** **InTASC 1, 2, 7, 8**	The plan includes a detailed outline of how content is addressed (with a specific link to research), how learners are organized and working, questions used, anticipated misconceptions, and differentiated activities for diverse learners.	The plan includes a well developed outline of how content is addressed (with a general link to research), how learners are organized and working, questions used, and differentiated activities for diverse learners.	The plan provides an incomplete outline of how content is addressed (with no or inaccurate link to research), how learners are organized and working, questions used, response to struggling learners, and planned extensions for those finished early.	The plan does not include an outline of how the content is addressed.

Place this portion of your plan in the box that follows:

Teacher: Hands out packet (contains three blank or lined outlines and a page for a creation) with a bucket of pattern block shapes per group. The outlines include the shape of a dog, swan, and butterfly.

For high to medium level groups, students will be instructed to fill in, trace and label each of the three blank outlines as the teacher had shown. Then, they can create their own shape on the last page, trace, and label it. The creation can be what each student wants and does not have to be the same for the whole group.

For low to medium groups, students will be instructed to match their shapes within the outlines and then label the shape. At the end of their three lined outlines they can make their own that they will then trace and label. Again, these do not have to be the same for the whole group.

Teacher: Once each group is instructed and gathered, address the class, “if you have any questions, remember to ask three friends before me. You are in groups so you can talk and work together.”
Teacher: Sit with group struggling to instruct and guide further.

- “Do I have to use all these shapes?”
  - Instruct students to match the shapes in the outline with the ones in the bucket. If they find other shapes fit together in the outline, they can use those and then trace them in at the end.
- “I don’t know how to spell the shape.”
  - Guide students to sound it out or offer them to use the math anchor chart with the shapes spelt and shown.

Teacher: For early finishing and/or high-level students, instruct them to add color and a background to their completed creation shape. May also have them practice sharing it with the class at the end.

- “How many shapes do we have to use for the one?”
  - Have students use at least five shapes and if they make small creations, encourage them to try to make others.

Teacher: provide 15-minute warning at end of working time for students to work towards creating their own. “We will be able to have some students share their creations, so at this time please finish the outline you are on and start moving on to the create your own page.”

13) **Lesson End/Closure** How will the lesson end to promote student learning and application? **ACEI 3.1-3.5** **CAEP 1.1** **NJPST 7, 8** **InTASC 7, 8**	The plan includes a detailed description of how the lesson will be concluded with reference to future content and skills as well as to their own learner context.	The plan includes a general description of how the lesson will be concluded with either a reference to future content and skills or their own learner context.	The plan includes a brief description of how the lesson will conclude with no reference to future content and/or skill and their own learner context.	The plan does not include a lesson conclusion.

Place this portion of your plan in the box that follows:

Teacher: “Please put the shapes in the basket and bring your packet and pencil to the carpet. One member of your group can place the bucket on the back table.”
Students: Clean up the shapes and bring their work and pencil to the carpet.
Teacher: Have all students together at the carpet. “Would anyone like to share the shape they created with the class? We can have about three students share today.”
Teacher: Choose one student, “Please share what shape your created and some of the shapes you used.”
Students: Have 3 students share the outline they created and label the shapes they used. After each student, provide two students to be chosen to share a comment or ask a question to the presenter.
Teacher: “Today we made a lot of bigger shapes with our smaller shapes. I want you to stay in your spot but look around the room and see if you can find smaller shapes inside a bigger outline. When you see one or more, place your thumb up on your knee.”
Teacher: Provide 1 minute of time to have students look around and think.
Teacher: “Turn and talk to a partner about what you saw.”
Students: Turn and talk to about which smaller shapes in bigger shapes they saw in the classroom.
Teacher: Close by repeating some student answers and share one that the teacher found. “Shapes are a big part of our world; I am happy so many friends found more shapes in our classroom. When you go home you can look more too! Now, as I call each table, please walk to your desk and put your math packet in your math folder.” Call each table to put away their packet.

Assessment				
14) **Assessment** How will you know objective(s) were met? How will you analyze data? How will you provide information? **ACEI 4.0** **CAEP 1.1** **NJPST 6** **InTASC 6**	The plan thoroughly describes and includes all measures of progress appropriate to the lesson (such as formative, summative, individual, group, and alternate assessments) and reflects individual student needs. The plan specifically describes the feedback to be used with students to acknowledge success, need, and progress.	The candidate generally describes and includes all forms of student learning measures appropriate to the lesson (such as formative, summative, individual, group, and alternate). The plan generally describes feedback to be used with students to acknowledge their success, need, and progress.	The candidate minimally describes some student learning measures (such as formative, summative, individual, group, and alternate). The plan minimally describes how feedback will be used with students to acknowledge their success, need, and progress.	The candidate does not describe any appropriate examples of student learning measures (such as formative, summative, individual, group, and alternate). The plan does not describe how feedback will be used with learners to acknowledge their success, need, and progress.

Place this portion of your plan in the box that follows:

Students will be assessed throughout the lesson during the discussion and in their completion of the math packet. Success in the completion of the packet will be used to measure comprehension and application of shape identification, as well as composition and decomposition. The following chart will be used to assess student work:

Below Expectations	Meets Expectations	Above Expectations
Student does not participate in whole class and small group discussions.	Student partially participates in whole class and small group discussions.	Student actively participates in whole class and small group discussions.
Student can identify less than four of the six shapes by name, number of sides and number of vertices reviewed.	Student can identify at least four of the six shapes by name, number of sides and number of vertices reviewed.	Student can identify all six of the shapes by name, number of sides and number of vertices reviewed.
Student completes less than three of the four outlines with labeling.	Student completes at least three of the four outlines with labeling.	Student completes all four of the outlines with labeling and adds detail to creation (i.e. color, background, etc.)

Using this chart, the data collected can be used to assess what areas of the lesson may need to be re-taught, reviewed or practiced more before a final assessment of the unit. To follow this lesson, the data collected can guide instruction to also continue in order to challenge students to compose and decompose shapes within the small shapes. For example, decomposing a hexagon into two trapezoids or triangles can further student understanding of shapes composing and decomposing into different shapes. In addition, each student can be assessed to measure their individual progress and learning in case math groupings need to be modified and how students can be supported or challenged by the material as necessary.

15) **Reflection** After the lesson, a reflection provides detailed insight about teaching, student learning, and re-teaching. **ACEI 5.1** **CAEP 1.1, 1.2** **NJPST 9** **InTASC 9**	The lesson reflection provides detailed insight about effectiveness of teaching related to student learning and options for re-teaching.	The lesson reflection provides general insight about effectiveness of teaching related to student learning and options for re-teaching.	The lesson reflection merely summarizes the lesson plan and lacks insight about effectiveness of teaching related to student learning and options for re-teaching.	The lesson reflection is underdeveloped and fails to make any connection among teaching effectiveness, student learning, and options for re-teaching.

Place this portion of your plan in the box that follows:

On April 16, 2019, my partner and I taught a small group lesson as an end to the geometry unit. This lesson took place from 2:40-3:00 p.m. which directly followed lunch, recess, and music. Although the students did have higher attention to this lesson as they had had a brain break, the time to work on the lesson was more limited. The lesson was not fully completed due to the students' independent work time extending into the closure time planned for the lesson in order for the students to prepare for dismissal.

This lesson served as a closing activity to the geometry unit and was a more active way to end after a math test given before lunch. The activity was taught to a small group of seven students, identified as the higher learners, through coteaching by myself and my partner. The lesson was based on the idea of tangrams, where numerous smaller shapes are used to fill out a larger shape's outline. In this lesson, the shape outline was to be filled in with pattern blocks that the students had already used numerous times throughout the geometry unit. The small group met with the two teachers in front of the plane shapes chart with a pencil. The students sat around the teachers and the lesson began with a review of the names of each shape—square, rhombus, hexagon, trapezoid, triangle, diamond—, the number of sides each shape had, and the number of vertices per shape. After a teacher asked, "what shape is this?" a student raised their hand and was called on to answer. Following this, the shape was placed

in front of the students and the number of sides and vertices were said by the student. The term vertices were described as the corners of the shape and pointed to during the explanation by the teacher during the first shape. After this review, the students were shown the fish outline shape they would be filling in with the patter blocks. The students were instructed that they will fill in the outline as much as possible with their shapes. Next, the chart to be filled out was passed out to the students and explained. The students would be listing the shapes they used, how many sides they have in total from all the shapes they used and the total of all vertices of the shapes used. Each of these items were to be recorded in the corresponding box in the chart, along with their mathematical thinking of how they would solve for the total sides and vertices. Finally, the students were given their fish outline to begin working. All students began to work on the outline with their shapes, and then about half of them were instructed to fill in their chart and say how they solved for the number of sides and vertices for the total shapes used to fill in the fish outline. For those who finished the fish, they were told to move on to the next page where they create their own shape outline with the shapes and fill in the chart for their specific shape. Overall, students were guided though the assignment and asked to get ready for dismissal once the time allotted ran out.

The lesson objectives were: 1. Students will be able to identify plane shape names, number of vertices, and number of sides in plane shapes; 2. Students will be able to manipulate plane shape manipulatives in order to successfully fill in a pattern block worksheet. In the introduction of the lesson, the first objective was clearly met. Six of the seven students openly answered the name of a shape, the sides, and the vertices of that shape for the group. The one student who did not answer these questions did raise his hand repetitively to answer and did provide an explanation of the term vertices as, “the points on the shape.” The large group input and clear nodding that followed each member’s answers demonstrated understanding and awareness of plane shapes and their characteristics for the first objective to be met successfully. In contrast, the second objective was met by most of the students but not all. Only one student was unable to complete the fish outline that was distinguished by the objective. The one student struggled to determine how to fill in the fish outline with the shapes, however the other six students were able to complete this. Although the one student did struggle, the objective was overall met and would have been completely successful if more time was allotted for individual’s support. In addition to this one outline, five of the seven students were successful in moving on to create their own individual shape and recording all the shapes they used and the totals of sides and vertices. All the data recorded of how many vertices and sides were totaled was solved through addition or counting to provide evidence of their mathematical thinking. For example, Luke and Takahito recorded their addition sentences, meanwhile, Deven and Avik counted the total sides and vertices in their work. In entirety, all seven students did demonstrate knowledge of how to manipulate shapes as they corrected their shape decisions by placing, moving, flipping, and replacing their shapes within the outline. This was even noted in the student who did not complete the fish as she moved numerous diamonds, trapezoids, triangles, and rhombuses throughout the outline in order to fill in the spaces. Although not all seven members of the small group were able to complete the entire fish outline, they did learn how to manipulate the shapes in various directions and record them completely in their data. Recognizing that these shapes are the same regardless of positioning and orientation is an important learning goal in geometry, thus they did learn how to manipulate and correctly identify their plane shapes throughout the lesson.

After analyzing the student work and regarding what objectives were met, the lesson was proven more successful for some students than others. The students all succeeded to identify their plane shapes by name and describe how many sides and vertices each shape had. This provided success in the goal of reviewing student understanding for key geometric terms when discussing shapes. Similarly, most students were able to manipulate their shapes within their outline to complete the shape. This was not completely successful as one student did not fulfill the second objective and it is noted that most students spent a large portion of time struggling to determine how to solve the activity. The activity did however have the students interact with their shapes so that they could learn the shape in numerous forms and transformations, such as when flipped, upside down or sideways. In summation, the lesson succeeded in reviewing geometric terms and identification, but more scaffolding and support was needed for the fulfillment of the shape outline activity.

Throughout this lesson, the students were very engaged and active in their learning throughout the twenty-minute lesson. To begin, the students were eager to answer the review questions and share their knowledge with the group by labeling a shape and numbering the sides and vertices. As evidence, six of the seven students were able to provide an answer to the opening questions about the shape names, number of sides and number of vertices. The group was actively engaged, and no student’s attention had to be regained, nor was one student responsible for speaking for the whole. This engagement was then further involved when the students were productively struggling for about fifteen minutes to solve how to fill the fish outline with the pattern block shapes. This time involved lots of trial and error as students placed and replaced their shapes to best solve the work. After

working to fill the outline, students were also focused and engaged in recording the names of the shapes they used and then solving for how many sides and shapes totaled in their work. This engagement was most obvious as the students became rather quiet and focused on their work. The students were very attentive to the shape they would need to fill in spots on their paper, rather than try to rely on another student's work. Students would often say the name of the shape they were looking for in their work as they searched for the piece in the buckets the shapes were stored in. This productive struggle and active engagement with their fish outline was then transitioned into more creative engagement as students were able to create their own outline shape to fill and solve for. For example, Deven was very focused on making a house out of his pieces. He spent time making the house outline, filling it in, and then tracing each shape he used within the outline. Although the overall engagement was high, it is also noted that the one student who struggled the most with the fish outline, and occasionally some of the other students as well, would be distracted as they took a moment from the activity. However, these moments were overall short and sporadic, thus the overall engagement in the activity was high for all members of the small group.

As this lesson was a final activity for the geometry unit, it provided a strong review of the geometric terms and plane shapes. The lesson also provided students with a fun way to interact and manipulate their shapes within the geometry unit. Although this classroom is finishing their geometry unit, a next lesson that would be beneficial and have a strong connection with this lesson taught would be to find how smaller plane shapes are visible to make up lager shapes. For example, a lesson on identifying shapes in the environment around students would be a good continuation. A lesson that identified smaller rectangles, such as bricks and windows, to make up an apartment building would be a suitable example for the lesson concept. By teaching students to manipulate their shapes to make others, it would connect even further if they found examples of this idea in their surroundings. The lesson on identifying shapes within their environment would be the next lesson taught if this were my classroom to build on the geometric ideas.

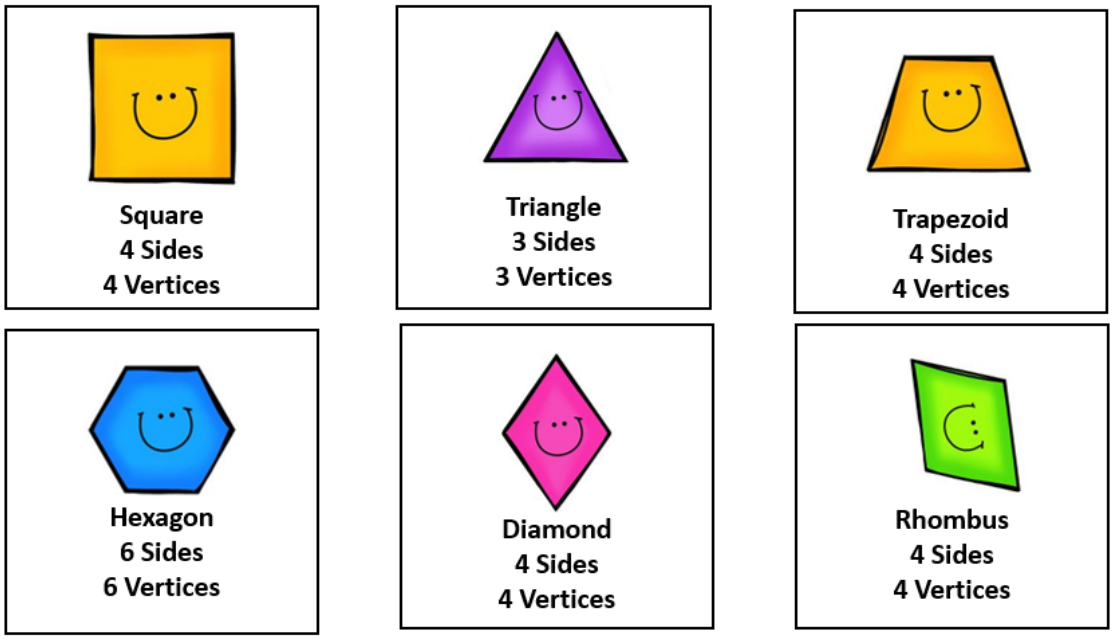
In order to improve this lesson, there are a few changes that would have improved the lesson's success. To begin, it would have been more beneficial if the outline of the fish shape was more accurate to fit the shapes of the pattern blocks. The original lesson plan idea involved four premade outlines: a cat, house, fish and boat. However, when having the opportunity to practice with the pattern shapes, the fish was the only outline that proved to be generally successful. It would have been more beneficial if more time was available to work with the manipulatives and the outlines to ensure success for the students. If this was possible, more outline options would have been available for the students and this most likely would have led to more success due to more accurate sizing in respect to the pattern blocks. Similarly, clearer instructions for the expectations on the create your shape section would have improved the lesson. Firstly, the limitation of one shape outline did not provide students with an in-depth idea for what shapes could be made to create one's own shape. Secondly, the limited time prevented students from having the opportunity to create larger outline ideas. As evidence, Deven created a simple house and Avyaan simply traced a hexagon provided. More time was necessary for this lesson as well for students to work with the fish outline and to create their own shape. Overall, the lesson was limited by the time frame, limited shape outline success and practice, and the inability to fully exemplify and explain the goals of the create your own shape outline.

This lesson began with difficulty in the morning. Upon arriving to the school, the first issue that arose was that the shape outlines made were not accurate to the sizes of the shape pattern block manipulatives. This led to trial and error, reprinting of shape outlines, and reduction of outlines from four premade to one premade with the sheet of creating one's own outline. This first issue provided new insight on how important it is to adequately plan and practice one's own activity before having students work on it. It is necessary for the teacher to practice the work in order to understand potential difficulties and be aware of the potential success and failure of the lesson being presented. After being able to correct and alter this lesson, the importance of timing also arose as a new personal lesson. A teacher's time is very limited and thus planning ahead of time is necessary to deal with such errors that may arise. It is imperative to have these planning issues resolved before the day of, as unplanned and sudden issues or changes to a day plan can arise. Further, the difficulty of the lesson is important to be assessed for planning of a lesson's necessary time to be completed. This lesson was originally expected to take up less than fifteen minutes in total. This was an incorrect estimation as the twenty minutes was not fully enough time. The twenty minutes of this lesson did not include enough working time for the students and did not include the lesson closure, thus it was important to learn how much time needs to be allotted for students to complete an activity. Finally, as planning to use these pattern blocks within the outlines was more difficult than if a teacher owned official Tangrams, it would have been more beneficial to have investigated various assignment ideas. Instead of becoming committed to one desirable idea, having an open-mind to numerous activity ideas may have provided better success in the overall lesson and resulted in less struggle in creating the lesson activity and outlines. This lesson's

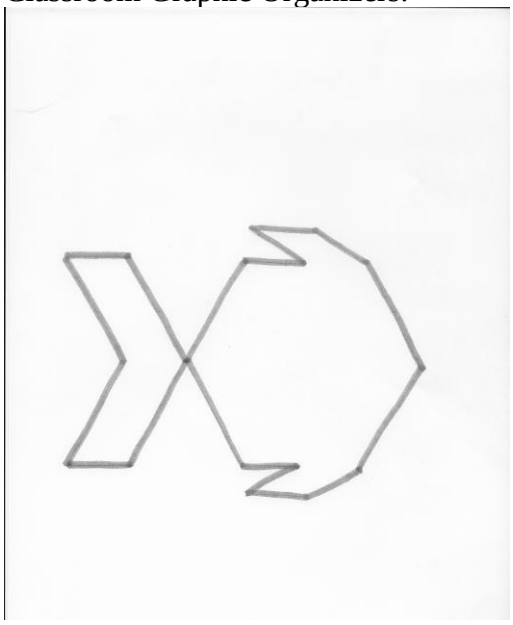
difficulty provided valuable insight to the importance of planning and practicing of lessons prior to having students work on them and ways to best handle such situations.

Attachments Below.

Anchor Chart:

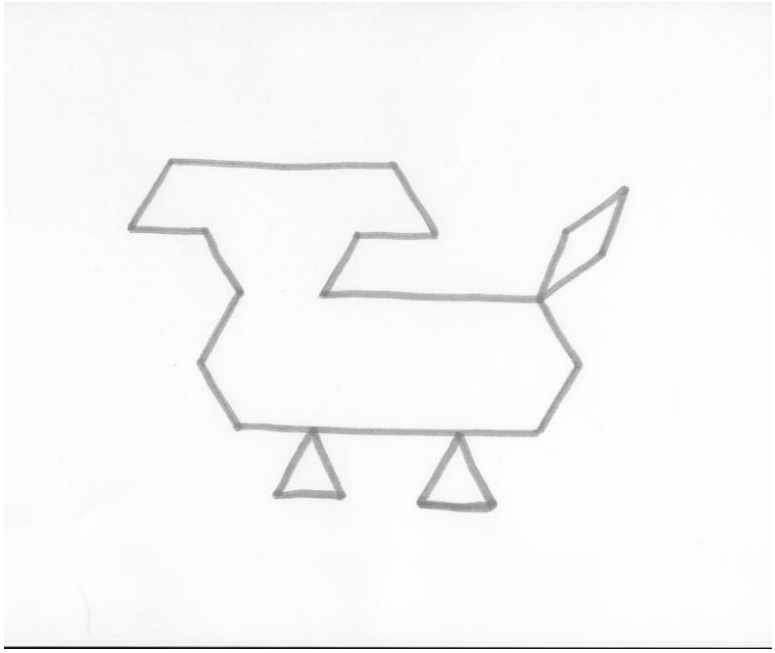


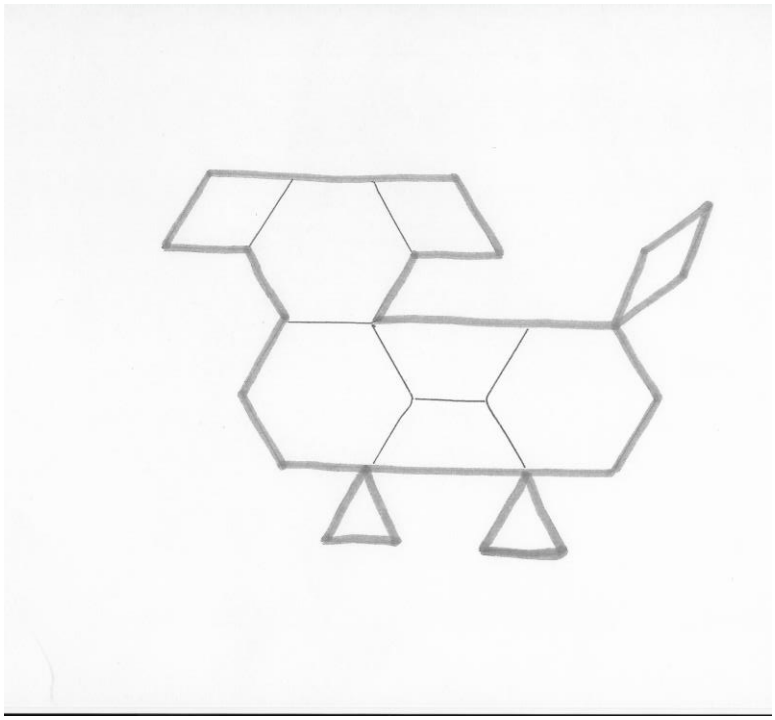
Classroom Graphic Organizers:

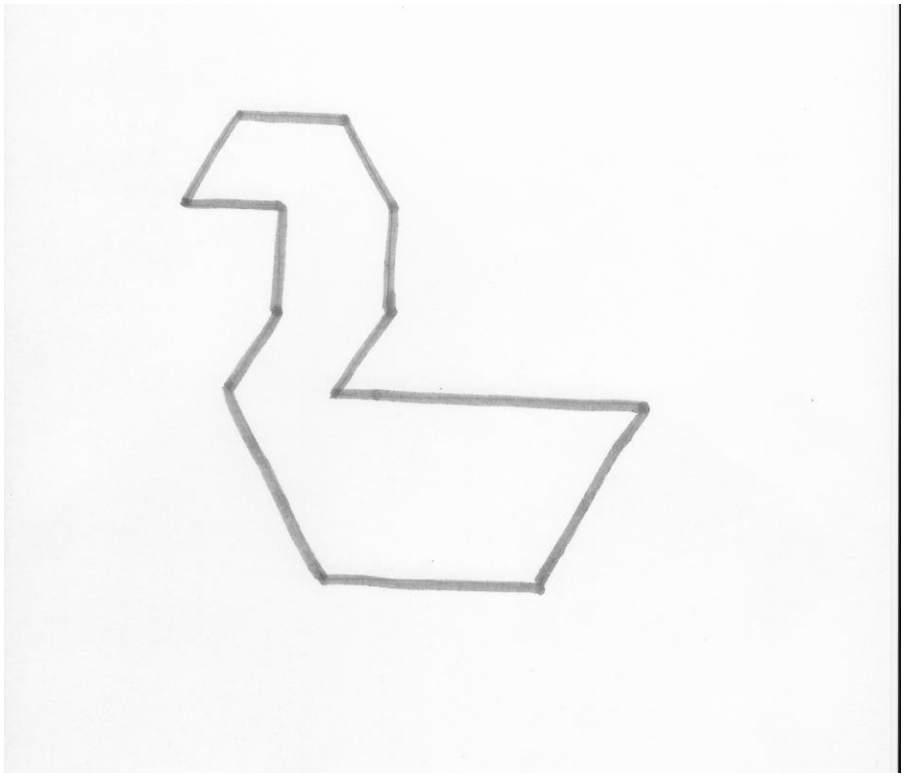


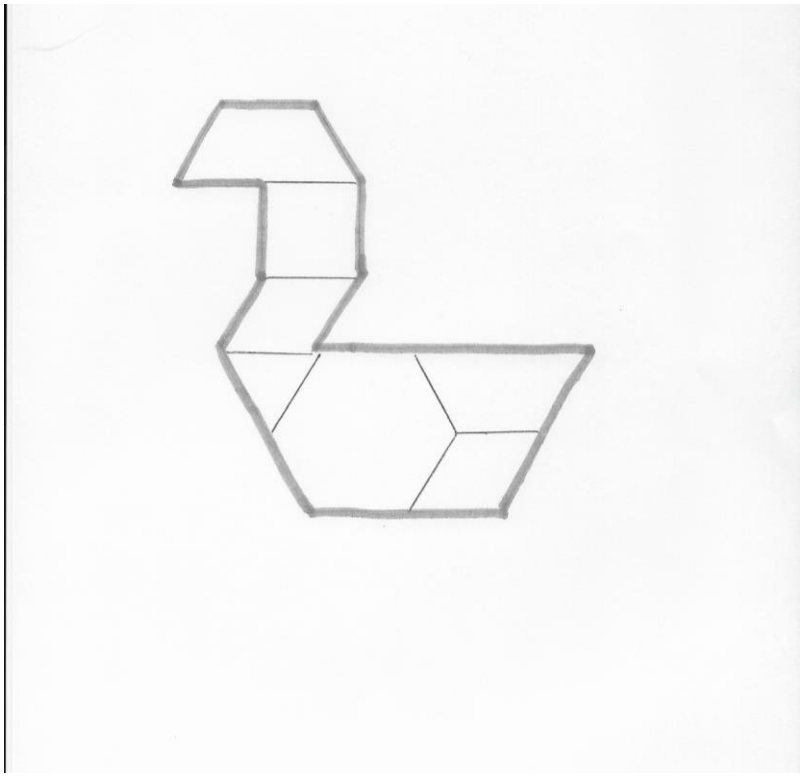
Fish Outline for Whole Group.

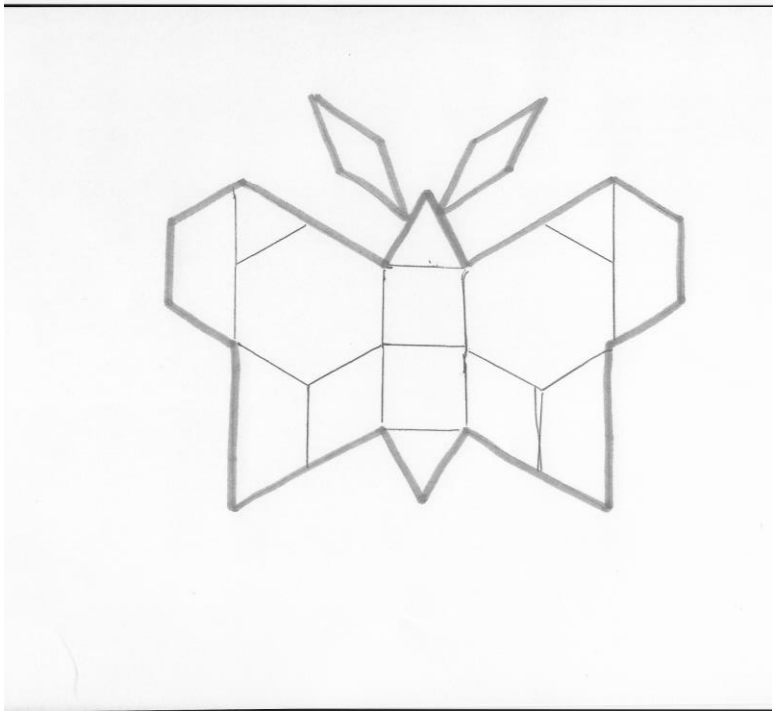
Dog, Swan, Butterfly, and Create Your Own Pages.











Name: _____

Directions: Create your own shape and trace the outline.