

NJDOE MODEL CURRICULUM PROJECT

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| CONTENT AREA: Mathematics | GRADE: K | UNIT: # 5 | UNIT NAME: Geometric Shapes |
|----------------------------------|-----------------|------------------|------------------------------------|

| STUDENT LEARNING OBJECTIVES | | CORRESPONDING CCSS | |
|-----------------------------|---|--------------------|---|
| 1 | Count to 100 by ones and by tens. | K.CC.1 | Count to 100 by ones and by tens. |
| 2 | Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. | K.G.1 | Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. |
| 3 | Correctly name shapes regardless of their orientations or overall size. | K.G.2 | Correctly name shapes regardless of their orientations or overall size. |
| 4 | Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”). | K.G.3 | Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”). |
| 5 | Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. | K.G.5 | Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. |
| 6 | Compose simple shapes to form larger shapes. | K.G.6 | Compose simple shapes to form larger shapes <i>For example, “Can you join these two triangles with full sides touching to make a rectangle?”</i> |

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks)

Selected Opportunities for Connection to Mathematical Practices

1. Make sense of problems and persevere in solving them.

SLO #2 Analyze, describe, and make sense of objects in the environment.

2. Reason abstractly and quantitatively.

3. Construct viable arguments and critique the reasoning of others.

4. Model with mathematics.

SLO #5 Use various concrete objects to compose a model of shapes in the environment.

Bold type identifies possible starting points for connections to the SLOs in this unit.

Greater Brunswick Charter School Curriculum

| Grade level: K | | Subject: Math | | | Unit #: 5 | | | |
|-----------------------|-------------------------|----------------------|---|--|---|---|---|---------------------------|
| Day | Topic | SLO | Learning Objectives | Essential Questions | Suggested Student Activities | | Possible Resources | |
| | | | | | Whole Group | Small Group / Stations | | |
| 1 | Squares and Rectangles | 3 | <ul style="list-style-type: none"> To recognize the characteristics of rectangles and identify them. To identify a square as a special rectangle. | <ul style="list-style-type: none"> <i>How do I know a rectangle when I see one?</i> <i>How are some rectangles also squares?</i> | <i>If you prefer, you can begin this unit with the position module that starts on Day 12. This first part is a review of content in Unit 3.</i> | | <ul style="list-style-type: none"> Lesson & Guided Practice Independent Practice Intervention i-Ready | MyMath 11.1 p. 623-628 |
| 2 | Circles and Triangles | 3 | To recognize the characteristics of circles and triangles and identify them. | <i>How do I know a circle or a triangle when I see one?</i> | | <ul style="list-style-type: none"> Lesson & Guided Practice Independent Practice Intervention i-Ready | MyMath 11.2 p.629-634 | |
| 3 | Recognizing four shapes | 3 | To recognize and sort rectangles, squares, circles, and triangles | <i>Can I recognize the shapes when they are all together?</i> | | <ul style="list-style-type: none"> Lesson & Guided Practice Independent Practice Intervention i-Ready | MyMath 11.3 p.635-640 | |
| 4 | Hexagon | 3 | To recognize the characteristics of hexagons and identify them | <i>How do I know a hexagon when I see one?</i> | <i>Feel free to include pentagons here. It's a nice counting exercise.</i> | <ul style="list-style-type: none"> Lesson & Guided Practice Independent Practice Intervention i-Ready | MyMath 11.4 p.641-646 | |
| 5 | All six shapes | 3 | To recognize the characteristics of all six shapes and identify them | <i>How am I doing with these shapes?</i> | | <ul style="list-style-type: none"> Independent Practice Intervention for strugglers i-Ready | MyMath p.647-648 | |
| 6 | Recognizing shapes | 3 | | | | <ul style="list-style-type: none"> Review Assessment | | |
| 7 | Composing new shapes | 3, 6 | To make new shapes by combining simple shapes | <i>How can I make bigger shapes using the shapes I know?</i> | | <ul style="list-style-type: none"> Lesson & Guided Practice Independent Practice Intervention i-Ready | MyMath 11.7 p.661-666 | |
| 8 | Composite shapes | 3, 6 | To identify composite shapes missing from a figure | <i>How can I know what shapes will fit into an area?</i> | | <ul style="list-style-type: none"> Lesson & Guided Practice Independent Practice Intervention i-Ready | MyMath 11.8 p.667-672 | |

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| Day | Topic | SLO | Learning Objectives | Essential Questions | Suggested Student Activities | Possible Resources | |
| 9 | Composite shapes in the real world | 3, 6 | To use shapes to make real world objects | <i>How are these shapes in everything I see all day?</i> | | <ul style="list-style-type: none"> • Lesson & Guided Practice • Independent Practice • Intervention • i-Ready | MyMath 11.9 p.673-678 |
| 10 | Composite shapes | 3, 6 | To recognize and use simple shapes to make composite shapes | <i>How are these shapes in everything I see all day?</i> | | <ul style="list-style-type: none"> • Independent Practice • Intervention for strugglers • i-Ready | MyMath p.679-682 |
| 11 | Composite shapes | 3, 6 | | | | <ul style="list-style-type: none"> • Review • Assessment | |
| 12 | Above and below | 2 | To recognize the positioning of objects as above or below others | <i>How do I tell someone two things aren't in the same place?</i> | | <ul style="list-style-type: none"> • Lesson & Guided Practice • Independent Practice • Intervention • i-Ready | MyMath 10.1 p.583-588 |
| 13 | In Front and Behind | 2 | To recognize the positioning of objects in front of and behind others | <i>How do I tell someone two things aren't in the same place?</i> | <i>You may wish to talk about perspective here. Youngsters often have trouble seeing something from someone else's perspective. Things are behind others depending on where the person is.</i> | <ul style="list-style-type: none"> • Lesson & Guided Practice • Independent Practice • Intervention • i-Ready | MyMath 10.2 p.589-594 |
| 14 | Next to and Beside | 2 | To recognize the positioning of objects next to or beside others | <i>Why shouldn't I say something behind something else is next to it?</i> | <i>You may wish to identify this as a language point of emphasis. Something behind something else IS next to it. It's the viewer's perspective that places it "next to".</i> | <ul style="list-style-type: none"> • Lesson & Guided Practice • Independent Practice • Intervention • i-Ready | MyMath 10.3 p.597-602 |
| 15 | Acting on positioning | 2 | To determine where to place an object that is directed to be in a specific position relative to another object. | <i>How do I know where you want something to go?</i> | | <ul style="list-style-type: none"> • Lesson & Guided Practice • Independent Practice • Intervention • i-Ready | MyMath 10.4 p.603-608 |
| 16 | Shapes and Position | 2 | To identify shapes in a specific position | <i>Do positions work the same way with rectangles?</i> | | <ul style="list-style-type: none"> • Lesson & Guided Practice • Independent Practice • Intervention • i-Ready | MyMath 11.7 p.655-660 |
| 17 | Identifying position | 2 | To determine what is where and the language to say so. | <i>Do I know where to put and find things?</i> | | <ul style="list-style-type: none"> • Independent Practice • Intervention for strugglers • i-Ready | MyMath p.595-596, 609-612 |
| 18 | Positioning | 2 | | | | <ul style="list-style-type: none"> • Review • Assessment | |

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| 19 | Spheres and Cubes | 3, 4 | <ul style="list-style-type: none"> To identify a shape as 3-dimensional To identify the characteristics of sphere and of a cube and recognize them. | <ul style="list-style-type: none"> What are the dimensions in the world? How do I tell the difference between 2-dimensional and 3-dimensional shapes? What makes a sphere and cube different? | <p><i>The topic of dimensions is probably going to be a bigger hurdle than a round shape or a boxy shape. But, dimensions is the focus of SLO #4. If your students have already mastered this from exposure in Unit 3, you can skip down to Day 22.</i></p> <ul style="list-style-type: none"> Lesson & Guided Practice Independent Practice Intervention i-Ready | MyMath 12.1 p.693-698 |
| 20 | Cylinders and Cones | 3, 4 | To identify the characteristics of cylinder and of a cone and recognize them. | Which one has a pointy head? | <ul style="list-style-type: none"> Lesson & Guided Practice Independent Practice Intervention i-Ready | MyMath 12.2 p.699-704 |
| 21 | Four solid shapes | 3, 4 | To identify all four 3-dimensional shapes out of a line up. | Can I pick out the shape I want? | <ul style="list-style-type: none"> Lesson & Guided Practice Independent Practice Intervention i-Ready | MyMath 12.3 p.705-710 |
| 22 | Real world shapes | 3, 4, 5 | To identify the four shapes from real world objects | How are things in the real world like these shapes? | <ul style="list-style-type: none"> Lesson & Guided Practice Independent Practice Intervention i-Ready | MyMath 12.5 p.719-724 |
| 23 | Four solid shapes | 3, 4, 5 | To identify all four 3-dimensional shapes out of a line up. | | <ul style="list-style-type: none"> Independent Practice Intervention for strugglers i-Ready | MyMath p.711-712, p.725-728 |
| 24 | Four solid shapes | 3, 4, 5 | | | <ul style="list-style-type: none"> Review Assessment | |
| 24 | Stacking | NA | To determine which shapes can be stacked | | <p><i>The lessons that follow are not in the SLOs. You're welcomed to them, but they can be optional.</i></p> <ul style="list-style-type: none"> Lesson & Guided Practice Independent Practice Intervention i-Ready | MyMath 12.4 p.713-718 |
| 25 | Alike and Different | NA | To identify characteristics that make two objects alike or different | How much detail do I have to see to tell if two things are the same? | <ul style="list-style-type: none"> Lesson & Guided Practice Independent Practice Intervention i-Ready | MyMath 9.1 p.539-544 |

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| 26 | Objects with characteristics that are different | NA | To determine which items in a group do not belong in the group? | <i>How can what makes each thing what it is tell me which belongs?</i> | | <ul style="list-style-type: none"> • Lesson & Guided Practice • Independent Practice • Intervention • i-Ready | MyMath 9.2 p.545-550 |
| 27 | Sort by size | NA | To determine which objects are bigger or smaller? | <i>How can I see the size of something?</i> | | <ul style="list-style-type: none"> • Lesson & Guided Practice • Independent Practice • Intervention • i-Ready | MyMath 9.3 p.551-556 |
| 28 | Sort by shape | NA | To sort objects by their shape | <i>Why would I need to sort things by their shape?</i> | | <ul style="list-style-type: none"> • Lesson & Guided Practice • Independent Practice • Intervention • i-Ready | MyMath 9.4 p.559-564 |
| 29 | Sort by count | NA | To sort groups by how many are in the group. | <i>What makes some groups larger than others?</i> | | <ul style="list-style-type: none"> • Lesson & Guided Practice • Independent Practice • Intervention • i-Ready | MyMath 9.4 p.565-570 |
| 30 | Sorting and stacking | NA | To fluently perform all four activities | | | <ul style="list-style-type: none"> • Lesson & Guided Practice • Independent Practice • Intervention • i-Ready | MyMath p.571-574 |
| 31 | Sorting and stacking | NA | | | | <ul style="list-style-type: none"> • Review • Assessment | |

| <u>Word Wall Candidates</u> | | | | | | |
|-----------------------------|----------|-------------|--------|-----------|----------|--|
| Circle | Round | Straight | Side | Rectangle | Square | |
| Vertex | Triangle | Hexagon | Cone | Cube | Cylinder | |
| Roll | Slide | Sphere | Stack | Sort | | |
| Above | Below | In Front of | Behind | Beside | Next to | |

Authentic Application

Your Goal: To draw the rooms in your house and the things in your bedroom using the shapes you know.

The Situation: You are going to have relatives visit from far away and they don't know your home. One of those relatives is going to share your bed for the week they are visiting. You need to draw a map of your house using squares, rectangles, triangles, and circles so they know what your house looks like and they can go from one room to another and know where they are going. Then, you need to draw a map of your bedroom using the same shapes so your relative can not get hurt if they wake up in the middle of the night without the lights on and need to go to the bathroom.

Your product: #1 The map of your house with all the rooms shown using good rectangles, triangles, and circles.
#2 The map of your bedroom with all the things that are in it shown using rectangles, triangles, and circles.

Success Criteria: You must use at least one rectangle, one square, one triangle, and one circle in your maps.
Your rectangles, squares, circles, and triangles must be drawn correctly.