

| Grade K | | | |
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| Unit 3.5 | Unit Title Exploring Two- and Three-Dimensional Shapes | Lesson 1 of 4 | Day 1 - 2 |
| Lesson Focus | | | |
| 1. Standards Addressed | 2. Content to be Learned | 3. Mathematical Practices | 4. Essential Question |
| K.G.3 Identify shapes as two dimensional (lying in a “plane”, “flat”) or three-dimensional (“solid”). | •Visually compare attributes of shapes to determine 2-D from 3-D. | SMP4 Model with mathematics. SMP5 Use appropriate tools strategically. | •How can you tell the difference between a 2-D and a 3-d shape? |
| 5. Prerequisite Knowledge | 6. Essential Vocabulary | 7. Possible Misconceptions | 8. Necessary Materials |
| Recognize the difference between shapes even if they do not know the names. | Squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, spheres. 2-dimensional or 2-D 3-dimensional or 3-D flat, solid | It is difficult for teachers and students alike to understand “flat” plane because we use things like pattern blocks as a sample of 2-D shape; where in reality they have a height/thickness of about ¼ inch. | OnCore Lesson 92 Student pages 183 – 184 K-5 Math Resources Geometry Sentence Frames (Set 3) Worksheets: Recognize 2-D Shapes Recognize 3-D Shapes |
| Instruction | | | |
| 9. Instruction Practices (What are the teachers doing) | | 10. Learning Practices (What are the students doing) | |
| Teachers will guide students to visually compare attributes of shapes to determine if they are 2-dimensional or 3-dimensional. They will help students understand (those that question it!) that sometimes we use shapes that we consider 2-D, but they have some type of third degree like pattern blocks. Teachers will utilize OnCore lesson 92, Geometry Sentence Frames and if needed, the additional worksheets that have been included. Most importantly is for students to recognize real-life shapes that can pick up, turned around, and viewed for their attributes. | | Students will visually compare attributes of shapes to determine if they are 2-dimensional or 3-dimensional. They will practice comparing attributes by using real-life shapes they can pick up and turn around. Once they are comfortable with recognizing 3-D shapes they will identify these shapes using the OnCore student pages and additional worksheets the teacher may provide. Some students may not know the names of the shapes but should still recognize if they are 2-D or 3-D. | |

Lesson Alignment Guide – Mathematics
Cranston Public Schools

| Grade K | | | |
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| Unit 3.5 | Unit Title Exploring Two- and Three-Dimensional Shapes | Lesson 2 of 4 | Day 3 - 4 |
| Lesson Focus | | | |
| 1. Standards Addressed | 2. Content to be Learned | 3. Mathematical Practices | 4. Essential Question |
| K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of one object. | <ul style="list-style-type: none"> •Describe measurable attributes of objects, such as length and weight. •Describe several measurable attributes of a single object. | SMP4 Model with mathematics. SMP5 Use appropriate tools strategically. | <ul style="list-style-type: none"> •Describe several ways that you can measure an object? •How do you know what part of an object is the length? Height? •What does the weight of an object tell you? |
| 5. Prerequisite Knowledge | 6. Essential Vocabulary | 7. Possible Misconceptions | 8. Necessary Materials |
| Understand the concept of length, height and weight. | Length, width, height, weight Heavy, light, tall, short | Students may not understand the height of an object because we tend to change our vocabulary depending on what we are talking about. For example, we should consider height to be the vertical distance, but the student’s height does not change if they lie down on a bed! When referring to a pool, we may use the term depth for height. | OnCore Lesson 69 Student pages 137 – 138 Worksheets: Measuring Objects w/Paper Clips Length and Weight of Creatures Balance scale for weight. |
| Instruction | | | |
| 9. Instruction Practices (What are the teachers doing) | | 10. Learning Practices (What are the students doing) | |
| Teachers will guide students to describe the measurable attributes of objects, such as length and weight. They will encourage students to describe several measurable attributes of a single object. Teachers will help students recognize the correct attribute when looking at an object (see misconceptions). For consistency, when talking about height we will consider the “height” of the students, which is from the ground to the top of their head (vertical measure). When referring to length, it is best to consider this the longest measure (leaving the last measure to be the width). Teachers will also find the use of a balance scale helpful when measuring weights. | | Students will learn to describe the measurable attributes of objects, such as length and weight. They will describe several measurable attributes of a single object. Students will learn that the height of an object is the vertical measure, like their own height is. Length as being the longest side measure. They will work with these attributes using real-life objects, when possible. Students will learn about weight using a balance scales. | |

**Lesson Alignment Guide – Mathematics
Cranston Public Schools**

Grade K

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| Unit 3.5 | Unit Title Exploring Two- and Three-Dimensional Shapes | Lesson 3 of 4 | Day 5 - 7 |
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Lesson Focus

| 1. Standards Addressed | 2. Content to be Learned | 3. Mathematical Practices | 4. Essential Question |
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| <p>K.MD.2 Directly compare two objects with a measurable attribute in common, to see which objects has ‘more of’/’less of’ the attribute, and describe the difference. <i>For example, directly compare the heights of two children and describe one child as taller/shorter than the other.</i></p> | <ul style="list-style-type: none"> •Directly compare the length of two objects. •Directly compare the height of two objects. •Describe the difference between two objects as being taller, shorter, longer. Etc. •Use the strategy <i>draw a picture</i> to compare two objects. | <p>SMP4 Model with mathematics. SMP5 Use appropriate tools strategically.</p> | <ul style="list-style-type: none"> •How can you compare the length of two objects? •how can you compare the height of two objects? •How can you compare the weight of two objects? •How can you compare two objects by using the strategy <i>draw a picture</i>? |
| 5. Prerequisite Knowledge | 6. Essential Vocabulary | 7. Possible Misconceptions | 8. Necessary Materials |
| Understand the concepts of length, height, and weight of two objects. | <p>Longer, shorter Taller Heavier, lighter Same length or height</p> | <p>Not comparing the correct attributes of two objects. Students may be comparing the height of one to the width of another.</p> | <p>OnCore Lesson 70 - 73 Student pages 139 – 146 K-5 Math Resources Is it Longer? □ Is it Shorter? Comparing Towers Which is Longer?</p> |

Instruction

| 9. Instruction Practices (What are the teachers doing) | 10. Learning Practices (What are the students doing) |
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| <p>Teachers will guide students to directly compare two objects with a measurable attribute in common to see which objects has more or less of a particular attribute; like their length or height. They will help students describe the difference between two objects as being taller, shorter, longer, etc. and to draw a picture to help show the comparisons. Teachers will decide which materials to use (OnCore or K-5 Math Resources) based on time and need of their students.</p> | <p>Students will directly compare the length and height of two objects. They will describe the difference between two objects as being taller, shorter, longer, etc. At times, they may use the strategy <i>draw a picture</i> to compare two objects. They will practice this standard using materials from OnCore, or the K-5 Math Resource materials</p> |

Grade K

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| Unit 3.5 | Unit Title Exploring Two- and Three-Dimensional Shapes | Lesson 4 of 4 | Day 8 - 10 |
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Lesson Focus

| 1. Standards Addressed | 2. Content to be Learned | 3. Mathematical Practices | 4. Essential Question |
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| K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Limit category counts to <i>less than or equal to 10</i>) | <ul style="list-style-type: none"> •Classify objects into given categories. •Count the number of objects in each category (limited to 10) and sort by count. •Read a graph to determine how many objects, or count the objects in each category. | SMP4 Model with mathematics. SMP5 Use appropriate tools strategically. | <ul style="list-style-type: none"> •Which shapes should be in this group and why? •What categories can you use to sort objects? •How will you count and label the number of objects in each category? |
| 5. Prerequisite Knowledge | 6. Essential Vocabulary | 7. Possible Misconceptions | 8. Necessary Materials |
| <ul style="list-style-type: none"> •Understand how to sort and classify. •One-to-one correspondence •Use pattern blocks or attributes blocks in the classroom. | Graph Sorting mat Sort Categories, attributes | <ul style="list-style-type: none"> •Difficulty recognizing the attributes that shapes have in common. •Incorrectly interpreting the graph. | OnCore Lesson 77 – 79 Student pages 153 – 158 Investigations Unit 7 Investigations 2 <i>How are they the Same? Different?</i> Worksheets: Same or Different What Category Do I Best Fit Into? K-5 Math Resources Button Sort Pattern Block Sort Sorting Attribute Blocks |

Instruction

| 9. Instruction Practices (What are the teachers doing) | 10. Learning Practices (What are the students doing) |
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| Teachers will guide students to classify objects into given categories, count the number of objects in each category and sort the categories by count (to a max of 10). Using the OnCore materials they will also help students to read a graph to determine how many objects, or how to count the objects in each category. Teachers also have available materials from Investigations Unit 7, K-5 Math Resources and additional worksheets, if needed. | Students will classify objects into given categories; count the number of objects in each category and sort the categories by count (to a max of 10). They will read graphs to determine how many objects and learn how to count the objects in each category using the OnCore student pages. Using Investigations students will discuss how objects are the same and/or different. Other practice will be determined by the teacher. |