



# Math Pacing Guide

## Grade K

<b>Units</b>	<b>Unit TOTAL*</b>	<b>Cumulative TOTAL**</b>
Unit 1 – Counting and Cardinality	<b>54 days</b>	<b>54 days</b>
Unit 2 – Operations & Algebraic Thinking	<b>25 days</b>	<b>79 days</b>
Unit 3 – Numbers and Operations in Base Ten	<b>13 days</b>	<b>92 days</b>
Unit 4 – Measurement and Data	<b>17 days</b>	<b>109 days</b>
Unit 5 – Geometry	<b>27 days</b>	<b>136 days</b>
End of the Year Planner: Getting ready for Grade 1	<b>25 days</b>	<b>161 days</b>
Flex Days (projects, reteaching, standardized testing, etc.)	<b>19 days</b>	<b>180 days</b>

\* Unit Total is inclusive of introduction, instruction, assessment for that particular topic.

\*\* Cumulative Total is a running total, inclusive of prior and current topics.

# Pemberton Township School District Unit Planner

**Unit Title:** Grade K Mathematics - Counting and Cardinality

## Stage 1: Desired Results

### Standards & Indicators:

#### NJSLS Grade K – Standards for Mathematical Practice

- NJSLS.Math.Practice.MP1-8

#### NJSLS Grade K – Math

- K.CC.A.1
- K.CC.A.2
- K.CC.A.3
- K.CC.B.4a
- K.CC.B.4b
- K.CC.B.4c
- K.CC.B.5
- K.CC.C.6
- K.CC.C.7

#### NJSLS Grade K – Science

- K-2-ETS1-1
- K-2-ETS1-2
- K-2-ETS1-3

#### NJSLS Grade K – Social Studies

- 6.1.4.C.1
- 6.1.4.C.4
- 6.1.4.C.10

#### NJSLS Grade K – Literacy

- NJSLS.ELA-Literacy.SL.K.1-3
- NJSLS.ELA-Literacy.SL.K.4-6
- NJSLS.ELA-Literacy.RF.K.1-4

#### NJSLS Grade K – Technology

- 8.1.2.A.1-7
- 8.1.2.B.1
- 8.1.2.C.1
- 8.1.2.D.1
- 8.1.2.E.1
- 8.1.2.F.1

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- 8.2.2.A.1-5
- 8.2.2.B.1-4
- 8.2.2.C.1-6
- 8.2.2.D.1-5
- 8.2.2.E.1-5

## NJSLS 21<sup>st</sup> Century Life and Careers

- CRP2
- CRP8
- CRP11
- CRP12
- 9.2.4.A.4

### Central Idea / Enduring Understanding:

- Student will...
  - ...count to 100 by ones and by tens.
  - ...count forward beginning from a given number within the known sequence (instead of having to begin at 1).
  - ...write numbers from 0 to 20.
  - ...represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).
  - ...understand the relationship between numbers and quantities; connect counting to cardinality.
  - ...say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
  - ...understand the relationship between numbers and quantities; connect counting to cardinality.
  - ...understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
  - ...understand the relationship between numbers and quantities; connect counting

### Essential/Guiding Question:

- How does the order of numbers help you to count to 50 by ones?
- How can you count to 100 by tens on a hundred chart?
- How can you use sets of tens to count to 100?
- How can you count forward to 20 from a given number?
- How can you use a drawing to make 10 from a given number?
- How can you count and write 1, 2, 3, and 4 with words and numbers?
- How can you solve problems using the strategy *make a model*?
- How can you identify and write 0 with words and numbers?
- How can you count and write 5, 6, 7, 8, 10, 11, 12, 13, 14, 16, 17, 18, 19, and 20 with words and numbers?
- How can you show and count 1, 2, 3, 4, and 5 with objects?
- How do you know that the order of numbers is the same as a set of objects that is one larger?
- How can you show and count 6 objects?

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<p>to cardinality.</p> <ul style="list-style-type: none"> <li>• ...understand that each successive number name refers to a quantity that is one larger.</li> <li>• ...count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.</li> <li>• ...identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.</li> <li>• ...compare two numbers between 1 and 10 presented as written numerals.</li> </ul>	<ul style="list-style-type: none"> <li>• How can you show and count 7, 8, 9, 10, and 20 objects?</li> <li>• How can you use matching and counting strategies to compare sets with the same number of objects?</li> <li>• How can you compare sets when the number of objects in one set is <i>greater than</i> or <i>less than</i> the number of objects in the other set?</li> <li>• How can you make a model to solve problems using a matching strategy?</li> <li>• How can you use a counting strategy to compare sets of objects?</li> <li>• How can you solve problems using the strategies <i>draw a picture</i> or <i>make a model</i>?</li> <li>• How can you compare two numbers between 1 and 10?</li> </ul>
<p><b><u>Content:</u></b></p> <ul style="list-style-type: none"> <li>• Number names</li> <li>• Count sequence</li> <li>• Count objects</li> <li>• Compare numbers</li> </ul>	<p><b><u>Skills (Objectives):</u></b></p> <ul style="list-style-type: none"> <li>• Know the count sequence when counting to 50 and 100 by ones.</li> <li>• Know the count sequence when counting to 100 by tens.</li> <li>• Use sets of tens to count to 100.</li> <li>• Use a drawing to make 10 from a given number.</li> <li>• Count forward to 20 from a given number.</li> <li>• Represent 1, 2, 3, and 4 objects with number names and written numerals.</li> <li>• Solve problems by using the strategy <i>make a model</i>.</li> <li>• Represent 0, 6, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, and 20 objects with a number name and a written numeral.</li> <li>• Solve problems by using the strategy <i>draw a picture</i>.</li> <li>• Model and count 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20 with objects.</li> <li>• Represent 5 objects with a number name and a</li> </ul>

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written numeral.

- Use matching and counting strategies to compare sets with the same number of objects.
- Use matching and counting strategies to compare sets when the number of objects in one set is greater than the number of objects in the other set.
- Use matching and counting strategies to compare sets when the number of objects in one set is less than the number of objects in the other set.
- Make a model to solve problems using a matching strategy.
- Use a counting strategy to compare sets of objects.
- Solve problems by using the strategy *draw a picture or make a model*.
- Use counting strategies to compare sets of objects.
- Compare two numbers between 1 and 10.

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## Stage 2: Assessment Evidence

### Performance Task(s):

- Lesson *Quick Checks*
- Formative Assessment
- Open-Ended Problems
- Project-Based Assessment
- Self-Assessment
- Timed Drills
- End-of-Year Assessment
- Benchmark Assessment

### Other Evidence:

- Class-Work Review
- Teacher Observation
- Homework Review
- Group & Cooperative Work
- Think-Pair-Share

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## Stage 3: Learning Plan

### Learning Opportunities/Strategies:

- Segment 1
  - Give children more practice comparing numbers. Have them count from 1 to 20.
  - Explain to children the process of filling in the name and numbers on a calendar for the current month.
  - On a hundred chart have children read aloud the numbers across the first row.
  - Show a hundred chart on the board. Have children count with you as you count forward by tens to 100.
  
- Segment 2
  - Ask three boys and one girl to stand. Four children are standing—three boys and one girl. How could we have four children grouped in a different way? Have children model various combinations of boys and girls—all boys; all girls; two boys; two girls; one boy, three girls; etc.

### Resources:

- Segment 1
  - Refer to Go Math! Lesson(s): 8.5, 8.6, 8.7, 8.8
  - Refer to Go Math! Teacher Edition and Student Edition page(s): 325A–325B, 325–328, 329A–329B, 329–332, 333A–333B, 333–336, 337A–337B, 337–340 (Note: *Pages only in Teacher Edition are italics*)
  - Go Math! Animated Math Models (via Think Central)
  - HMH Mega Math (via Think Central)
  - Go Math! iTools (via Think Central)
  - Go Math! eGlossary (via Think Central)
  - Go Math! Destination Math (via Student Edition in Think Central)
  - Corresponding Go Math! Grab and Go for Activities/Literature/Games
  - Corresponding Go Math! Daily Routines
  - <https://www-k6.thinkcentral.com/ePC/start.do>
  - <http://www.state.nj.us/education/aps/ccs/math/>
  
- Segment 2
  - Refer to Go Math! Lesson(s): 4.4, 8.3
  - Refer to Go Math! Teacher Edition and Student Edition page(s): 145A–145B, 145–147, 317A–317B, 317–320 (Note: *Pages only in Teacher Edition are italics*)
  - Go Math! Animated Math Models (via Think Central)
  - HMH Mega Math (via Think Central)

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- Have children use manipulatives to create a set of 17 counters and a set of 19 counters. Which set has more/fewer counters? Which number is greater/less? Continue with different sets of 20.

- Segment 3

- Discuss with children the idea that people write to share information.
- Invite children to tell some things that they already know about the numbers 3 and 4.
- Use iTools to show a set of five counters. How many counters are in this set? Use counters or iTools to show another set of five counters placed differently. How many counters are in this set? What can you tell about the placement of objects?
- Put three counters in your hands and show the class. How many counters are in my hands? Repeat with other numbers to five. Show your empty hands. Now how many counters are in my hands?
- Use iTools to make a set of three, four, and five animals. Point to each set and have children describe it. Which set has one more than 3? Which set has one more than 4?

- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
- Corresponding Go Math! Grab and Go for Activities/Literature/Games
- Corresponding Go Math! Daily Routines
- <https://www-k6.thinkcentral.com/ePC/start.do>
- <http://www.state.nj.us/education/aps/ccs/math/>

- Segment 3

- Refer to Go Math! Lesson(s): 1.2, 1.4, 1.9, 1.10, 3.2, 3.4, 3.6, 3.8, 4.2, 7.2, 7.4, 7.6, 7.8, 7.10, 8.2
- Refer to Go Math! Teacher Edition and Student Edition page(s): 17A–17B, 17–20, 25A–25B, 25–27, 45A–45B, 45–48, 49A–49B, 49–52, 93A–93B, 101A–101B, 101–103, 109A–109B, 109–112, 117A–117B, 117–120, 137A–137B, 137–140, 265A–265B, 265–268, 273A–273B, 273–276, 281A–281B, 281–283, 289A–289B, 289–292, 297A–297B, 297–300, 313A–313B, 313–316 (Note: Pages only in Teacher Edition are italics)
- Go Math! Animated Math Models (via Think Central)
- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
- Corresponding Go Math! Grab and Go



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- Let children tell some things that they have learned about the number 7. Accept several answers. How does 7 compare to 1? Would you eat seven sandwiches for lunch? Would you eat seven grapes?
- Descriptive questions: Have you ever been to a fair? What kinds of things did you see there? What did you do at the fair?
- Lead children in counting to 9. Think about taking two hops. How far would you go? What about five hops? Now what about nine hops?
- What numbers do you know that are more than 5? Tell some things you know about the number 10. When counting objects, what do you know about the last counting word?
- Is 12 greater or less than 11?
- If you really like happy-face stickers, do you think you would want 11 new stickers or 12 new stickers? Why?
- Have children describe a set of 10 patterned counters using the pattern "10 ones and 1 one". Continue the pattern through 14.
- Use numeral cards 8-15 and have children select a card and show the numeral with cubes.
- Create a set of 18 objects. How many objects? How many more objects will you need to make a set of 20?

for Activities/Literature/Games

- Corresponding Go Math! Daily Routines
- <https://www-k6.thinkcentral.com/ePC/start.do>
- <http://www.state.nj.us/education/aps/ccs/math/>

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- Segment 4

- Invite children to tell some things that they already know about the numbers 1 and 2. Name something of which you have one. Name something of which you have two. Discuss the symbols used to represent the quantities for 1 and 2.
- Show one counter. How can you describe this set I made? Show a set of two counters. How can you describe this set I made?
- Show a set of three counters. How many counters are in this set? Show a set with four counters. How many counters are in the set? Are there more counters in a set of three or a set of four?

- Segment 5

- Lead children in counting to 5 and clapping five times. Clap various numbers of times and let children tell whether the number of claps is 5 or not.
- How many fingers do you have on each hand? How many toes do you have on each foot? Look around the room. Where do you see the number 5?

- Segment 4

- Refer to Go Math! Lesson(s): 1.1, 1.3, 1.5
- Refer to Go Math! Teacher Edition and Student Edition page(s): 13A–13B, 13–16, 21A–21B, 21–24, 29A–29B, 29–32 (Note: Pages only in Teacher Edition are italics)
- Go Math! Animated Math Models (via Think Central)
- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
- Corresponding Go Math! Grab and Go for Activities/Literature/Games
- Corresponding Go Math! Daily Routines
- <https://www-k6.thinkcentral.com/ePC/start.do>
- <http://www.state.nj.us/education/aps/ccs/math/>

- Segment 5

- Refer to Go Math! Lesson(s): 1.6
- Refer to Go Math! Teacher Edition and Student Edition page(s): 33A–33B, 33–36 (Note: Pages only in Teacher Edition are italics)
- Go Math! Animated Math Models (via Think Central)
- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
- Corresponding Go Math! Grab and Go for Activities/Literature/Games

# Pemberton Township School District Unit Planner

- Segment 6

- Ask the following questions to help children to start thinking about order: What do you think it means to put things in order? When have you put things in order?

- Segment 7

- Show a five-cube train. How many cubes are in this cube train? How many cubes do I have now?
- There are two children sitting at one table and six children sitting at another table. Compare the number of children sitting at each table. Ask other questions that would have answers of

- Corresponding Go Math! Daily Routines
- <https://www-k6.thinkcentral.com/ePC/start.do>
- <http://www.state.nj.us/education/aps/ccs/math/>

- Segment 6

- Refer to Go Math! Lesson(s): 1.8
- Refer to Go Math! Teacher Edition and Student Edition page(s): 41A–41B, 41–44 (Note: Pages only in Teacher Edition are italics)
- Go Math! Animated Math Models (via Think Central)
- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
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- Corresponding Go Math! Daily Routines
- <https://www-k6.thinkcentral.com/ePC/start.do>
- <http://www.state.nj.us/education/aps/ccs/math/>

- Segment 7

- Refer to Go Math! Lesson(s): 3.1, 3.3, 3.5, 3.7, 4.1, 8.1
- Refer to Go Math! Teacher Edition and Student Edition page(s): 89A–89B, 89–92, 97A–97B, 97–100, 105A–105B, 105–108, 113A–113B, 113–116, 133A–133B, 133–136, 309A–309B, 309–312 (Note: Pages only in Teacher Edition are italics)

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about 6 or fewer.

- Show a set of five counters. What number does this set I made show? Show a set of three counters. What number does this set I made show?
- Do you think these sentences are silly or real? Eight children sit on one chair. Seven chairs are just right for seven children. Katie can write with five pencils at one time.
- Explore the word full with children. Use three chairs and have a child sit in each one. Each chair is full. What does that mean? What other things might be full?
- Have children count from 1 to 18. What number comes after 18? What do you know about a full ten frame? How many counters is 10 and 9 more?

- Segment 8

- Show a set of three counters. How many counters are in this set? Erase the set of counters. How many counters do you see now? Remind children that when you take away all the objects in a set, you have none, or zero objects. Repeat with five counters.
- Show two sets of four counters. How can you describe these sets? Now I will put two more in the bottom set. Describe my sets now. Continue with sets of one and three, and two and five.
- Hold up your two hands. What can you say about the number of fingers showing on my hands? Children: Hold up one hand showing two fingers. Show more

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- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
- Corresponding Go Math! Grab and Go for Activities/Literature/Games
- Corresponding Go Math! Daily Routines
- <https://www-k6.thinkcentral.com/ePC/start.do>
- <http://www.state.nj.us/education/aps/ccs/math/>

- Segment 8

- Refer to Go Math! Lesson(s): 2.1, 2.2, 2.3, 2.4, 2.5, 3.9, 4.5, 4.6, 8.4
- Refer to Go Math! Teacher Edition and Student Edition page(s): 61A–61B, 61–64, 65A–65B, 65–68, 69A–69B, 69–71, 73A–73B, 73–76, 77A–77B, 77–80, 121A–121B, 121–124, 149A–149B, 149–152, 153A–153B, 153–156, 321A–321B, 321–323 (Note: Pages only in Teacher Edition are italics)
- Go Math! Animated Math Models (via Think Central)
- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student

# Pemberton Township School District Unit Planner

fingers on the other hand. Raise the hand that shows fewer fingers.

- Ask a group of three girls to stand next to a group of three boys. How many girls are in this group? How many boys are in this group? In which group is the number of children less? How do you know?
- Show a set of five red counters and a set of seven yellow counters. How are the sets alike? How are they different? Continue with a set of seven red counters and a set of five yellow counters.
- Show two sets—a set of eight counters and a set of six counters. Describe the two sets. Which set would you rather have? Why? Continue with sets of four and nine, seven and four.
- Place seven chairs in front of the classroom. Have five children come to the front. Are there as many children as chairs? Which set has the greater number? How do you know?
- For more practice with counting sets, show a set of 10 counters and a set of seven counters. Have children describe the sets using the terms 10 and 7 more. Continue with sets of 18, 19, and 20.

- Segment 9

- Show two sets of counters—a set of six and a set of nine. Which set has more counters? Which set has fewer? Repeat for sets of seven and five, and eight and ten.

Edition in Think Central)

- Corresponding Go Math! Grab and Go for Activities/Literature/Games
- Corresponding Go Math! Daily Routines
- <https://www-k6.thinkcentral.com/ePC/start.do>
- <http://www.state.nj.us/education/aps/ccs/math/>

- Segment 9

- Refer to Go Math! Lesson(s): 4.7
- Refer to Go Math! Teacher Edition and Student Edition page(s): 157A–157B, 157–160 (Note: Pages only in Teacher Edition are italics)

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	<ul style="list-style-type: none"> <li>○ Go Math! Animated Math Models (via Think Central)</li> <li>○ HMH Mega Math (via Think Central)</li> <li>○ Go Math! iTools (via Think Central)</li> <li>○ Go Math! eGlossary (via Think Central)</li> <li>○ Go Math! Destination Math (via Student Edition in Think Central)</li> <li>○ Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>○ Corresponding Go Math! Daily Routines</li> <li>○ <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>○ <a href="http://www.state.nj.us/education/aps/ccs/math/">http://www.state.nj.us/education/aps/ccs/math/</a></li> </ul>
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### Differentiation

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
<ul style="list-style-type: none"> <li>● Go Math! Enrich Guide</li> <li>● Mega Math</li> <li>● Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>● Go Math! Reteach Guide</li> <li>● Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>● Go Math! Reteach Guide</li> <li>● Go Math! Strategic Intervention Guide</li> <li>● Go Math! Soar to Success</li> <li>● Go Math! Animated Math Models</li> <li>● Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>● Go Math! Intensive Intervention Guide</li> <li>● Go Math! ELL Activity Guide</li> <li>● Go Math! Soar to Success</li> <li>● Go Math! Animated Math Models</li> <li>● Grab-and-Go! Differentiated Centers</li> </ul>

# Pemberton Township School District Unit Planner

**Unit Title:** Grade K Mathematics – Operations & Algebraic Thinking

## Stage 1: Desired Results

### Standards & Indicators:

#### NJSLS Grade K – Standards for Mathematical Practice

- NJSLS.Math.Practice.MP1-8

#### NJSLS Grade K – Math

- K.OA.A.1
- K.OA.A.2
- K.OA.A.3
- K.OA.A.4
- K.OA.A.5

#### NJSLS Grade K – Science

- K-2-ETS1-1
- K-2-ETS1-2
- K-2-ETS1-3

#### NJSLS Grade K – Social Studies

- 6.1.4.C.1
- 6.1.4.C.4
- 6.1.4.C.10

#### NJSLS Grade K – Literacy

- NJSLS.ELA-Literacy.SL.K.1-3
- NJSLS.ELA-Literacy.SL.K.4-6
- NJSLS.ELA-Literacy.RF.K.1-4

#### NJSLS Grade K – Technology

- 8.1.2.A.1-7
- 8.1.2.B.1
- 8.1.2.C.1
- 8.1.2.D.1
- 8.1.2.E.1
- 8.1.2.F.1
- 8.2.2.A.1-5
- 8.2.2.B.1-4
- 8.2.2.C.1-6

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- 8.2.2.D.1-5
- 8.2.2.E.1-5

## NJSLS 21<sup>st</sup> Century Life and Careers

- CRP2
- CRP8
- CRP11
- CRP12
- 9.2.4.A.4

### Central Idea / Enduring Understanding:

- Student will...
  - Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.)
  - Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
  - Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g.,  $5 = 2 + 3$  and  $5 = 4 + 1$ ).
  - For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
  - Demonstrate fluency for addition and subtraction within 5.

### Essential/Guiding Question:

- How can you show addition as adding to or as putting together?
- How can you solve problems using the strategy act it out?
- How can you show subtraction as taking from or taking apart?
- How can you solve addition word problems and complete the addition sentence?
- How can you solve subtraction word problems and complete the equation?
- How can you solve word problems using addition and subtraction?
- How can you use two sets of objects to show 5 in more than one way?
- How can you model and write addition sentences for number pairs for sums to 5, 6, 7, 8, 9, and 10?
- How can you use a drawing to make 10 from a given number?
- How can you use a drawing to find the number that makes a ten from a given number?
- How can you use objects and drawings to solve addition or subtraction word problems?



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## Content:

- Understand Addition
- Understand Subtraction

## Skills (Objectives):

- Use expressions to represent addition within 5.
- Solve problems by using the strategy act it out.
- Use expressions to represent subtraction within 5.
- Use expressions to represent subtraction.
- Solve addition word problems within 10 and record the equation.
- Solve subtraction word problems within 10 and record the equation.
- Understand addition as putting together or adding to and subtraction as taking apart or taking from to solve word problems.
- Use objects or drawings to decompose 5 into pairs in more than one way.
- Decompose numbers within 5 into pairs in more than one way and record each decomposition with an equation.
- Decompose 6, 7, 8, 9, and 10 into pairs in more than one way and record each decomposition with an equation.
- Use a drawing to find 10 from a given number and record the equation.
- Use objects and drawings to solve addition word problems within 5.
- Solve addition word problems within 5 and record the equation.
- Use objects and drawings to solve subtraction word problems within 5.
- Solve subtraction word problems within 5 and record the equation.

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## Stage 2: Assessment Evidence

### Performance Task(s):

- Lesson *Quick Checks*
- Formative Assessment
- Open-Ended Problems
- Project-Based Assessment
- Self-Assessment
- Timed Drills
- End-of-Year Assessment
- Benchmark Assessment

### Other Evidence:

- Class-Work Review
- Teacher Observation
- Homework Review
- Group & Cooperative Work
- Think-Pair-Share

# Pemberton Township School District Unit Planner

## Stage 3: Learning Plan

### Learning Opportunities/Strategies:

- Segment 1
  - Have a group of two boys come to the front of the classroom. Then have a group of three girls come to the front of the classroom. As you point to the groups ask: How many boys are in this group? How many girls are in this group? Continue with other groups of boys and girls using numbers 10 or less.
  - Make a row of three red counters followed by two yellow counters. How many red counters are in this row? How many yellow counters are in this row? How can you use the word and to tell about the counters in this row?
  - Remind children that they have previously used models to solve problems. Tell them that, they are going to use the strategy act it out to solve some problems: Have you ever been playing on your own and then a friend comes to play with you? How many children will you need to act this out? Let children share other experiences that they could act out.
  - Review with children that they have been learning to put together sets to add. Model the addition expression  $4 + 1$ . Explain the steps as you model  $4 + 1$ . Show four counters. How many counters am I starting with? How many counters did I add? Repeat for  $3 + 2$ , and  $1 + 4$ .
  - Have five children stand up. Have two of them sit down. How many children

### Resources:

- Segment 1
  - Refer to Go Math! Lesson(s): 5.1, 5.2, 5.3, 6.1, 6.2, 6.3
  - Refer to Go Math! Teacher Edition and Student Edition page(s): 169A–169B, 169–172, 173A–173B, 173–176, 177A–177B, 177–180, 225A–225B, 225–228, 229A–229B, 229–232, 233A–233B, 233–236 (Note: Pages only in Teacher Edition are italics)
  - Go Math! Animated Math Models (via Think Central)
  - HMH Mega Math (via Think Central)
  - Go Math! iTools (via Think Central)
  - Go Math! eGlossary (via Think Central)
  - Go Math! Destination Math (via Student Edition in Think Central)
  - Corresponding Go Math! Grab and Go for Activities/Literature/Games
  - Corresponding Go Math! Daily Routines
  - <https://www-k6.thinkcentral.com/ePC/start.do>
  - <http://www.state.nj.us/education/aps/ccs/math/>

## Pemberton Township School District Unit Planner

were standing up? How many children sat down? Have children discuss the subtraction problem and they say 5 take away 3 to describe the situation. If time permits, have children act out another example of taking from within 5.

- Show five counters in a ten frame. How many counters are in the ten frame? How many counters are left? How can you use numbers and a symbol to show this subtraction? Repeat with other numbers of counters.

- Segment 2

- Have a class discussion about birds. Where have you seen birds? What is alike about all birds? What is different? What do you know about birds?
- Model the subtraction sentence  $9 - 5 = 4$ . Explain the steps as you model 9 and take away 5. First show nine counters. How many counters am I starting with? Take away five. How many counters did I take away? How many counters are left? Repeat for  $10 - 6$ , and  $8 - 1$ .
- Model addition and subtraction with groups of children. Start with some children and have some more come. Ask children questions such as: How many children are in the set? How many children are added to the set? How many children are there in all? Then have some leave the set. How many children are there in all? How many children went away? How many children are left? Continue adding and

- Segment 2

- Refer to Go Math! Lesson(s): 5.7, 6.6, 6.7
- Refer to Go Math! Teacher Edition and Student Edition page(s): 193A–193B, 193–196, 245A–245B, 245–248, 249A–249B, 249–252 (Note: Pages only in Teacher Edition are italics)
- Go Math! Animated Math Models (via Think Central)
- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
- Corresponding Go Math! Grab and Go for Activities/Literature/Games
- Corresponding Go Math! Daily Routines
- <https://www-k6.thinkcentral.com/ePC/start.do>
- <http://www.state.nj.us/education/aps/ccs/math/>

## Pemberton Township School District Unit Planner

subtracting numbers of children.

- Segment 3

- Ask children questions to get them thinking about parts that make 5. Show a set of two yellow counters and a set of three red counters. How many yellow counters are there? How many red counters are there? How many counters are there in both sets? Repeat with different sets that make 5. What can you tell about ways to make 5?
- Show three red counters and four yellow counters as a blank addition sentence. What addition sentence do the counters show? Change one yellow counter to red so there are four red counters and three yellow counters. Now what addition sentence do the counters show? Discuss how the two number sentences are the same or different. Repeat with other pairs of numbers.
- Make two circles on the floor, each large enough for five children to stand in. Have three children stand in the first circle and have two children stand in the second circle. Call on other children to tell how many children are in each circle.
- Write 7 on the board. Show seven yellow cubes in one bowl and seven orange cubes in the other bowl. Remove six or fewer cubes from one bowl. Count the cubes aloud with children. Remove additional cubes from the other bowl with children. After children see there are seven cubes in all, call a volunteer to

- Segment 3

- Refer to Go Math! Lesson(s): 1.7, 5.8, 5.9, 5.10, 5.11, 5.12
- Refer to Go Math! Teacher Edition and Student Edition page(s): 37A–37B, 37–40, 197A–197B, 197–200, 201A–201B, 201–204, 205A–205B, 205–208, 209A–209B, 209–212, 213A–213B, 213–216 (Note: Pages only in Teacher Edition are italics)
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- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
- Corresponding Go Math! Grab and Go for Activities/Literature/Games
- Corresponding Go Math! Daily Routines
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- <http://www.state.nj.us/education/aps/ccs/math/>

## Pemberton Township School District Unit Planner

complete an addition sentence on the board. As you continue the activity, be sure to include a number pair with a zero. What would the addition sentence be if I removed seven cubes from one bowl and none or zero cubes from the other bowl?

- Review the number and numeral 9. Ask children to count aloud as you stamp 9 counters of your choice on a mat. Then have children record the numeral 9 on paper. Repeat the activity inviting different volunteers to stamp out nine counters of their choice.
- Use counters on a ten frame to review numbers and numerals 1 to 10. Say a number from 1 to 10 and have children show the number with counters on a ten frame. Remind them to start at the top and fill left to right. Then have them write the matching numeral on their MathBoards/paper.

- Segment 4

- Ask three boys and one girl to stand. Four children are standing—three boys and one girl. How could we have four children grouped in a different way? Have children model various combinations of boys and girls—all boys; all girls; two boys, two girls; one boy, three girls. There are many ways to make 4!
- Show a row of two red and three yellow counters. Ask how many red counters and how many yellow counters there

- Segment 4

- Refer to Go Math! Lesson(s): 4.3, 5.5
- Refer to Go Math! Teacher Edition and Student Edition page(s): 141A–141B, 141–144, 185A–185B, 185–188 (Note: Pages only in Teacher Edition are italics)
- Go Math! Animated Math Models (via Think Central)
- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)

# Pemberton Township School District

## Unit Planner

are. What addition sentence tells about the counters? Continue with other numbers of red and yellow counters (up to a total of five counters)

- Segment 5

- Have you ever had other children added to your group when you were doing something? Let children share experiences. After children were added to your group, did you have more children, or fewer children doing the activity? Lead a class discussion of other times more may have been added to something, such as birds on a lawn or dishes on a table.
- Show and say the following: I have three cubes in my right hand. How can you show the cubes on a Mathboard/piece of paper? I have three cubes in my left hand. How can you show the cubes on a Mathboard/piece of paper? Have children draw each cube train. Draw one circle around the two cube trains. Ask a volunteer to count the cubes to find how many in all. Repeat with other cube trains.
- Ask children questions about the beach. Have you ever been to the beach? If you were going to the beach, what would you bring? Ask three volunteers to act out the following subtraction word problem: Two people were sitting on the

- Corresponding Go Math! Grab and Go for Activities/Literature/Games
- Corresponding Go Math! Daily Routines
- <https://www-k6.thinkcentral.com/ePC/start.do>
- <http://www.state.nj.us/education/aps/ccs/math/>

- Segment 5

- Refer to Go Math! Lesson(s): 5.4, 5.6, 6.4, 6.5
- Refer to Go Math! Teacher Edition and Student Edition page(s): 181A–181B, 181–183, 189A–189B, 189–192, 237A–237B, 237–239, 241A–241B, 241–244 (Note: Pages only in Teacher Edition are italics)
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- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
- Corresponding Go Math! Grab and Go for Activities/Literature/Games
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- <http://www.state.nj.us/education/aps/ccs/math/>

## Pemberton Township School District Unit Planner

<p>beach. One went swimming. How many people are left sitting on the beach? Continue with other subtraction word problems about the beach.</p> <ul style="list-style-type: none"> <li>○ Ask a group of five children to form a circle. Help the class count to see how many children there are in all. How many children are in the circle? How many children leave? How many children are in the circle now? Ask a volunteer to tell a subtraction word problem about what happened. Repeat the activity with other groups of children.</li> </ul>	
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### Differentiation

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
<ul style="list-style-type: none"> <li>• Go Math! Enrich Guide</li> <li>• Mega Math</li> <li>• Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>• Go Math! Reteach Guide</li> <li>• Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>• Go Math! Reteach Guide</li> <li>• Go Math! Strategic Intervention Guide</li> <li>• Go Math! Soar to Success</li> <li>• Go Math! Animated Math Models</li> <li>• Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>• Go Math! Intensive Intervention Guide</li> <li>• Go Math! ELL Activity Guide</li> <li>• Go Math! Soar to Success</li> <li>• Go Math! Animated Math Models</li> <li>• Grab-and-Go! Differentiated Centers</li> </ul>



# Pemberton Township School District Unit Planner

**Unit Title:** Grade K Mathematics – Numbers & Operations in Base Ten

## Stage 1: Desired Results

### Standards & Indicators:

#### NJSLS Grade K – Standards for Mathematical Practice

- NJSLS.Math.Practice.MP1-8

#### NJSLS Grade K – Math

- K.KBT.A.1

#### NJSLS Grade K – Science

- K-2-ETS1-1
- K-2-ETS1-2
- K-2-ETS1-3

#### NJSLS Grade K – Social Studies

- 6.1.4.C.1
- 6.1.4.C.4
- 6.1.4.C.10

#### NJSLS Grade K – Literacy

- NJSLS.ELA-Literacy.SL.K.1-3
- NJSLS.ELA-Literacy.SL.K.4-6
- NJSLS.ELA-Literacy.RF.K.1-4

#### NJSLS Grade K – Technology

- 8.1.2.A.1-7
- 8.1.2.B.1
- 8.1.2.C.1
- 8.1.2.D.1
- 8.1.2.E.1
- 8.1.2.F.1
- 8.2.2.A.1-5
- 8.2.2.B.1-4
- 8.2.2.C.1-6
- 8.2.2.D.1-5
- 8.2.2.E.1-5

# Pemberton Township School District Unit Planner

## NJSLS 21<sup>st</sup> Century Life and Careers

- CRP2
- CRP8
- CRP11
- CRP12
- 9.2.4.A.4

### Central Idea / Enduring Understanding:

- Student will
  - Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as  $18 = 10 + 8$ ); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

### Essential/Guiding Question:

- How can you use objects to show 11, 12, 13, 14, 15, 16, 17, 18, and 19 as ten ones and some more ones?

### Content:

- Work with numbers to 19
- Place value foundation

### Skills (Objectives):

- Use objects to decompose the numbers 11, 12, 13, 14, 15, 16, 17, 18, and 19 into ten ones and some further ones.

# Pemberton Township School District Unit Planner

## Stage 2: Assessment Evidence

### Performance Task(s):

- Lesson *Quick Checks*
- Formative Assessment
- Open-Ended Problems
- Project-Based Assessment
- Self-Assessment
- Timed Drills
- End-of-Year Assessment
- Benchmark Assessment

### Other Evidence:

- Class-Work Review
- Teacher Observation
- Homework Review
- Group & Cooperative Work
- Think-Pair-Share

# Pemberton Township School District Unit Planner

## Stage 3: Learning Plan

### Learning Opportunities/Strategies:

- Segment 1
  - Provide children with counters and present these directions, one step at a time. Put five counters, red side up, in a row in front of you. Put one counter, yellow side up, below each of these counters. Now you have a red row above your yellow row. How many red counters are there? Turn over one of the yellow counters. How many red counters are there now? Turn over the other yellow counters. How many red counters are there now?
  - Call one child to the front of the room, and explain that you need a circle of 11 children. How many more children would I need to make 11? Ask children how they found the answer. Make sure they know that 1 and 10 more make 11. Discuss with children how this is like using ten frames, but starting with the “one” instead of the “ten”. Repeat with two children and make the number 12.
  - Show children 13 counters scattered on a table. How could I count these counters? Would it be easier to count on from a full ten frame or to count each counter by one? Repeat for the number 14.
  - Ask children to draw 15 objects. Count to 15. Have children erase one object and then recount the set. Continue until zero are left.
  - Review the number 17 with children by asking the following questions: How

### Resources:

- Segment 1
  - Refer to Go Math! Lesson(s): 7.1, 7.3, 7.5, 7.7, 7.9
  - Refer to Go Math! Teacher Edition and Student Edition page(s): *261A–261B, 261–264, 269A–269B, 269–272, 277A–277B, 277–280, 285A–285B, 285–288, 293A–293B, 293–296* (Note: Pages only in Teacher Edition are italics)
  - Go Math! Animated Math Models (via Think Central)
  - HMH Mega Math (via Think Central)
  - Go Math! iTools (via Think Central)
  - Go Math! eGlossary (via Think Central)
  - Go Math! Destination Math (via Student Edition in Think Central)
  - Corresponding Go Math! Grab and Go for Activities/Literature/Games
  - Corresponding Go Math! Daily Routines
  - <https://www-k6.thinkcentral.com/ePC/start.do>
  - <http://www.state.nj.us/education/aps/ccs/math/>

## Pemberton Township School District Unit Planner

<p>many children are here today? With children, count out 17 sheets of paper. If I have 17 papers, will it be enough for this class? Why or why not?</p>			
<b>Differentiation</b>			
<b>High-Achieving Students</b>	<b>On Grade Level Students</b>	<b>Struggling Students</b>	<b>Special Needs/ELL</b>
<ul style="list-style-type: none"> <li>• Go Math! Enrich Guide</li> <li>• Mega Math</li> <li>• Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>• Go Math! Reteach Guide</li> <li>• Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>• Go Math! Reteach Guide</li> <li>• Go Math! Strategic Intervention Guide</li> <li>• Go Math! Soar to Success</li> <li>• Go Math! Animated Math Models</li> <li>• Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>• Go Math! Intensive Intervention Guide</li> <li>• Go Math! ELL Activity Guide</li> <li>• Go Math! Soar to Success</li> <li>• Go Math! Animated Math Models</li> <li>• Grab-and-Go! Differentiated Centers</li> </ul>

# Pemberton Township School District Unit Planner

**Unit Title:** Grade K Mathematics – Measurement & Data

## Stage 1: Desired Results

### Standards & Indicators:

#### NJSLS Grade K – Standards for Mathematical Practice

- NJSLS.Math.Practice.MP1-8

#### NJSLS Grade K – Math

- K.MD.A.1
- K.MD.A.2
- K.MD.B.3

#### NJSLS Grade K – Science

- K-2-ETS1-1
- K-2-ETS1-2
- K-2-ETS1-3

#### NJSLS Grade K – Social Studies

- 6.1.4.C.1
- 6.1.4.C.4
- 6.1.4.C.10

#### NJSLS Grade K – Literacy

- NJSLS.ELA-Literacy.SL.K.1-3
- NJSLS.ELA-Literacy.SL.K.4-6
- NJSLS.ELA-Literacy.RF.K.1-4

#### NJSLS Grade K – Technology

- 8.1.2.A.1-7
- 8.1.2.B.1
- 8.1.2.C.1
- 8.1.2.D.1
- 8.1.2.E.1
- 8.1.2.F.1
- 8.2.2.A.1-5
- 8.2.2.B.1-4
- 8.2.2.C.1-6
- 8.2.2.D.1-5
- 8.2.2.E.1-5

# Pemberton Township School District Unit Planner

**NJSLS 21<sup>st</sup> Century Life and Careers**

- CRP2
- CRP8
- CRP11
- CRP12
- 9.2.4.A.4

**Central Idea / Enduring Understanding:**

- Students will
  - Describe measurable attributes of objects, such as length or weight.
  - Describe several measurable attributes of a single object.
  - Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. Limit category counts to be less than or equal to 10.

**Essential/Guiding Question:**

- How can you describe several ways to measure one object?
- How can you compare the lengths, heights, and weights of two objects?
- How can you solve problems using the strategies: *draw a picture* and *use logical reasoning*?
- How can you classify and count objects by color, size, and shape?
- How can you make and read a graph to count objects that have been classified into categories?

**Content:**

- Describe and compare measureable attributes
- Classify objects
- Count objects

**Skills (Objectives):**

- Describe several measurable attributes of a single object.
- Directly compare the lengths, heights, and weights of two objects.
- Solve problems by using the strategies: *draw a picture* and *use logical reasoning*.
- Classify and count objects by color, shape, and size
- Make and read a graph to count objects that have been classified into categories.
- Solve problems by using the strategy use logical reasoning.

# Pemberton Township School District Unit Planner

## Stage 2: Assessment Evidence

### Performance Task(s):

- Lesson *Quick Checks*
- Formative Assessment
- Open-Ended Problems
- Project-Based Assessment
- Self-Assessment
- Timed Drills
- End-of-Year Assessment
- Benchmark Assessment

### Other Evidence:

- Class-Work Review
- Teacher Observation
- Homework Review
- Group & Cooperative Work
- Think-Pair-Share



# Pemberton Township School District Unit Planner

## Stage 3: Learning Plan

### Learning Opportunities/Strategies:

- Segment 1
  - Ask a volunteer to come to the front of the room. Give the volunteer a notebook to hold in her or his left hand and a paper clip to hold in her or his right hand. Which object is heavier? How can you tell which object is heavier? Repeat with another volunteer and other objects. Ask how children can tell which object is lighter than the other.
  
- Segment 2
  - Hold up a new crayon and a broken crayon. Suppose you have a new crayon. Your friend has a broken crayon. Why might you want to compare the two crayons? Continue the discussion using examples of other pairs of similar objects, eliciting from children why they might want to compare them.
  - Practice comparing lengths with objects and counters. What do you notice about the longer lines and the number of counters?
  - Have a pair of children come to the front

### Resources:

- Segment 1
  - Refer to Go Math! Lesson(s): 11.5
  - Refer to Go Math! Teacher Edition and Student Edition page(s): *481A–481B, 481–484* (Note: Pages only in Teacher Edition are italics)
  - Go Math! Animated Math Models (via Think Central)
  - HMH Mega Math (via Think Central)
  - Go Math! iTools (via Think Central)
  - Go Math! eGlossary (via Think Central)
  - Go Math! Destination Math (via Student Edition in Think Central)
  - Corresponding Go Math! Grab and Go for Activities/Literature/Games
  - Corresponding Go Math! Daily Routines
  - <https://www-k6.thinkcentral.com/ePC/start.do>
  - <http://www.state.nj.us/education/aps/ccs/math/>
  
- Segment 2
  - Refer to Go Math! Lesson(s): 11.1, 11.2, 11.3, 11.4
  - Refer to Go Math! Teacher Edition and Student Edition page(s): *465A–465B, 465–468, 469A–469B, 469–472, 473A–473B, 473–475, 477A–477B, 477–480* (Note: Pages only in Teacher Edition are italics)
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  - HMH Mega Math (via Think Central)
  - Go Math! iTools (via Think Central)
  - Go Math! eGlossary (via Think Central)

## Pemberton Township School District Unit Planner

of the class. Use the words shorter than to describe these children. Use the words taller than to describe these children. Repeat with another pair of children.

- Ask children to draw a row of 15 evenly-spaced dots. Count the 15 dots together. Do you think a row of 20 evenly-spaced dots of the same size would be shorter or longer? Do you think a row of 10 evenly-spaced dots of the same size would be shorter or longer?

- Segment 3

- Show several shapes and other objects in red, yellow, green, and blue. Point to the red shape. What color is this shape? Point to another object that is the same color. Have children continue to identify the color of the shapes and objects in the same manner. Then ask them to find red, yellow, green, and blue objects in the classroom.
- Show several triangles, squares, rectangles, circles, and hexagons. Point to a triangle. What is this shape? Find another triangle. Have children continue to identify the shapes in the same manner. Then ask them to find triangles, squares, other rectangles, circles, and hexagons in the classroom.
- Draw a circle, a triangle, a rectangle, a square, and a hexagon. Point to each shape and have children name it. Draw a square. Ask children to draw two

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- Corresponding Go Math! Grab and Go for Activities/Literature/Games
- Corresponding Go Math! Daily Routines
- <https://www-k6.thinkcentral.com/ePC/start.do>
- <http://www.state.nj.us/education/aps/ccs/math/>

- Segment 3

- Refer to Go Math! Lesson(s): 12.1, 12.2, 12.3, 12.4, 12.5, 12.6
- Refer to Go Math! Teacher Edition and Student Edition page(s): *493A–493B, 493–496, 497A–497B, 497–500, 501A–501B, 501–503, 505A–505B, 505–508, 509A–509B, 509–512, 513A–513B, 513–516* (Note: Pages only in Teacher Edition are italics)
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- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
- Corresponding Go Math! Grab and Go for Activities/Literature/Games
- Corresponding Go Math! Daily Routines
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## Pemberton Township School District Unit Planner

<p>shapes that are the same. Draw a circle. Ask children to draw two shapes that are different.</p> <ul style="list-style-type: none"> <li>○ How can you sort and classify the children in this class into two categories? Have children sort and classify themselves into each category named.</li> <li>○ Make a concrete graph with two rows and six columns. Place a red cube to label the first row and a blue cube to label the second row. Place a collection of red and blue connecting cubes in a paper bag. Have six volunteers come to the front and take a cube out of the bag. Have children place their cubes on the graph in the correct row. What does this graph show?</li> <li>○ Provide each child with six to ten counters. Have children turn over some of the counters to show yellow. How many red counters do you have? How many yellow counters do you have? How many counters do you have in all?</li> </ul>	<ul style="list-style-type: none"> <li>○ <a href="http://www.state.nj.us/education/aps/ccs/math/">http://www.state.nj.us/education/aps/ccs/math/</a></li> </ul>
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### Differentiation

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
<ul style="list-style-type: none"> <li>• Go Math! Enrich Guide</li> <li>• Mega Math</li> <li>• Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>• Go Math! Reteach Guide</li> <li>• Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>• Go Math! Reteach Guide</li> <li>• Go Math! Strategic Intervention Guide</li> <li>• Go Math! Soar to Success</li> <li>• Go Math! Animated Math Models</li> <li>• Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>• Go Math! Intensive Intervention Guide</li> <li>• Go Math! ELL Activity Guide</li> <li>• Go Math! Soar to Success</li> <li>• Go Math! Animated Math Models</li> <li>• Grab-and-Go! Differentiated Centers</li> </ul>

# Pemberton Township School District Unit Planner

**Unit Title:** Grade K Mathematics – Geometry

## Stage 1: Desired Results

### Standards & Indicators:

#### NJSLS Grade K – Standards for Mathematical Practice

- NJSLS.Math.Practice.MP1-8

#### NJSLS Grade K – Math

- K.G.A.1
- K.G.A.2
- K.G.A.3
- K.G.B.4
- K.G.B.5
- K.G.B.6

#### NJSLS Grade K – Science

- K-2-ETS1-1
- K-2-ETS1-2
- K-2-ETS1-3

#### NJSLS Grade K – Social Studies

- 6.1.4.C.1
- 6.1.4.C.4
- 6.1.4.C.10

#### NJSLS Grade K – Literacy

- NJSLS.ELA-Literacy.SL.K.1-3
- NJSLS.ELA-Literacy.SL.K.4-6
- NJSLS.ELA-Literacy.RF.K.1-4

#### NJSLS Grade K – Technology

- 8.1.2.A.1-7
- 8.1.2.B.1
- 8.1.2.C.1
- 8.1.2.D.1
- 8.1.2.E.1
- 8.1.2.F.1
- 8.2.2.A.1-5
- 8.2.2.B.1-4

# Pemberton Township School District Unit Planner

- 8.2.2.C.1-6
- 8.2.2.D.1-5
- 8.2.2.E.1-5

## NJSLS 21<sup>st</sup> Century Life and Careers

- CRP2
- CRP8
- CRP11
- CRP12
- 9.2.4.A.4

### Central Idea / Enduring Understanding:

- Students will...
  - 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.
  - Correctly name shapes regardless of their orientations or overall size.
  - Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).
  - Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).
  - How can you identify, name, and describe cubes?
  - How can you solve problems using the strategy *draw a picture*?

### Essential/Guiding Question:

- How can you use the terms *above*, *below*, *beside*, *next*, *in front of*, and *behind* to describe shapes in the environment?
- How can you identify and name two-dimensional shapes including squares.
- How can you identify, name, and describe circles, squares, triangles, rectangles, and hexagons?
- How can you identify, name, and describe spheres, cubes, cylinders, and cones?
- How can you solve problems by using the strategy *use logical reasoning*?
- How can you use the words *alike* and *different* to compare two-dimensional shapes?
- How can you show which shapes stack, roll, or slide?
- Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
- Compose simple shapes to form larger shapes. For example, “Can you join these two triangles with full sides touching to make a rectangle?”

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## Content:

- Identify shapes
- Describe shapes
- Analyze shapes
- Compare shapes
- Create shapes
- Compose shapes

## Skills (Objectives):

- Use the terms *above*, *below*, *next to*, *beside*, *in front of*, and *behind* to describe shapes in the environment.
- Identify and name two-dimensional shapes including circles, squares, triangles, rectangles, and hexagons.
- Identify, name, and describe three-dimensional shapes including spheres, cubes, cylinders, and cones.
- Solve problems by using the strategy *use logical reasoning*.
- Describe attributes of circles, squares, triangles, rectangles, and hexagons.
- Use the words *alike* and *different* to compare two-dimensional shapes by attributes.
- Analyze and compare three-dimensional shapes by attributes.
- Solve problems by using the strategy *draw a picture*.

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## Stage 2: Assessment Evidence

### Performance Task(s):

- Lesson *Quick Checks*
- Formative Assessment
- Open-Ended Problems
- Project-Based Assessment
- Self-Assessment
- Timed Drills
- End-of-Year Assessment
- Benchmark Assessment

### Other Evidence:

- Class-Work Review
- Teacher Observation
- Homework Review
- Group & Cooperative Work
- Think-Pair-Share

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## Stage 3: Learning Plan

### Learning Opportunities/Strategies:

- Segment 1
  - Construct a box with an opening at one end to allow children to reach inside and identify a shape by touch. Place several objects of different shapes into the box and see if children can identify the shapes.
  - Show the following shapes in a row: cylinder, sphere, cube. Left aligned and directly below this row, show a sphere, cube, and cylinder. Have children name each solid shape. What is the shape that is above the cylinder? What is the shape that is below the cylinder? Continue questioning children about the position of the shapes, using the terms above and below.
  - Have children use objects to demonstrate positions of things in the classroom. Have a child stand next to the first child. Repeat the activity with several children using different objects in the classroom.
  
- Segment 2
  - Invite children to explore shapes. How could you sort the shapes? Decide how you want to sort. Then sort a handful of shapes. Have children share their sets and explain how they sorted them.
  - Show a circle. How would you describe this shape? What is the name of this shape? Show the name of the shape to children. Have them repeat the word

### Resources:

- Segment 1
  - Refer to Go Math! Lesson(s): 10.7, 10.8, 10.9
  - Refer to Go Math! Teacher Edition and Student Edition page(s): *437A–437B, 437–440, 441A–441B, 441–444, 445A–445B, 445–448* (Note: Pages only in Teacher Edition are italics)
  - Go Math! Animated Math Models (via Think Central)
  - HMH Mega Math (via Think Central)
  - Go Math! iTools (via Think Central)
  - Go Math! eGlossary (via Think Central)
  - Go Math! Destination Math (via Student Edition in Think Central)
  - Corresponding Go Math! Grab and Go for Activities/Literature/Games
  - Corresponding Go Math! Daily Routines
  - <https://www-k6.thinkcentral.com/ePC/start.do>
  - <http://www.state.nj.us/education/aps/ccs/math/>
  
- Segment 2
  - Refer to Go Math! Lesson(s): 9.1, 9.3, 9.5, 9.7, 9.9, 10.2, 10.3, 10.4, 10.5
  - Refer to Go Math! Teacher Edition and Student Edition page(s): *357A–357B, 357–360, 365A–365B, 365–368, 373A–373B, 373–376, 381A–381B, 381–384, 389A–389B, 389–392, 417A–417B, 417–420, 421A–421B, 421–424, 425A–425B, 425–428, 429A–429B, 429–431* (Note:



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- circle to you. Trace a circle in the air.
- Make a large square on the classroom floor using masking tape. Invite children to take turns walking on the square. Have children count each side as they walk on it. Then ask a volunteer to stand inside or outside the square.
  - Show each shape: square and triangle. Have children identify and name each shape. Then have children count the number of straight sides and vertices. You can repeat the activity, putting the shapes in a different order.
  - Draw a puppet shape on the board with a circle for the head, a rectangle for the body, squares for the legs, and a triangle for a hat. What shape is the puppet's head? What shape is the puppet's body? What shape is the puppet's legs? What shape is the puppet's hat?
  - Show a cylinder, sphere, and cube. Place the sphere and cylinder in one set and the cube in another. Point to the sphere and cylinder set. These shapes are all alike. How are they alike? How are these shapes sorted?
  - Brainstorm with children a list of balls that people use for sports. Display sports balls such as a soccer ball, basketball, tennis ball, football, baseball, softball, and golf ball. What is alike about all the sports balls? Are all of the sports balls spheres? Why is a sphere a good shape for a ball?
  - Show a sphere and a cube side-by-side. Have children name each shape. How are these shapes alike? How are they

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- Go Math! Animated Math Models (via Think Central)
- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
- Corresponding Go Math! Grab and Go for Activities/Literature/Games
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- <http://www.state.nj.us/education/aps/ccs/math/>

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different?

- Hold up a sphere. What is the shape? What are some objects shaped like a sphere in the classroom? Repeat with a cube and a cylinder.

- Segment 3

Hold up a square and a cube. Are these shapes the same? How are the shapes different?

- Segment 4

- Use six circles to draw a caterpillar on the board. What shape do you see repeated in my caterpillar? How many circles do you see? Invite children to draw their own caterpillars using six or more circles.
- Have children make models of squares using clay and toothpicks. Roll the clay

- Segment 3

- Refer to Go Math! Lesson(s): 10.6
- Refer to Go Math! Teacher Edition and Student Edition page(s): *433A–433B, 433–436* (Note: Pages only in Teacher Edition are italics)
- Go Math! Animated Math Models (via Think Central)
- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
- Corresponding Go Math! Grab and Go for Activities/Literature/Games
- Corresponding Go Math! Daily Routines
- <https://www-k6.thinkcentral.com/ePC/start.do>
- <http://www.state.nj.us/education/aps/ccs/math/>

- Segment 4

- Refer to Go Math! Lesson(s): 9.2, 9.4, 9.6, 9.8, 9.10, 9.11, 10.1
- Refer to Go Math! Teacher Edition and Student Edition page(s): *361A–361B, 361–364, 369A–369B, 369–372, 377A–377B, 377–380, 385A–385B, 385–388, 393A–393B, 393–396, 397A–397B, 397–400, 413A–413B, 413–416* (Note: Pages

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into four small balls for the corners.  
Press the ends of four toothpicks into the clay to form a square. Make sure the shape lies flat and is closed. What shape do you have? How do you know it is a square?

- Have children make models of triangles using clay and toothpicks. Roll the clay into three small balls for the corners. Press the ends of three toothpicks into the clay to form a triangle. Make sure the shape is closed. What shape do you have? How do you know it is a triangle?
- Have children make models of rectangles using clay and toothpicks. Roll the clay into four small balls for the corners. Press the ends of four toothpicks into the clay to form a rectangle. Make sure the shape lies flat and is closed. What shape do you have? How do you know it is a square? My rectangle has four sides of the same length. Is it still a rectangle? Explain.
- Draw the following on the board in a row: a triangle and a rectangle. On your Mathboard/piece of paper draw these two shapes. What are the names of the shapes? Count the straight sides in these shapes and write the number of straight sides in the center of the shape.
- Hold up a paper bag filled with shapes. Ask children to guess what is inside the bag. Have volunteers take turns reaching inside and pulling out one shape at a time, naming the shape, and telling something about the shape.
- Describe an object in the classroom by

only in Teacher Edition are italics)

- Go Math! Animated Math Models (via Think Central)
- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
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- <http://www.state.nj.us/education/aps/ccs/math/>

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listing two of its attributes. Have volunteers take turns finding the object. Model your descriptions similar to the following: Find a toy that is round and red. Find a crayon that is black and pointed. Find a paper that is a rectangle and is white.

- Segment 5

Brainstorm with children a list of balls that people use for sports. Display sports balls such as a soccer ball, basketball, tennis ball, football, baseball, softball, and golf ball. What is alike about all the sports balls? Are all of the sports balls spheres? Why is a sphere a good shape for a ball?

- Segment 6

Place triangles, squares, and hexagons in a bag. Have children take turns picking a pattern block, and describing it. How many sides does the shape have? How many vertices does the shape have?

- Segment 5

- Refer to Go Math! Lesson(s): 10.3
- Refer to Go Math! Teacher Edition and Student Edition page(s): *421A–421B, 421–424* (Note: Pages only in Teacher Edition are italics)
- Go Math! Animated Math Models (via Think Central)
- HMH Mega Math (via Think Central)
- Go Math! iTools (via Think Central)
- Go Math! eGlossary (via Think Central)
- Go Math! Destination Math (via Student Edition in Think Central)
- Corresponding Go Math! Grab and Go for Activities/Literature/Games
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- <https://www-k6.thinkcentral.com/ePC/start.do>
- <http://www.state.nj.us/education/aps/ccs/math/>

- Segment 6

- Refer to Go Math! Lesson(s): 9.12
- Refer to Go Math! Teacher Edition and Student Edition page(s): *401A–401B, 401–404* (Note: Pages only in Teacher Edition are italics)

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	<ul style="list-style-type: none"> <li>○ Go Math! Animated Math Models (via Think Central)</li> <li>○ HMH Mega Math (via Think Central)</li> <li>○ Go Math! iTools (via Think Central)</li> <li>○ Go Math! eGlossary (via Think Central)</li> <li>○ Go Math! Destination Math (via Student Edition in Think Central)</li> <li>○ Corresponding Go Math! Grab and Go for Activities/Literature/Games</li> <li>○ Corresponding Go Math! Daily Routines</li> <li>○ <a href="https://www-k6.thinkcentral.com/ePC/start.do">https://www-k6.thinkcentral.com/ePC/start.do</a></li> <li>○ <a href="http://www.state.nj.us/education/aps/ccs/math/">http://www.state.nj.us/education/aps/ccs/math/</a></li> </ul>
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**Differentiation**

High-Achieving Students	On Grade Level Students	Struggling Students	Special Needs/ELL
<ul style="list-style-type: none"> <li>● Go Math! Enrich Guide</li> <li>● Mega Math</li> <li>● Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>● Go Math! Reteach Guide</li> <li>● Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>● Go Math! Reteach Guide</li> <li>● Go Math! Strategic Intervention Guide</li> <li>● Go Math! Soar to Success</li> <li>● Go Math! Animated Math Models</li> <li>● Grab-and-Go! Differentiated Centers</li> </ul>	<ul style="list-style-type: none"> <li>● Go Math! Intensive Intervention Guide</li> <li>● Go Math! ELL Activity Guide</li> <li>● Go Math! Soar to Success</li> <li>● Go Math! Animated Math Models</li> <li>● Grab-and-Go! Differentiated Centers</li> </ul>