

WSK Mathematics Pacing Guide

Enduring Understanding - Successful problem solvers possess a set of core beliefs that support their work: problem solving is important, takes significant time and repeated efforts, and requires reflection.

Essential Question - What are the specific strategies that have wide application in attacking problems and can help in problem solving?

NO.3.K.3	Solve problems by using a variety of methods and tools (e.g., objects, and/or illustrations, with and without appropriate technology and mental computations)
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First Nine Weeks

(1) Enduring Understanding: Quantities can be counted, ordered, compared, estimated, combined, and separated using number, words, and numerals with various strategies.

Essential Question 1A: How can sets of numbers be represented, counted, compared, and ordered?

NO.1.K.3	Connect various physical models and representations to the quantities they represent using number names, numerals and number words up to 10 with and without appropriate
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NO.1.K.4	Represent numbers to 10 in various forms Ex. 1 rod, 1 bundle of 10, tally marks, 10 units
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NO.1.K.8	Compare 2 numbers, with less than 6 in each set, using objects and pictures, with and without appropriate technology Ex. A: (XXX) B: (Set A has more elements than set B
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NO.1.K.6	Estimate quantities fewer than or equal to 10 and judge the reasonableness of the
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NO.1.K.10	Consecutively order sets of physical objects from one to ten.
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NO.1.K.7	Orally determine relative position using ordinal numbers (first through tenth)
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NO.1.K.1	Count with understanding, explaining that each object should be counted only once and that placement of objects does not change the total amount
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Essential Question 1B: How are numbers used to solve problems?

NO.1.K.5	Recognize the number or quantity in sets up to 5 without counting, regardless of
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(2) Enduring Understanding: Objects can be sorted by similarities.

Essential Question 2A: How can items be explored using 2-D figures ?

A.4.K.1	Identify how (2 dimensional) objects are alike or different.
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A.4.K.2	Sort (2 dimensional) objects into groups in one or more ways and identify which attribute was used to sort
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G.8.K.3	Sort, describe and make (2 dimensional) geometric figures (triangle, rectangle [including square] and circle by investigating their physical characteristics independent of position or
G.11.K.1	Arrange physical materials (toothpicks, pretzel sticks, modeling clay, etc...) to form two-
Essential Question 2B: How can items be explored using 3-D figures?	
A.4.K.1	Identify how (3 dimensional) objects are alike or different
A.4.K.2	Sort (3 dimensional) objects into groups in one or more ways and identify which attribute
(3) Enduring Understanding: The position of an object can be described.	
Essential Question 3A: What words can be used to describe the position of an object?	
G.10.K.1	Demonstrate and describe the relative position of objects as follows: over, under, inside, outside, on, beside, between, above, below, on top of, upside-down, behind, in back of and in front of
(4) Enduring Understand: Quantities can be measured in a variety of ways using objects, numerals and tools.	
Essential Question 4A: Why are coins different?	
Essential Question 4B: How can the order of events be described?	
M.12.K.1	Recognize that a calendar is used to measure time and use it to identify units of time (day,
M.12.K.2	Orally sequence and count the days of the week
(5) Enduring Understanding: Objects can be sorted, classified and identified by their	
Essential Question 5A: How are objects alike or different?	
A.4.K.1	Identify how objects are alike or different
A.4.K.2	Sort objects into groups in one or more ways and identify which attribute was used to sort

Second Nine Weeks

(1) Enduring Understanding: Quantities can be counted, ordered, compared, estimated,

Essential Question 1A: How can sets of numbers be represented, counted, compared, and ordered?

NO.1.K.3	Connect various physical models and representations to the quantities they represent using number names, numerals and number words up to 10 with and without appropriate technology
NO.1.K.4	Represent numbers to 10 in various forms Ex. 1 rod, 1 bundle of 10, tally marks, 10 units
NO.1.K.8	Compare 2 numbers, with less than 6 in each set, using objects and pictures, with and
NO.1.K.6	Estimate quantities fewer than or equal to 10 and judge the reasonableness of the
NO.1.K.10	Consecutively order sets of physical objects from one to ten.
NO.1.K.7	Orally determine relative position using ordinal numbers (first through tenth)
NO.1.K.1	Count with understanding, explaining that each object should be counted only once and that placement of objects does not change the total amount
NO.2.K.1	Count on (forward) and count back (backward) using physical models or a number line starting at any whole number between zero and twenty Ex. Start at six and count forward
NO.1.K.9	Compare and order numbers less than twenty using terms more than, same amount as, less than.

Essential Question 1B: How are numbers used to solve problems?

NO.1.K.5	Recognize the number or quantity in sets up to 5 without counting, regardless of
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Essential Question 1C: How can groups be divided equally and represented by fractions?

A.4.K.5	Identify, describe and extend skip-counting patterns by 5s and 10s.
NO.2.K.4	Partition or share a small set of objects into groups of equal size e.g., sharing 6 pencils equally among 3 children.
NO.1.K.11	Use physical models and drawings to represent commonly used fractions such as halves, thirds and fourths in relation to the whole.

(2) Enduring Understanding: Objects can be sorted by similarities.

Essential Question 2A: How can items be explored using 2-D figures ?

A.4.K.1	Identify how (2 dimensional) objects are alike or different.
A.4.K.2	Sort (2 dimensional) objects into groups in one or more ways and identify which attribute was used to sort
G.8.K.3	Sort, describe and make (2 dimensional) geometric figures (triangle, rectangle [including
G.11.K.1	Arrange physical materials (toothpicks, pretzel sticks, modeling clay, etc...) to form two-dimensional figures

Essential Question 2B: How can items be explored using 3-D figures?	
A.4.K.1	Identify how (3 dimensional) objects are alike or different
A.4.K.2	Sort (3 dimensional) objects into groups in one or more ways and identify which attribute was used to sort
(3) Enduring Understanding: The position of an object can be described.	
Essential Question 3A: What words can be used to describe the position of an object?	
G.10.K.1	Demonstrate and describe the relative position of objects as follows: over, under, inside, outside, on, beside, between, above, below, on top of, upside-down, behind, in back of
Essential Question 3B: What are some ways to decide if shapes are symmetric?	
G.9.K.1	Identify figures with a line of symmetry as they appear in the environment Ex. Butterfly, leaf
Essential Question 3C: What are transformations?	
(4) Enduring Understand: Quantities can be measured in a variety of ways using objects, numerals and tools.	
Essential Question 4B: How can the order of events be described?	
M.12.K.1	Recognize that a calendar is used to measure time and use it to identify units of time (day, week, month, season, year) and compare them.
M.12.K.2	Orally sequence and count the days of the week
Essential Question 4C: How do measurements help compare objects?	
M.13.K.5	Estimate and measure length of familiar objects using non-standard units
Enduring Understanding (5): Objects can be sorted, classified and identified by their attributes.	
Essential Question 5A: How are objects alike or different?	
A.4.K.1	Identify how objects are alike or different
A.4.K.2	Sort objects into groups in one or more ways and identify which attribute was used to sort
Enduring Understanding (6): Patterns can be found in the environment in many different forms.	
Essential Question 6A: What is a pattern and how can it be repeated?	
A.4.K.3	Identify patterns in the environment
A.4.K.6	Duplicate, extend, create and describe repeating patterns sing a wide variety of materials.
A.4.K.5	Identify, describe and extend skip-counting patterns by 5s and 10s.
Enduring Understanding (7): Graphs convey data in a concise way.	
Essential Question 7A: What are some ways to gather , record and use data on a graph?	
DAP.14.K.1	Explore and discuss data collection by collecting, organizing and displaying physical
DAP.15.K.1	Analyze and interpret concrete and pictorial graphs (i.e. bar graphs, pictographs, Venn

Third Nine Weeks

(1) Enduring Understanding: Quantities can be counted, ordered, compared, estimated, combined, and separated using number, words, and numerals with various strategies.

Essential Question 1A: How can sets of numbers be represented, counted, compared,

<u>NO.1.K.3</u>	Connect various physical models and representations to the quantities they represent using number names, numerals and number words up to 10 with and without appropriate technology
<u>NO.1.K.4</u>	Represent numbers to 10 in various forms Ex. 1 rod, 1 bundle of 10, tally marks, 10 units
<u>NO.1.K.8</u>	Compare 2 numbers, with less than 6 in each set, using objects and pictures, with and
<u>NO.1.K.6</u>	Estimate quantities fewer than or equal to 10 and judge the reasonableness of the
<u>NO.1.K.10</u>	Consecutively order sets of physical objects from one to ten.
<u>NO.1.K.7</u>	Orally determine relative position using ordinal numbers (first through tenth)
<u>NO.1.K.1</u>	Count with understanding, explaining that each object should be counted only once and
<u>NO.2.K.1</u>	Count on (forward) and count back (backward) using physical models or a number line
<u>NO.1.K.9</u>	Compare and order numbers less than twenty using terms more than, same amount as,
<u>A.4.K.4</u>	Use patterns to rote count up to 100 and count backward from 20-0.
<u>A.5.K.2</u>	Identify, create, compare and describe sets of objects as more, less or equal.

Essential Question 1B: How are numbers used to solve problems?

<u>NO.1.K.5</u>	Recognize the number or quantity in sets up to 5 without counting, regardless of
<u>NO.1.K.2</u>	Group physical objects to represent a whole number less than 10 in at least two ways using composition and decomposition Composition: A group of 5 cubes can be made by combining 2 red and 3 blue or 4 red and 1 blue
<u>NO.2.K.2</u>	Use physical and pictorial models to demonstrate various meanings of addition and subtraction See Appendix for examples.
<u>NO.3.K.3</u>	Solve problems by using a variety of methods and tools (e.g., objects, and/or illustrations, with and without appropriate technology and mental computations)
<u>A.5.K.1</u>	Use drawings and labels to record solutions of addition and subtraction problems with answers less than or equal to 10
<u>NO.2.K.3</u>	Demonstrate the relationship between addition and subtraction with informal language and models in contextual situations involving whole numbers
<u>NO.3.K.1</u>	Develop strategies for basic addition facts <ul style="list-style-type: none"> • counting all • counting on • one more, two more
<u>NO.3.K.2</u>	Develop strategies for basic subtraction facts

Essential Question 1C: How can groups be divided equally and represented by fractions?

<u>A.4.K.5</u>	Identify, describe and extend skip-counting patterns by 5s and 10s.
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NO.2.K.4	Partition or share a small set of objects into groups of equal size e.g., sharing 6 pencils equally among 3 children.
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NO.1.K.11	Use physical models and drawings to represent commonly used fractions such as halves, thirds and fourths in relation to the whole.
(2) Enduring Understanding: Objects can be sorted by similarities.	
Essential Question 2A: How can items be explored using 2-D figures ?	
A.4.K.1	Identify how (2 dimensional) objects are alike or different.
A.4.K.2	Sort (2 dimensional) objects into groups in one or more ways and identify which attribute was used to sort
G.8.K.3	Sort, describe and make (2 dimensional) geometric figures (triangle, rectangle [including
G.11.K.1	Arrange physical materials (toothpicks, pretzel sticks, modeling clay, etc...) to form two-dimensional figures
Essential Question 2B: How can items be explored using 3-D figures?	
A.4.K.1	Identify how (3 dimensional) objects are alike or different
A.4.K.2	Sort (3 dimensional) objects into groups in one or more ways and identify which attribute was used to sort
(3) Enduring Understanding: The position of an object can be described.	
Essential Question 3A: What words can be used to describe the position of an object?	
G.10.K.1	Demonstrate and describe the relative position of objects as follows: over, under, inside, outside, on, beside, between, above, below, on top of, upside-down, behind, in back of and in front of
Essential Question 3B: What are some ways to decide if shapes are symmetric?	
G.9.K.1	Identify figures with a line of symmetry as they appear in the environment Ex. Butterfly, leaf
Essential Question 3C: What are transformations?	
(4) Enduring Understand: Quantities can be measured in a variety of ways using objects, numerals and tools.	
Essential Question 4A: Why are coins different?	
A.4.K.1	Identify how objects (coins) are alike or different
A.4.K.2	Sort objects (coins) into groups in one or more ways and identify which attribute was used
M.12.K.4	Recognize and identify attributes of penny, nickel, dime, and quarter
M.12.K.5	State the values of coins (penny, nickel, dime)
A.7.K.1	Recognize qualitative change (in money) Ex. A nickel is worth more than a penny.
Essential Question 4B: How can the order of events be described?	
M.12.K.1	Recognize that a calendar is used to measure time and use it to identify units of time (day, week, month, season, year) and compare them.
M.12.K.3	Recognize that a clock is used to tell time

M.12.K.2	Orally sequence and count the days of the week
M.13.K.2	Tell time to the hour the nearest hour using analog and digital clock
M.13.K.3	Order events based on time Ex. • Activities that take long or short time • Review what we do first, next, last
A.7.K.1	Recognize qualitative change (in time) Ex. Changes in seasons, and two o'clock in the afternoon is earlier than 3 o'clock in the afternoon
Essential Question 4C: How do measurements help compare objects?	
M.13.K.5	Estimate and measure length of familiar objects using non-standard units
A.7.K.1	Recognize qualitative change (in distance) Ex. "Alice is taller/shorter than Paul."
Essential Question 4D: How is temperature used to compare objects?	
A.7.K.1	Recognize qualitative change (in temperature) Ex. "Today is colder/warmer than yesterday"
Enduring Understanding (5): Objects can be sorted, classified and identified by their attributes.	
Essential Question 5A: How are objects alike or different?	
A.4.K.1	Identify how objects are alike or different
A.4.K.2	Sort objects into groups in one or more ways and identify which attribute was used to sort
Enduring Understanding (6): Patterns can be found in the environment in many different forms.	
Essential Question 6A: What is a pattern and how can it be repeated?	
A.4.K.3	Identify patterns in the environment
A.4.K.6	Duplicate, extend, create and describe repeating patterns using a wide variety of materials.
A.4.K.5	Identify, describe and extend skip-counting patterns by 5s and 10s.
Enduring Understanding (7): Graphs convey data in a concise way.	
Essential Question 7A: What are some ways to gather, record and use data on a graph?	
DAP.14.K.1	Explore and discuss data collection by collecting, organizing and displaying physical objects.
DAP.15.K.1	Analyze and interpret concrete and pictorial graphs (i.e. bar graphs, pictographs, Venn diagrams, T-chart)

Fourth Nine Weeks

(1) Enduring Understanding: Quantities can be counted, ordered, compared, estimated, combined, and separated using number, words, and numerals with various strategies.

Essential Question 1A: How can sets of numbers be represented, counted, compared, and ordered?

NO.1.K.3	Connect various physical models and representations to the quantities they represent using number names, numerals and number words up to 10 with and without appropriate technology
NO.1.K.4	Represent numbers to 10 in various forms Ex. 1 rod, 1 bundle of 10, tally marks, 10 units
NO.1.K.8	Compare 2 numbers, with less than 6 in each set, using objects and pictures, with and without appropriate technology Ex. A: (XXX) B: () Set A has more elements than set B
NO.1.K.6	Estimate quantities fewer than or equal to 10 and judge the reasonableness of the estimate
NO.1.K.10	Consecutively order sets of physical objects from one to ten.
NO.1.K.7	Orally determine relative position using ordinal numbers (first through tenth)
NO.1.K.1	Count with understanding, explaining that each object should be counted only once and that placement of objects does not change the total amount
NO.2.K.1	Count on (forward) and count back (backward) using physical models or a number line starting at any whole number between zero and twenty Ex. Start at six and count forward to ten. Start at eight and count backward to five.
NO.1.K.9	Compare and order numbers less than twenty using terms more than, same amount as,
A.4.K.4	Use patterns to rote count up to 100 and count backward from 20-0.
A.5.K.2	Identify, create, compare and describe sets of objects as more, less or equal.

Essential Question 1B: How are numbers used to solve problems?

NO.1.K.5	Recognize the number or quantity in sets up to 5 without counting, regardless of arrangement
NO.1.K.2	Group physical objects to represent a whole number less than 10 in at least two ways using composition and decomposition
NO.2.K.2	Use physical and pictorial models to demonstrate various meanings of addition and subtraction
NO.3.K.3	Solve problems by using a variety of methods and tools (e.g., objects, and/or illustrations, with and without appropriate technology and mental computations)
A.5.K.1	Use drawings and labels to record solutions of addition and subtraction problems with answers less than or equal to 10

NO.2.K.3	Demonstrate the relationship between addition and subtraction with informal language and models in contextual situations involving whole numbers
NO.3.K.1	Develop strategies for basic addition facts <ul style="list-style-type: none"> • counting all • counting on
NO.3.K.2	Develop strategies for basic subtraction facts <ul style="list-style-type: none"> • counting back • one less, two less
Essential Question 1C: How can groups be divided equally and represented by fractions?	
A.4.K.5	Identify, describe and extend skip-counting patterns by 5s and 10s.
NO.2.K.4	Partition or share a small set of objects into groups of equal size e.g., sharing 6 pencils equally among 3 children.
NO.1.K.11	Use physical models and drawings to represent commonly used fractions such as halves, thirds and fourths in relation to the whole.
(2) Enduring Understanding: Objects can be sorted by similarities.	
Essential Question 2A: How can items be explored using 2-D figures ?	
A.4.K.1	Identify how (2 dimensional) objects are alike or different.
A.4.K.2	Sort (2 dimensional) objects into groups in one or more ways and identify which attribute was used to sort
G.8.K.3	Sort, describe and make (2 dimensional) geometric figures (triangle, rectangle [including square] and circle by investigating their physical characteristics independent of position or size
G.11.K.1	Arrange physical materials (toothpicks, pretzel sticks, modeling clay, etc...) to form two-dimensional figures
G.8.K.2	Locate the presence of two-dimensional figures within three-dimensional objects in the environment
Essential Question 2B: How can items be explored using 3-D figures?	
A.4.K.1	Identify how (3 dimensional) objects are alike or different
A.4.K.2	Sort (3 dimensional) objects into groups in one or more ways and identify which attribute was used to sort
G.8.K.1	Sort and describe three-dimensional solids (sphere, cube, cone, and cylinder) by investigating their physical characteristics
G.8.K.2	Locate the presence of two-dimensional figures within three-dimensional objects in the environment
(3) Enduring Understanding: The position of an object can be described.	

Essential Question 3A: What words can be used to describe the position of an object?	
G.10.K.1	Demonstrate and describe the relative position of objects as follows: over, under, inside, outside, on, beside, between, above, below, on top of, upside-down, behind, in back of and in front of
Essential Question 3B: What are some ways to decide if shapes are symmetric?	
G.9.K.1	Identify figures with a line of symmetry as they appear in the environment Ex. Butterfly, leaf
Essential Question 3C: What are transformations?	
G.9.K.2	Explore slides, flips and turns
(4) Enduring Understand: Quantities can be measured in a variety of ways using objects, numerals and tools.	
Essential Question 4A: Why are coins different?	
A.4.K.1	Identify how objects (coins) are alike or different
A.4.K.2	Sort objects (coins) into groups in one or more ways and identify which attribute was used to sort
M.12.K.5	State the values of coins (penny, nickel, dime)
A.7.K.1	Recognize qualitative change (in money) Ex. A nickel is worth more than a penny.
M.12.K.4	Recognize and identify attributes of penny, nickel, dime, and quarter
Essential Question 4B: How can the order of events be described?	
M.12.K.1	Recognize that a calendar is used to measure time and use it to identify units of time (day,
M.12.K.3	Recognize that a clock is used to tell time
M.13.K.1	Use a calendar to determine elapsed time using the terms yesterday, today and tomorrow
M.12.K.2	Orally sequence and count the days of the week
M.13.K.2	Tell time to the hour the nearest hour using analog and digital clock
M.13.K.3	Order events based on time Ex. • Activities that take long or short time • Review what we do first, next, last • Recall what we did or plan to do yesterday, today, and tomorrow
A.7.K.1	Recognize qualitative change (in time) Ex. Changes in seasons, and two o'clock in the afternoon is earlier than 3 o'clock in the afternoon
Essential Question 4C: How does measurement help compare objects related to length?	
M.13.K.5	Estimate and measure length of familiar objects using non-standard units

A.7.K.1	Recognize qualitative change (in distance) Ex. "Alice is taller/shorter than Paul."
M.12.K.7	Explore the attributes of length, using relative terms (longer, shorter, bigger, smaller)
M.13.K.4	Name common tools for measurement for distance (ruler)
M.13.K.6	Surround a figure with objects (links, craft sticks, etc) and tell how many it takes to go
Essential Question 4D: How does measurement help compare objects related to temperature?	
A.7.K.1	Recognize qualitative change (in temperature)
M.12.K.6	Differentiate and make connections between hot and cold temperatures
Essential Question 4E: How does measurement help compare objects related to area?	
M.13.K.7	Cover a figure with one type of shape and tell how many it takes to cover (Area answers the questions: How much to cover?)
A.7.K.1	Recognize qualitative change (in area) Ex. The desk has more area than a piece of paper."
Essential Question 4F: How does measurement help compare objects related to weight/mass?	
M.12.K.7	Explore the attributes of weight and mass using relative terms (heavier, lighter, more mass)
M.13.K.4	Name common tools for measurement (balance and scale) of weight/mass
M.13.K.5	Estimate and measure weight/mass of familiar objects using non-standard units
A.7.K.1	Recognize qualitative change (in weight/mass) Ex. "A bag of rice weighs more than a bag of marshmallows."
Essential Question 4G: How does measurement help compare objects related to volume/capacity?	
M.12.K.7	Explore the attributes of volume/capacity using relative terms (holds more and holds less) Ex. How many cheerios/marbles will a container hold?
M.13.K.4	Name common tools for measurement for volume/capacity (cup or liter)
M.13.K.5	Estimate and measure volume/capacity familiar objects using non-standard units
A.7.K.1	Recognize qualitative change (in volume/capacity) Ex. "A pond hold more than a puddle."
Enduring Understanding (5): Objects can be sorted, classified and identified by their attributes.	
Essential Question 5A: How are objects alike or different?	
A.4.K.1	Identify how objects are alike or different
A.4.K.2	Sort objects into groups in one or more ways and identify which attribute was used to sort
Enduring Understanding (6): Patterns can be found in the environment in many different forms.	
Essential Question 6A: What is a pattern and how can it be repeated?	
A.4.K.3	Identify patterns in the environment

A.4.K.6	Duplicate, extend, create and describe repeating patterns using a wide variety of materials.
A.4.K.5	Identify, describe and extend skip-counting patterns by 5s and 10s.
Enduring Understanding (7): Graphs convey data in a concise way.	
Essential Question 7A: What are some ways to gather, record and use data on a graph?	
DAP.14.K.1	Explore and discuss data collection by collecting, organizing and displaying physical objects.
DAP.15.K.1	Analyze and interpret concrete and pictorial graphs (i.e. bar graphs, pictographs, Venn diagrams, T-chart)
Enduring Understanding (8): The likelihood of an event depends on the possible outcomes.	
Essential Question 8A: How can the possible outcome for an event be determined?	
DAP.17.K.1	Describe the probability of an event as being possible or not possible