

Math Inventory Kindergarten

(Sept/Oct, Jan/Feb, June)

PAGE 1:

1. Put your finger on the fish.

Circle the shape that belongs in the group.

2. Put your finger on the turtle.

Look at the pattern of hats and shoes. Circle the picture that would come next in the pattern.

3. Put your finger on the star.

Circle the banana on the left.

4. Put your finger on the heart.

Count the children. Circle the group of apples that has the same number.

5. Put your finger on the flower.

Circle the group that has more.

6. Put your finger on the sun.

Circle the group that has less.

PAGE 2:

7. Put your finger on the fish.

Count the shapes. Circle the number that tells how many shapes there are.

8. Put your finger on the turtle.

Count the cars. Circle the number that tells how many cars there are.

9. Put your finger on the star.

Count the circles. Circle the number that tells how many circles there are.

10. Put your finger on the heart.

Count the stars. Circle the number that tells how many stars there are.

11. Put your finger on the flower.

Look at the shapes. Circle the triangle.

12. Put your finger on the sun.

Look at the shapes. Circle the square.

PAGE 3:

13. Put your finger on the fish.
Look at the crayon. Circle the pencil that is longer than the crayon.
14. Put your finger on the turtle.
Circle the group of ten?
15. Put your finger on the star.
Circle the number that tells how many dots there are.
16. Put your finger on the heart.
Circle the number that tells how many dots there are.
17. Put your finger on the flower.
Look at the number line. Write the number that comes before 8.
18. Put your finger on the sun.
Look at the number line. Write the number that comes after 14.

PAGE 4:

19. Put your finger on the fish.
Circle the third shape.
20. Put your finger on the turtle.
Add the sets of faces. Circle the number that tells how many faces in all.
21. Put your finger on the star.
Look at the children. Mark an X on the child who is leaving. Circle the number that tells how many children are left.
22. Put your finger on the heart.
Circle the addition sentence that matches the picture.
23. Put your finger on the flower.
Circle the subtraction sentence that matches the picture.

PAGE 5: Look at the graph. It is called "Which Snack Did You Eat?" We will use this graph to answer the questions.

24. Put your finger on the fish.
Write the number that tells how many ate each snack.
25. Put your finger on the turtle.
Circle the snack that fewer children ate.

Kindergarten Harcourt Math Sequence

September:

Getting Ready Chapter

Chapter 1: Sort and Classify

October:

Chapter 1: Sort and Classify

Chapter 3: Numbers 0-5

November:

Chapter 2: Patterns

Chapter 4: Number 6-10

December:

Chapter 4: Numbers 6-10

January:

Chapter 5: Geometry & Fractions

Chapter 6: Numbers 10 - 30

February:

Chapter 6: Numbers 10 - 30

Chapter 7: Number Patterns

March:

Chapter 7: Number Patterns

Chapter 8: Money & Time

April:

Chapter 9: Measurement

May:

Chapter 10: Data, Graphing and Probability

Chapter 11: Addition

June:

Chapter 12: Subtraction

Suggested List of Mathematical Language

Kindergarten

Problem Solving

Act out
Compare
Draw
Explain
Explore
Identify the problem
Interpret
Make observations
Model using manipulatives
Problem

Reasoning and Proof

About
Almost
Guess
Listen

Representation

Act it out
Draw
Model a situation
Show

Number Sense and Operations

Add
After
All together
Before
Set
Count
Count backwards
Equal
Fewer

Share
True/false

Communication

Ask questions
Draw
Explain
Organize
Share ideas
Use the language of mathematics

Connections

Above
After
All
Before
Below
Numeral
See mathematics in their daily lives
Use strategies

Fewer than
First
Group
How many
Last
Less
More/most
Next
Number
Numeral
Ordinal numbers (first-tenth)
Plus
Some
Sum
Take away
Together

Algebra

Attribute
Length
Next
Pattern

Geometry

Above
Alike
Autumn (fall)
Below
Beside
Between
Circle
Diagonal
Diamond
Inside
Horizontal
Match
Next to
On
Over
Rectangle
Same
Shape
Side
Size
Sort
Square
Symmetry
Triangle
Under
Vertical

Measurement

Afternoon
As long as
Calendar
Day
Evening
Longer
Longer than
Measure

Months of the Year

Morning
Night
Noon
Shorter
Shorter than
Small/medium/large
Spring
Summer
Winter

Statistics and Probability

Attribute
Chart
Color (as an attribute)
Different
Graph
Least
Less
More
Most
Pictograph
Same
Sort

**Process Strands:
Problem Solving, Reasoning & Proof, Communication, Connection, Representation**

Topic: Addition and Subtraction

Essential Questions: How do I solve problems?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
K.PS.1 K.PS.2 K.PS.3 K.PS.4 K.PS.5 K.PS.6 K.PS.7 K.PS.8 K.PS.9 K.PS.10 K.RP.4 K.CM.1 K.CM.2 K.CM.3 K.CM.4 K.CM.5 K.CN.1 K.CN.2 K.CN.3 K.R.1 K.R.3 K.R.4 K.R.5 K.N.1 K.N.2 K.N.3 K.N.5 K.N.6 K.N.7 K.N.8 K.N.9 K.N.10	How do I add? How do I subtract? What words tell how I put groups together? What words tell how I take groups apart?	Explore, examine, and make observations about a social problem or mathematical situation Interpret information correctly, identify the problem, and generate possible solutions Act out or model with manipulatives activities involving mathematical content from literature and/or storytelling Formulate problems and solutions from everyday situations(e.g. counting the number of children in the class, using the calendar to teach counting) Use informal counting strategies to find solutions Experience teacher-directed questioning process to understand problems Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking Use manipulatives (for e.g. tiles, blocks) to model the action in problems Use drawings/pictures to model the action in problems Explain to others how a problem was solved, giving strategies Listen to claims other students make Understand how to organize their thought process with teacher guidance Share mathematical ideas through the manipulation of objects, drawings, pictures, and verbal explanations Listen to solutions shared by other students Formulate mathematically relevant questions with teacher guidance Use appropriate mathematical terms, vocabulary, and language Recognize the presence of mathematics in their daily lives Use counting strategies to solve problems in their daily lives Recognize and apply mathematics to objects and pictures Use multiple representations, including verbal language, acting out or modeling a situation, and drawing pictures as representations	Small group instruction Center Activities Literature responses (i.e. Five Little Ducks) Math Journal	Teacher Observation Teacher Questioning Harcourt Chapter Test Student Work

<p>K.N.12 K.N.13 K.S.1 K.S.4</p>		<p>Use objects to show and understand physical phenomena (e. g. guess the number of cookies in a package)</p> <p>Use objects to show and understand social phenomena (e. g. count and represent sharing cookies between friends)</p> <p>Use objects to show and understand mathematical phenomena (e.g. draw pictures to show a story problem, show number value using fingers on your hand)</p> <p>Count the items in a collection and know the last counting word tells how many are in the collection</p> <p>Count out a collection of specified size 1 to 10</p> <p>Numerically label a data set of 1 to 5</p> <p>Verbally count backwards from 10</p> <p>Represent collections with a finger pattern up to 10</p> <p>Draw pictures or other informal symbols to represent how many in a collection up to 10</p> <p>Draw pictures or other informal symbols to represent a spoken number up to 10</p> <p>Write numbers 1-10 to represent a collection</p> <p>Visually determine how many more or less, and then using the verbal counting sequence, match and count</p> <p>Solve and create addition and subtraction verbal word problems (use counting-based strategies, such as counting on and to ten)</p> <p>Determine sums and differences by various means</p> <p>Draw pictures or other informal symbols to represent a spoken number up to 10</p> <p>Draw pictures or other informal symbols to represent how many in a collection up to 10</p> <p>Gather data in response to questions posed by teacher and students</p> <p>Sort and organize objects by two attributes</p> <p>Represent data using manipulatives</p>		
--	--	--	--	--

<p>Connections to Text (Resources) : Math Reader: The Sled, Our Home Math Storybook, Math Reader: 3 Ants, Math Storybook: How Many are Left? Five Little Ducks</p>	<p>Time: 4th Quarter</p>
<p>Connections to Technology: Harcourt Mega Math, Compass Learning</p>	
<p>Key Vocabulary: add, in all, how many, is equal to, plus, subtract, take away, are left, one less, minus. one more</p>	

Process Strands: Problem Solving, Reasoning & Proof, Communication, Connection, Representation

Topic: Data, Graphing, and Probability

Essential Questions: How do I solve problems?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
K.PS.1 K.PS.2 K.PS.3 K.PS.4 K.PS.5 K.PS.6 K.PS.7 K.PS.8 K.PS.9 K.PS.10 K.RP.4 K.CM.1 K.CM.2 K.CM.3 K.CM.4 K.CM.5 K.CN.1 K.CN.2 K.CN.3 K.R.1 K.R.2 K.R.3 K.R.4 K.R.5 K.N.7 K.N.8 K.N.10 K.S.1 K.S.2	What is a graph? How do I use a graph? How do I make a graph?	Explore, examine, and make observations about a social problem or mathematical situation Interpret information correctly, identify the problem, and generate possible solutions Act out or model with manipulatives activities involving mathematical content from literature and/or storytelling Formulate problems and solutions from everyday situations(e.g. counting the number of children in the class, using the calendar to teach counting) Use informal counting strategies to find solutions Experience teacher-directed questioning process to understand problems Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking Use manipulatives (for e.g. tiles, blocks) to model the action in problems Use drawings/pictures to model the action in problems Explain to others how a problem was solved, giving strategies Listen to claims other students make Understand how to organize their thought process with teacher guidance Share mathematical ideas through the manipulation of objects, drawings, pictures, and verbal explanations Listen to solutions shared by other students Formulate mathematically relevant questions with teacher guidance Use appropriate mathematical terms, vocabulary, and language Recognize the presence of mathematics in their daily lives Use counting strategies to solve problems in their daily lives	Whole group/Circle Time graphing activities Small Group graphs Center-Time graphing Weather graphs, M&M graph, jelly bean graphs, etc.	Teacher Observation Teacher Questioning Harcourt Chapter Test Student Work

<p>K.S.3 K.S.4 K.S.5</p>		<p>Recognize and apply mathematics to objects and pictures</p> <p>Use multiple representations, including verbal language, acting out or modeling a situation, and drawing pictures as representations</p> <p>Use standard and nonstandard representations</p> <p>Use objects to show and understand physical phenomena (e. g. guess the number of cookies in a package)</p> <p>Use objects to show and understand social phenomena (e. g. count and represent sharing cookies between friends)</p> <p>Use objects to show and understand mathematical phenomena (e.g. draw pictures to show a story problem, show number value using fingers on your hand)</p> <p>Visually determine how many more or less, and then using the verbal counting sequence, match and count</p> <p>Draw pictures or other informal symbols to represent a spoken number up to 10</p> <p>Draw pictures or other informal symbols to represent how many in a collection up to 10</p> <p>Gather data in response to questions posed by teacher and students</p> <p>Help to make simple pictographs for quantities up to 10, where one picture represents 1</p> <p>Sort and organize objects by two attributes</p> <p>Represent data using manipulatives</p> <p>Identify more, less, and same amounts from pictographs or concrete models</p>		
----------------------------------	--	---	--	--

<p>Connections to Text (Resources) :</p>	<p>Time: 4th Quarter (ongoing throughout year)</p>
<p>Connections to Technology: Harcourt Mega Math, Compass Learning</p>	
<p>Key Vocabulary: graph, sort, attribute</p>	

Process Strands: Problem Solving, Reasoning & Proof, Communication, Connection, Representation
Topic: Geometry and Fractions
Essential Questions: How do I solve problems?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
K.G.1 K.G.3 K.G.4 K.PS.7 K.PS.8 K.PS.1 K.PS.2 K.PS.3 K.PS.4 K.PS.5 K.PS.9 K.PS.10 K.RP.1 K.RP.2 K.RP.3 K.RP.4 K.CM.1 K.CM.2 K.CM.3 K.CM.4 K.CM.5 K.CN.1 K.CN.3 K.R.3 K.R.4 K.G.5 K.S.3	What are shapes? What makes shapes different? Where do we see shapes in our world? How do shapes move? How do I know if an object is divided into matching parts? How do I draw shapes?	Describe characteristics and relationships of geometric objects Explore vertical and horizontal orientation of objects Manipulate 2 and 3 dimensional shapes to explore symmetry Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking Use manipulatives(i.e. tiles, blocks) to model the action in problems Explore, examine, and make observations about a social problem or mathematical situation Interpret information correctly, identify the problem, and generate possible solutions Act out or model with manipulatives activities involving mathematical content from literature and/or storytelling Formulate problems and solutions from everyday situations(e.g. counting the number of children in the class, using the calendar to teach counting) Experience teacher-directed questioning process to understand problems Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking Use manipulatives (for e.g. tiles, blocks) to model the action in problems Use drawing/pictures to model the action in problems Explain to others how a problem was solved, giving strategies Understand that mathematical statements can be true or false	Dramatic play <ul style="list-style-type: none"> - block play - kitchen play Cooking projects Student exploration of 2-D and 3-D objects Shape centers (sorting, drawing, parquetry, pattern blocks) Shape drawing (starting in September and continuing throughout the school year)	Teacher Observation Teacher Questioning Harcourt Chapter Test Student Work

		<p>Investigate the use of knowledgeable guessing as a mathematical tool</p> <p>Explore guesses, using a variety of objects and manipulatives</p> <p>Listen to claims other students make</p> <p>Understand how to organize their thought process with teacher guidance</p> <p>Share mathematical ideas through the manipulation of objects, drawings, pictures, and verbal explanations</p> <p>Listen to solutions shared by other students</p> <p>Formulate mathematically relevant questions with teacher guidance</p> <p>Use appropriate mathematical terms, vocabulary, and language</p> <p>Recognize the presence of mathematics in their daily lives</p> <p>Recognize and apply mathematics to objects and pictures</p> <p>Use objects to show and understand physical phenomena (e. g. guess the number of cookies in a package)</p> <p>Use objects to show and understand social phenomena (e. g. count and represent sharing cookies between friends)</p> <p>Understand and use ideas such as over, under, below, on, beside, next to, and between</p> <p>Sort and organize objects by two attributes(e.g. color, size, or shape)</p>		
--	--	--	--	--

Connections to Text (Resources) : <u>Math storybook, Shapes , Bear in a Square</u>	Time: Second Quarter
Connections to Technology: Harcourt Mega Math, Compass Learning	
Key Vocabulary: divide, triangle, circle, square, rectangle, side, symmetry, matching parts, (horizontal, vertical, diagonal, clockwise, counterclockwise – introduced at the beginning of the school)	

Process Strands: Problem Solving, Reasoning & Proof, Communication, Connection, Representation
Topic: Measurement
Essential Questions: How do I solve problems?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
K.M.1 K.M.2 K.PS.1 K.PS.2 K.PS.3 K.PS.4 K.PS.5 K.PS.6 K.PS.7 K.PS.8 K.PS.9 K.PS.10 K.RP.4 K.CM.1 K.CM.2 K.CM.3 K.CM.4 K.CM.5 K.CN.1 K.CN.2 K.CN.3	How do I compare the length of two objects? What words do I use to describe the length of objects?	Name, discuss, and compare attributes of length (longer than, shorter than) Compare the length of 2 objects by representing each length with string or a paper clip Explore, examine, and make observations about a social problem or mathematical situation Interpret information correctly, identify the problem, and generate possible solutions Act out or model with manipulatives activities involving mathematical content from literature and/or storytelling Formulate problems and solutions from everyday situations(e.g. counting the number of children in the class, using the calendar to teach counting) Use informal counting strategies to find solutions Experience teacher-directed questioning process to understand problems Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking Use manipulatives (for e.g. tiles, blocks) to model the action in problems Use drawings/pictures to model the action in problems Explain to others how a problem was solved, giving strategies Listen to claims other students make Understand how to organize their thought process	Center Activities (nonstandard measurement) Small/Large group instructional activities (Using attribute cubes to measure and compare)	Teacher Observation Teacher Questioning Harcourt Chapter Test Student Work

		<p>with teacher guidance</p> <p>Share mathematical ideas through the manipulation of objects, drawings, pictures, and verbal explanations</p> <p>Listen to solutions shared by other students</p> <p>Formulate mathematically relevant questions with teacher guidance</p> <p>Use appropriate mathematical terms, vocabulary, and language</p> <p>Recognize the presence of mathematics in their daily lives</p> <p>Use counting strategies to solve problems in their daily lives</p> <p>Recognize and apply mathematics to objects and pictures</p>		
--	--	---	--	--

Connections to Text (Resources) : <u>Can I Go?</u>, Math Storybook: Look in the Garden	Time: 3rd Quarter
Connections to Technology: Harcourt Mega Math, Compass Learning	
Key Vocabulary: longer, shorter, measure, longer than, shorter than	

Process Strands: Problem Solving, Reasoning & Proof, Communication, Connection, Representation
Topic: Money & Time
Essential Questions: How do I solve problems?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
K.PS.5 K.PS.9 K.M.3 K.PS.4 K.PS.1 K.PS.2 K.PS.3 K.PS.4 K.PS.5 K.PS.6 K.PS.7 K.PS.8 K.PS.9 K.PS.10 K.RP.4 K.CM.1 K.CM.2 K.CM.3 K.CM.4 K.CM.5 K.CN.1 K.CN.2 K.CN.3	How do I tell the time of day? What happens at different times of day/night?	Use informal counting strategies to find solutions Use drawings/pictures to model the action in problems Relate specific times such as morning, noon, afternoon, and evening to activities and absence or presence of daylight Formulate problems and solutions from everyday situations (counting the number of children in the class, using the calendar to teach counting) Explore, examine, and make observations about a social problem or mathematical situation Interpret information correctly, identify the problem, and generate possible solutions Act out or model with manipulatives activities involving mathematical content from literature and/or storytelling Formulate problems and solutions from everyday situations(e.g. counting the number of children in the class, using the calendar to teach counting) Use informal counting strategies to find solutions Experience teacher-directed questioning process to understand problems Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking Use manipulatives (for e.g. tiles, blocks) to model the action in problems Use drawings/pictures to model the action in	Literature response activities (night/day puppets) Calendar/Circle Time Math Journal	Teacher Observation Teacher Questioning Harcourt Chapter Test Student Work

		<p>problems</p> <p>Explain to others how a problem was solved, giving strategies</p> <p>Listen to claims other students make</p> <p>Understand how to organize their thought process with teacher guidance</p> <p>Share mathematical ideas through the manipulation of objects, drawings, pictures, and verbal explanations</p> <p>Listen to solutions shared by other students</p> <p>Formulate mathematically relevant questions with teacher guidance</p> <p>Use appropriate mathematical terms, vocabulary, and language</p> <p>Recognize the presence of mathematics in their daily lives</p> <p>Use counting strategies to solve problems in their daily lives</p> <p>Recognize and apply mathematics to objects and pictures</p>		
--	--	---	--	--

Connections to Text (Resources) : <u>Animal Seasons</u>	Time: 3rd Quarter
Connections to Technology: Harcourt Mega Math, Compass Learning	
Key Vocabulary: morning, afternoon, evening, day, night, noon	

Process Strands: Problem Solving, Reasoning & Proof, Communication, Connection, Representation
Topic: Number Patterns
Essential Questions: How do I solve problems?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
K.N.4 K.PS.3 K.PS.4 K.PS.5 K.PS.7 K.PS.8 K.PS.9 K.N.11 K.CM.1 K.CM.2 K.CM.3 K.CM.4 K.CM.5 K.CN.1 K.CN.2 K.CN.3 K.R.1 K.R.3 K.R.4 K.R.5	What words do I use to tell the order? How do I put things in order?	Verbally count by 1's to 20 Act out or model with manipulatives activities involving mathematical content from literature and/or storytelling Formulate problems and solutions from everyday situations Use informal counting strategies to find Solutions Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking Use manipulatives (tiles, blocks) to model the action in problems Use drawing/pictures to model the action in problems Use and understand verbal ordinal terms, first to tenth Understand how to organize their thought process with teacher guidance Share mathematical ideas through the manipulation of objects, drawings, pictures, and verbal explanations Listen to solutions shared by other students Formulate mathematically relevant questions with teacher guidance Use appropriate mathematical terms, vocabulary, and language Recognize the presence of mathematics in	Count the days of school Calendar Transitional counting activities Center Activities (Ordinal number games, manipulatives) Math journal	Teacher Observation Teacher Questioning Harcourt Chapter Test Student Work

		<p>their daily lives</p> <p>Use counting strategies to solve problems in their daily lives</p> <p>Recognize and apply mathematics to objects and pictures</p> <p>Use multiple representations, including verbal language, acting out or modeling a situation, and drawing pictures as representations</p> <p>Use objects to show and understand physical phenomena (e. g. guess the number of cookies in a package)</p> <p>Use objects to show and understand social phenomena (e. g. count and represent sharing cookies between friends)</p> <p>Use objects to show and understand mathematical phenomena (e.g. draw pictures to show a story problem, show number value using fingers on your hand)</p>		
--	--	--	--	--

Connections to Text (Resources) : “Our Tree”, “Five Little Chickens” from Read-Aloud Anthology	Time: 3rd Quarter
Connections to Technology: Harcourt Mega Math, Compass Learning	
Key Vocabulary: first, second, third, fourth, fifth, sixth, seventh, eighth, ninth, tenth	

Process Strands: Problem Solving, Reasoning & Proof, Communication, Connection, Representation
Topic: Numbers 0 to 5
Essential Questions: How do I solve problems?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
K.S.5 K.N.9 K.N.10 K.PS.5 K.S.4 K.PS.1 K.PS.2 K.PS.3 K.PS.4 K.PS.6 K.PS.7 K.PS.8 K.PS.9 K.PS.10 K.RP.2 K.RP.3 K.RP.4 K.CM.1 K.CM.2 K.CM.3 K.CM.4 K.CM.5 K.CN.1 K.CN.2 K.CN.3 K.R.1 K.R.2 K.R.3	How do I know when there is more, fewer, or the same? How do I count? How do I read and write numbers? How do I compare numbers?	Identify more, less, and the same amounts from pictographs or concrete models Write numbers 1 to 10 to represent a collection Visually determine how many more or less, and then using the verbal counting sequence, match and count 1 – 10 Use informal counting strategies to find solutions Represent data using manipulatives Explore, examine, and make observations about a social problem or mathematical situation Interpret information correctly, identify the problem, and generate possible solutions Act out or model with manipulatives activities involving mathematical content from literature and/or storytelling Formulate problems and solutions from everyday situations(e.g. counting the number of children in the class, using the calendar to teach counting) Experience teacher-directed questioning process to understand problems Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking Use manipulatives (for e.g. tiles, blocks) to model the action in problems Use drawing/pictures to model the action in problems Explain to others how a problem was solved, giving strategies Investigate the use of knowledgeable guessing as a mathematical tool Explore guesses, using a variety of objects and manipulatives Listen to claims other students make Understand how to organize their thought process with teacher guidance Share mathematical ideas through the manipulation of objects,	Calendar Counting the days of school Counting sets - Students - Every day occurrences - Manipulatives - Classroom materials - Literature bags - Count and match center activities Number writing practice materials Play dough number and set building Problems of the Day	Teacher Observation Teacher Questioning Harcourt Chapter Test Student Work

<p>K.R.4 K.R.5 K.N.1 K.N.2 K.N.3 K.S.1</p>		<p>drawings, pictures, and verbal explanations Listen to solutions shared by other students Formulate mathematically relevant questions with teacher guidance Use appropriate mathematical terms, vocabulary, and language Recognize the presence of mathematics in their daily lives Use counting strategies to solve problems in their daily lives Recognize and apply mathematics to objects and pictures Use multiple representations, including verbal language, acting out or modeling a situation, and drawing pictures as representations Use standard and nonstandard representations Use objects to show and understand physical phenomena (e. g. guess the number of cookies in a package) Use objects to show and understand social phenomena (e. g. count and represent sharing cookies between friends) Use objects to show and understand mathematical phenomena (e.g. draw pictures to show a story problem, show number value using fingers on your hand) Count the items in a collection and know the last counting word tells how many items are in the collection (1 to 10) Count out a collection of specified size 1 to 10 Numerically label a data set of 1 to 5 Describe characteristics and relationships of geometric relationships Gather data in response to questions posed by the teacher and students</p>		
--	--	--	--	--

<p>Connections to Text (Resources) : A Bug Band, math storybook: Birds, Just Enough Carrots, Mouse Count</p>
<p>Time: Second Quarter</p>
<p>Connections to Technology: Harcourt Mega Math, Compass Learning</p>
<p>Key Vocabulary: same as, equal, more, more than, fewer, one more, graph, row, one, two, three, four, five, zero, one less, less than, number line, estimate, compare</p>

Process Strands: Problem Solving, Reasoning & Proof, Communication, Connection, Representation
Topic: Numbers 10 to 30
Essential Questions: How do I solve problems?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
K.N.9 K.PS.5 K.PS.9 K.PS.1 K.PS.2 K.PS.3 K.PS.4 K.PS.6 K.PS.7 K.PS.8 K.PS.10 K.RP.2 K.RP.3 K.RP.4 K.CM.1 K.CM.2 K.CM.3 K.CM.4 K.CM.5 K.CN.1 K.CN.2 K.CN.3 K.R.1 K.R.2 K.R.3 K.R.4 K.R.5 K.N.1 K.N.2 K.N.3	How do I count? How do I read and write numbers? How do I compare numbers? How do I use numbers and pictures to describe how many objects are in a group? How do I use objects to show a number? How do I use a number line? How do I use a graph?	Write numbers 1 to 10 to represent a collection Use informal counting strategies to find solutions Use drawings/pictures to model the action in problems Explore, examine, and make observations about a social problem or mathematical situation Interpret information correctly, identify the problem, and generate possible solutions Act out or model with manipulatives activities involving mathematical content from literature and/or storytelling Formulate problems and solutions from everyday situations(e.g. counting the number of children in the class, using the calendar to teach counting) Experience teacher-directed questioning process to understand problems Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking Use manipulatives (for e.g. tiles, blocks) to model the action in problems Use drawing/pictures to model the action in problems Explain to others how a problem was solved, giving strategies Investigate the use of knowledgeable guessing as a mathematical tool Explore guesses, using a variety of objects and manipulatives Listen to claims other students make Understand how to organize their thought process with teacher guidance Share mathematical ideas through the manipulation of objects, drawings, pictures, and verbal explanations Listen to solutions shared by other students Formulate mathematically relevant questions with teacher guidance Use appropriate mathematical terms, vocabulary, and language	Number writing activities Count the days of school Calendar Base ten blocks Center activities (building sets, counting games, etc.) *Begin introducing numbers 10 to 20 in December/January to develop concept of tens and ones*	Teacher Observation Teacher Questioning Harcourt Chapter Test Student Work

<p>K.S.1 K.N.4 K.N.5 K.N.6 K.N.7 K.N.8 K.S.2 K.N.10 K.S.4 K.S.5</p>		<p>Recognize the presence of mathematics in their daily lives Use counting strategies to solve problems in their daily lives Recognize and apply mathematics to objects and pictures Use multiple representations, including verbal language, acting out or modeling a situation, and drawing pictures as representations Use standard and nonstandard representations Use objects to show and understand physical phenomena (e. g. guess the number of cookies in a package) Use objects to show and understand social phenomena (e. g. count and represent sharing cookies between friends) Use objects to show and understand mathematical phenomena (e.g. draw pictures to show a story problem, show number value using fingers on your hand) Count the items in a collection and know the last counting word tells how many items are in the collection (1 to 10) Count out a collection of specified size 1 to 10 Numerically label a data set of 1 to 5 Describe characteristics and relationships of geometric relationships Gather data in response to questions posed by the teacher and students Verbally count by 1's to 20 Verbally count backwards from 10 Represent collections with a finger pattern up to 10 Draw pictures or other informal symbols to represent a spoken number up to 10 Draw pictures or other informal symbols to represent how many in a collection up to 10 Help to make simple pictographs for quantities up to 10, where one picture represents 1 Visually determine how many more or less, and then using the verbal counting sequence, match and count Represent data using manipulatives Identify more, less, and same amounts from pictographs or concrete models</p>		
---	--	---	--	--

Connections to Text (Resources) : Math storybook: Ten and More, My Counting Garden
Time: Second Quarter/Third Quarter
Connections to Technology: Harcourt Mega Math, Compass Learning **Key Vocabulary:** Numbers to 30, most, fewest

Process Strands: Problem Solving, Reasoning & Proof, Communication, Connection, Representation
Topic: Numbers 6 to 10
Essential Questions: How do I solve problems?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
K.S.5 K.N.9 K.N.10 K.PS.5 K.S.4 K.PS.1 K.PS.2 K.PS.3 K.PS.4 K.PS.6 K.PS.7 K.PS.8 K.PS.9 K.PS.10 K.RP.2 K.RP.3 K.RP.4 K.CM.1 K.CM.2 K.CM.3 K.CM.4 K.CM.5 K.CN.1 K.CN.2 K.CN.3 K.R.1 K.R.2 K.R.3	How do I know when there is more, fewer, or the same? How do I count? How do I read and write numbers? How do I compare numbers? How do I count backwards? How do I use a number line? How do I represent different ways to make a number?	Identify more, less, and the same amounts from pictographs or concrete models Write numbers 1 to 10 to represent a collection Visually determine how many more or less, and then using the verbal counting sequence, match and count 1 – 10 Use informal counting strategies to find solutions Represent data using manipulatives Explore, examine, and make observations about a social problem or mathematical situation Interpret information correctly, identify the problem, and generate possible solutions Act out or model with manipulatives activities involving mathematical content from literature and/or storytelling Formulate problems and solutions from everyday situations(e.g. counting the number of children in the class, using the calendar to teach counting) Experience teacher-directed questioning process to understand problems Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking Use manipulatives (for e.g. tiles, blocks) to model the action in problems Use drawing/pictures to model the action in problems Explain to others how a problem was solved, giving strategies Investigate the use of knowledgeable guessing as a mathematical tool Explore guesses, using a variety of objects and manipulatives Listen to claims other students make Understand how to organize their thought process with teacher guidance Share mathematical ideas through the manipulation of objects, drawings, pictures, and verbal explanations Listen to solutions shared by other students	Calendar Counting the days of school Counting sets - Students - Every day occurrences - Manipulatives - Classroom materials - Literature bags - Count and match center activities Number writing practice materials Play dough number and set building Problems of the Day	Teacher Observation Teacher Questioning Harcourt Chapter Test Student Work

<p>K.R.4 K.R.5 K.N.1 K.N.2 K.N.3 K.S.1 K.N.4 K.N.5 K.N.6 K.N.7 K.N.8 K.S.2</p>		<p>Formulate mathematically relevant questions with teacher guidance Use appropriate mathematical terms, vocabulary, and language Recognize the presence of mathematics in their daily lives Use counting strategies to solve problems in their daily lives Recognize and apply mathematics to objects and pictures Use multiple representations, including verbal language, acting out or modeling a situation, and drawing pictures as representations Use standard and nonstandard representations Use objects to show and understand physical phenomena (e. g. guess the number of cookies in a package) Use objects to show and understand social phenomena (e. g. count and represent sharing cookies between friends) Use objects to show and understand mathematical phenomena (e.g. draw pictures to show a story problem, show number value using fingers on your hand) Count the items in a collection and know the last counting word tells how many items are in the collection (1 to 10) Count out a collection of specified size 1 to 10 Numerically label a data set of 1 to 5 Describe characteristics and relationships of geometric relationships Gather data in response to questions posed by the teacher and students Verbally count by 1's to 20 Verbally count backwards from 10 Represent collections with a finger pattern up to 10 Draw pictures or other informal symbols to represent a spoken number up to 10 Draw pictures or other informal symbols to represent how many in a collection up to 10 Help to make simple pictographs for quantities up to 10, where one picture represents 1</p>	<p>Pictographs built with small manipulatives</p>	
--	--	--	---	--

<p>Connections to Text (Resources) : <u>Just Enough Carrots</u>, <u>Mouse Count</u> , <u>How Many?</u>, <u>Math storybook</u>, <u>Ten, Nine, Eight</u>, <u>Ten Black Dots</u> Time: Second Quarter</p>
<p>Connections to Technology: <u>Harcourt Mega Math</u>, <u>Compass Learning</u></p>
<p>Key Vocabulary: same as, equal, more, more than, fewer, one more, graph, row, one, two, three, four, five, zero, one less, less than, number line, estimate, compare, six, seven, eight, nine, ten, equation</p>

Process Strands: Problem Solving, Reasoning & Proof, Communication, Connection, Representation	Topic: Patterns
Essential Questions: How do I solve problems?	

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Strategies)	Assessment Ideas
K.A.1 K.A.2 K.PS.1 K.PS.2 K.PS.3 K.PS.6 K.PS.7 K.PS.8 K.PS.9 K.PS.10 K.RP.4 K.CM.1 K.CM.2 K.CM.3 K.CM.4 K.CM.5 K.CN.1 K.CN.3 K.R.1 K.R.2 K.G.1 K.G.2 K.G.3	What is a pattern? How do I describe a pattern? What comes next in a pattern? How do I make patterns?	Use a variety of manipulatives to create patterns using attributes of color, size, or shape Recognize, describe, extend, and create patterns that repeat (i.e., ABABAB or ABAABAAAB) Explore, examine, and make observations about a social problem or mathematical situation Interpret information correctly, identify the problem, and generate possible solutions Act out or model with manipulatives activities involving mathematical content from literature and/or storytelling Experience teacher-directed questioning process to understand problems Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking Use manipulatives (for e.g. tiles, blocks) to model the action in problems Use drawing/pictures to model the action in problems Explain to others how a problem was solved, giving strategies Listen to claims other students make Understand how to organize their thought process with teacher guidance Share mathematical ideas through the manipulation of objects, drawings, pictures, and verbal explanations Listen to solutions shared by other students Formulate mathematically relevant questions with teacher guidance Use appropriate mathematical terms, vocabulary, and language Recognize the presence of mathematics in their daily lives Recognize and apply mathematics to objects and pictures Use multiple representations, including verbal language, acting out or modeling a situation, and drawing pictures as representations Use standard and nonstandard representations Describe characteristics and relationships of geometric relationships Sort groups by size and size order (increasing and decreasing) Explore vertical and horizontal orientation of objects	Movement patterns Music/sound patterns Locating patterns within classroom and environment Manipulative patterns Coloring/drawing patterns Number patterns Calendar (ex: days of the week) Problem of the Day	Teacher Observation Teacher Questioning Harcourt Chapter Test Student Work

Connections to Text (Resources) : Pet Parade, Math Storybook	Time: First Quarter
Connections to Technology: Harcourt Mega Math, Compass Learning	Key Vocabulary: pattern, describe, next

Process Strands: Problem Solving, Reasoning & Proof, Communication, Connection, Representation
Topic: Sort & Classify
Essential Questions: How do I solve problems?

Performance Indicators	Guided Questions	Essential Knowledge & Skills	Classroom Ideas (Instructional Strategies)	Assessment Ideas (Evidence of Learning)
K.G.2 K.G.5 K.PS.9 K.S.3 K.S.4 K.PS.1 K.PS.2 K.PS.3 K.PS.4 K.PS.6 K.PS.7 K.PS.8 K.PS.9 K.PS.10 K.RP.4 K.CM.1 K.CM.2 K.CM.3 K.CM.5 K.CN.1 K.CN.3 K.R.1 K.G.1	How can I show where something is? How can I tell where something is? How do I sort? How do I make a graph? What does a graph tell me?	Sort groups of objects by size and size order (increasing and decreasing) Understand and use ideas such as over, under, above, below, on, beside, next to, and between Use drawing/pictures to model the action in problems Sort and organize objects by two attributes (i.e., color, size, or shape) Represent data using manipulatives Explore, examine, and make observations about a social problem or mathematical situation Interpret information correctly, identify the problem, and generate possible solutions Act out or model with manipulatives activities involving mathematical content from literature and/or storytelling Formulate problems and solutions from everyday situations (e.g. counting the number of children in the class, using the calendar to teach counting) Experience teacher-directed questioning process to understand problems Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking Use manipulatives (for e.g. tiles, blocks) to model the action in problems Explain to others how a problem was solved, giving strategies Listen to claims other students make Listen to claims other students make Understand how to organize their thought process with teacher guidance Share mathematical ideas through the manipulation of objects,	Sorting: <ul style="list-style-type: none"> - A variety of manipulatives - Within student groups by colors of clothing, by wants and needs, etc. Graphs <ul style="list-style-type: none"> - Weather - Transportation - Student likes/dislikes Classroom organization <ul style="list-style-type: none"> - Where materials in the classroom belong Identifying how to get to a location in the school using math vocabulary M & M sorting	Teacher Observation Teacher Questioning Harcourt Chapter Test Student Work

		drawings, pictures, and verbal explanations Listen to solutions shared by other students Use appropriate mathematical terms, vocabulary, and language Recognize the presence of mathematics in their daily lives Recognize and apply mathematics to objects and pictures Use multiple representations, including verbal language, acting out or modeling a situation, and drawing pictures as representations Describe characteristics and relationships of geometric objects	Problem of the Day Matrix	
--	--	--	----------------------------------	--

Connections to Text (Resources) : The Toys, A Pair of Socks, Math Jingles, Math Storybook	Time: First Quarter
Connections to Technology: Harcourt Mega Math, Compass Learning	
Key Vocabulary: top, middle, bottom, in, out, above, below, over, under, left, right, sort, group, alike, not like, belong, does not belong, size, kind, graph, column, row, solve problems, most, least, same, more, less	