Rigorous Curriculum Design

Unit Planning Organizer

Subject:	Math			Grade:	1
Unit Number:	4	Unit Name:	Add within 100: 10 more or less, attributes of shapes, time to half-hour/hour		
Unit Length	Days: 28		Mins / Day: 50		
Unit Synopsis	In this unit, students extend their understanding of attributes-e.g. orientation, size, and number of sides- they learned in kindergarten to distinguish between defining attributes and non-defining attributes. Students need to explore various examples in different ways so that their experiences with shapes are not limited to single examples (e.g. if a student has only worked with equilateral triangles, it may be difficult for them to develop more general understandings of triangles).				

	Math CCSS	Standards for Mathematical Practice
Priority Standards	1.G.1 – Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. 1.MD.3 – Tell and write time in hours and half-hours using analog and digital clocks. 1.NBT.4 – Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten 1.NBT.5 – Given a two-digit number, mentally find ten more or ten less than the number, without having to count; explain the reasoning used.	x Make sense of problems and persevere in solving them x Reason abstractly and quantitatively X Construct viable arguments and critique the reasoning of others x Model with mathematics x Use appropriate tools strategically x Attend to precision X Look for and make use of structure x Look for and express regularity in repeated reasoning

	Math CCSS	ELA CCSS	NG ELD Standards
Supporting Standards			

	1.OA.5-Relate counting to addition and subtraction 1NBT.1-Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. 1.OA.3 – Apply properties of operations as strategies to add and subtract. Examples: if 18 + 3 = 11 is known, then 3 + 8 = 11 is also known (commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12 (associative property of addition.) 1.OA.6 – Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; make 10 (eg, 8 + 6= 8+ 2 +4= 10 + 4=14); decomposing a number leading to a ten (eg, 13 – 4 = 13 – 3- 1 = 10 – 1 = 9); using the relationship between addition and subtraction (eg, knowing that 8 + 4 =12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (eg, adding 6 = 7 by creating the known equivalent 6 + 6+ 1 = 12 + 1 = 13). 1.NBT.2 – Understand that two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. ten can be thought of as a bundle of tens and ones-called a "ten." b. the numbers from 11-19 are composed of a ten and a one, two, three, four, five, six, seven, eight, or nine ones. c. the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	W.1.1 – Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, and provide some sense of closure. W.1.6 – With guidance and support of adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. SL1.1 - Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion). b. Build on others' talk in conversations by responding to the comments of others through multiple exchanges. c. Ask questions to clear up any confusion about the topics and texts under discussion. SL1.2 - Ask and answer questions about key details in a text read aloud or information presented orally or through other media. SL1.3. Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood. SL1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings. SL1.6 - Produce complete sentences when appropriate to task and situation. 1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Print all upper- and lowercase letters. b. Use common, proper, and possessive nouns. c. Use singular and plural nouns with matching verbs in basic sentences (e.g., He hops; We hop). d. Use personal, possessive, and indefinite pronouns (e.g., I, me, my; they, them, their; anyone, everything). e. Use verbs to convey a sense of past, present, and future (e.g., Yesterday I walked home; Today I walk home; Tomorrow I will walk home). f. Use frequently occurring adjectives. g. Use frequently occurring conjunctions (e.g., and, but, or, so, because). h. Use determiners (e.g., articles, demonstratives). i. Use frequently occurring prepositions (e.g., during, beyond, toward). j. Produce and expand complete simple and compound declarative, interrogative, imperative, and exclamatory sentences in response to prompts.	Part 1: Collaborative 1: Exchanging information and ideas with others through oral collaborative conversations on a range of social and academic topics. Collaborative 3: Offering and supporting opinions and negotiating with others in communicative exchanges. Interpretive 5: Listening actively to spoken English in a range of social and academic contexts. Productive 11: Supporting own opinions and evaluating others' opinions in speaking and writing. Productive 12: Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas. Part 2: Structuring Cohesive Texts 2: Understanding cohesion. Expanding and Enriching Ideas 3: Using verbs and verb phrases. Expanding and Enriching Ideas 4: Using nouns and noun phrases. Connecting and Condensing Ideas 6: Connecting ideas.

Interdisciplinary Standards	

Unwrapped Priority Standards

Standard 1:	1.G.1 – Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size);-build and draw shapes to possess defining attributes.		
Skills	Concepts	Bloom's	DOK
Distinguish	between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size)	3	2
Build	shapes to possess defining attributes	3	2
Draw	shapes to possess defining attributes	3	2

Standard 2:	1.MD.3 – Tell and write time in hours and half-hours using analog and digital clocks.		
Skills	Concepts	Bloom's	DOK
Tell	time in hours and half-hours using analog	1	1
Tell	time in hours and half-hours using digital clocks	1	1
Write	time in hours and half-hours using analog	1	1
Write	time in hours and half-hours using digital clocks	1	1

Standard 3:	1.NBT.4 – Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten		
Skills	Concepts	Bloom's	DOK
Add	within 100 including • adding a two-digit number and a one-digit number • adding a two-digit number and a multiple of 10 using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction	3	2
Relate	the strategy to a written method	3	2
Explain	the reasoning used	3	2
Understand	that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten	2	2

Standard 4:	1.NBT.5 – Given a two-digit number, mentally find ten more or ten less than the number, without having to count; explain the reasoning used.		
Skills	Concepts	Bloom's	DOK
mentally find	ten more or ten less than the number, given a two-digit number, without having to count	2	2
explain	the reasoning used	2	2

Learning Progressions

Standard 1:	1.G.1 – Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size);-build and draw shapes to possess defining attributes.				
Previous Grade		Current Grade		Next Grade	
Skills	Concepts	Skills	Concepts	Skills	Concepts
K.G.1 Describe	names of shapes and positions	Distinguish	defining attributes and non-defining attributes	2.G.1 Recognize	attributes
K.G.2 Name	orientation or overall size	Build and Draw	shapes to possess defining attributes	Draw	shapes with attributes
K.G.3 Identify	Two dimensional and three dimensional shapes	Identify	shapes	Identify	triangles, quadrilaterals, pentagons, hexagons, and cubes

Standard 2:	1.MD.3 – Tell and write time in hours and half-hours using analog and digital clocks.				
Previous Grade		Current Grade		Next Grade	
Skills	Concepts	Skills	Concepts	Skills	Concepts
K.MD		Tell	Time in hours and half- hours	2.MD7 Tell Time	to nearest five minutes, using a.m. and p.m.
		Write	Time in hours and half- hours	Write	To the nearest five minutes, using a.m. and p.m.

Standard 3:	1.NBT.4 – Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten

Previous Grade		Current Grade		Next Grade	
Skills	Concepts	Skills	Concepts	Skills	Concepts
K.NBT1 Compose	Numbers from 11 to 19 into ten ones and some further ones	Add	Two Digit Number and one Digit Number	2. NBT5 Add	Fluently within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction
Record	Each composition by a drawing or equation	Apply	Strategies based on place value, using concrete models or drawings	Subtract	Fluently within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction
Decompose	Numbers from 11 to 19 into ten ones and some further ones	Relate	Addition and subtraction; the strategy to a written method	2.NBT6 Add	Up to four-2-digit numbers using strategies based on place value and properties of operations
Record	Each decomposition by a drawing or equation	Explain	Reasoning for relating the strategy used	2.NBT7 Add	Within 1000, using concrete models or drawings and

Standard 4:	1.NBT.5 – Given a two-digit number, mentally find ten more or ten less than the number, without having to count; explain the reasoning used.

Previous Grade		Current Grade		Next Grade	
Skills	Concepts	Skills	Concepts	Skills	Concepts
		Mentally Find	10 more or 10 less	2.NBT8 Mentally Add	Add 10 or 100
		Explain	Reasoning	Mentally Subtract	Subtract 10 or 100

Big Idea(s)	Corresponding Essential Question(s)
Each shape can be identified by its attributes. I can add digits to the tens place in my mind. I can use the same strategies I used for smaller numbers to add larger numbers. I can use place value to help add larger numbers. I can use an analog clock to tell time. I can use a digital clock to tell time.	How can I identify shapes? How can I mentally find ten more or ten less than a given number? How can I use strategies to add larger numbers? How can I tell time to the hour and the half?

Unit Vocabulary Words	
Academic Cross-Curricular Vocabulary (Tier 2)	Content/Domain Specific Vocabulary (Tier 3)
Defining attributes Non-defining attributes Orientation Hour Half-hour Distinguish Closed Three-sided Concrete models	Triangle Trapezoid Circle Half-circle Square Rectangle Analog Digital Flat or plane Angles or vertices

21st Century Skills	
X Creativity and Innovation	X Initiative and Self-Direction
X Critical Thinking and Problem Solving	X Social and Cross-Cultural Skills
X Communication and Collaboration	X Productivity and Accountability
X Flexibility and Adaptability	X Leadership and Responsibility

Unit Assessments	
Pre-Assessment	Post-Assessment
EADMS test ID numbers are found at www.alvordschools.org/cfa	EADMS test ID numbers are found at www.alvordschools.org/cfa

Scoring Guides and Answer Keys

Pre and Post Test Rubrics:

Scoring rubric for question 1:

Points	trapezoids
3	Identifies 6 shapes correctly.
2	Identifies 4-5 shapes correctly
1	Identifies 3 shapes correctly.
0	Identifies fewer than 3 shapes or no response.

Scoring rubric for question 2:

Points	triangle rubric
3	Circles triangle, identifies 3 corners AND 3 sides
2	Circles triangle, identifies 3 corners OR 3 sides.
1	Circled triangle, description incorrect or no response. Or wrote a correct description but, did not circle triangle.
0	No response or Incorrect description.

Scoring rubric for question 3:

Points	
2	Students answers correctly AND shows the correct process.
1	Student answers incorrectly but, demonstrates the correct follow through. OR student answers correctly but, shows the wrong follow through.
0	Student has incorrect answer and follow through OR no response.

Scoring rubric for question 4:

Points	
2	Student has the correct answer by using the correct answer from the previous question.
1	Student gets incorrect answer because of a calculation error in the previous question but shows the correct follow through.
0	Student has incorrect answer OR no response.

Scoring rubric for question 5:

Points	
2	Student gets correct response with correct process from previous questions.
1	Student gets incorrect response because of an error in the previous questions, but has correct process.
0	Student gets incorrect response with incorrect process or no response.

Scoring rubric for question 6:

Points	
2	Student responds correctly within three seconds
1	Student responds incorrectly within three seconds.
0	Response takes longer than three seconds OR there is no response.

Scoring rubric for question 7:

Points	
2	Draws hour and minute correctly on **both** clocks.
1	Draws hour and minute correctly on the analog clock OR the digital clock.
0	Draws hour and minute incorrectly or no response.

Scoring rubric for question 8:

Points	
2	Draws hour and minute correctly on **both** clocks.
1	Draws hour and minute correctly on the analog clock OR the digital clock.
0	Both clocks incorrect OR no response.

Scoring rubric for question 9:

Points	
1	circles the correct clock
0	circles incorrect clock(s) no response

Engaging Scenario Overview (Situation, challenge, role, audience, product or performance)	
Description: Great News! You have an appointment with the principal. The principal has asked you to design a new playground for your school. It will be for the kindergarten students and they want it to be fun and educational. You will design the equipment and the blacktop area and include signs that describe the shapes that make up the playground items. You will also prepare a schedule to help plan recess times. All of this will be presented to the principal. You can use a poster, a PowerPoint, a written paper or another format if you choose. S- Planning a playground C- The playground needs to be designed for preschoolers R- Designer/ Presenter A- The principal/ preschool students P- The blueprint of your design	Suggested Length of Time Days: 28 Mins/Day: 50

Engaging Learning Experiences Synopsis of Authentic Performance Tasks		
Authentic Performance Tasks	Description	Suggested Length of Time
Task 1: Playground Blueprint	<u>Task 1</u> Now you will choose what you want on your playground and draw a sketch using shapes to represent what you choose. You may choose 4 items. Make sure to label your playground with a number sentence showing the number of students for each item.	Days: 5 Mins/Day: 50
Task 2: Label the Playground	<u>Task 2</u> Now that you have designed the playground, make it a learning environment by making signs that describe the shapes to put on the equipment.	Days: 5 Mins/Day: 50
Task 3: How Many can play?	<u>Task 3:</u> How many children can be on the playground? Using your sketch and the Equipment and Shape Chart, figure out how many students should be on the playground at one time.	Days: 5 Mins/Day: 50

Task 4: Recess Schedule	Task 4: Recess Schedule: Using the charts from Task 3, make a schedule for recess times with the right number of students on the playground at one time.	Days: 5 Mins/Day: 50
Task 5 Presentation	Task 5 Present your plan to the principal and the kindergarten classes. You will need to include all of your tasks and a paragraph stating why you chose the equipment you did. You can show your tasks in a folder, on a poster or in any other way that shows your plan clearly. Good Luck!	Days: 5 Mins/Day: 50

Authentic Performance Task 1

Name:

Playground Sketch:
Shapes are all around us. Look at the playground on the powerpoint. Do you see the shapes in the objects on the playground? Now you will choose what you want on your playground and draw a sketch using shapes to represent what you chose. You may choose 4 items. Make sure to label your playground with a number sentence showing the number of students for each item.

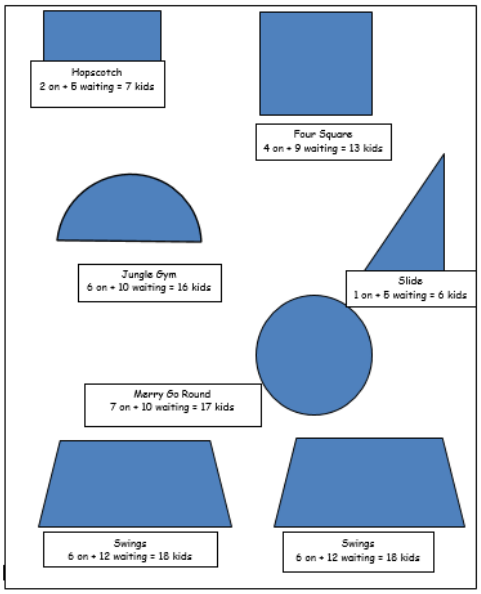
**You will need the powerpoint and the *Equipment and Shape Chart*. These are in the resources section on the common core website.

Suggested Length: Days: 5 Mins/Day: 50

Equipment and Shape chart

Equipment	Shape symbol	# of children on at one time	# of children waiting to use
Slide		1	5
Swings		6	12
Merry-go-round		7	10
Four-square		4	9
Hopscotch		2	5
Jungle gym		6	10

Sample Playground Sketch



<table>
<tr><td rowspan="5">Standards Addressed</td><td colspan="3">Priority Standards</td></tr>
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☐Reason abstractly and quantitatively
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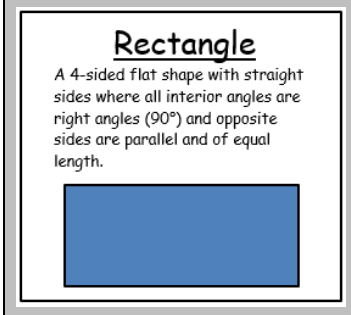
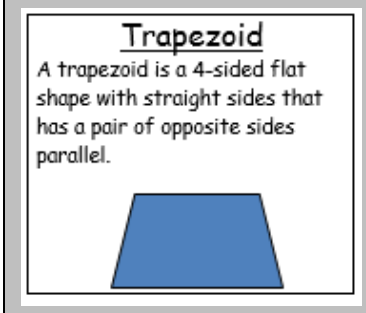
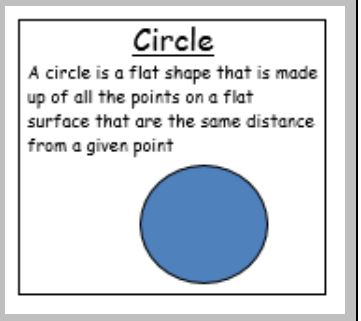
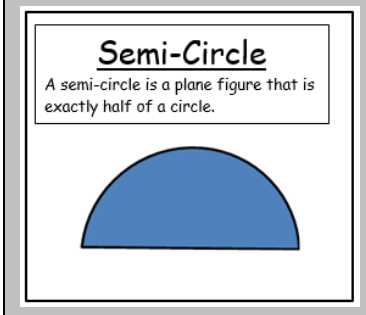
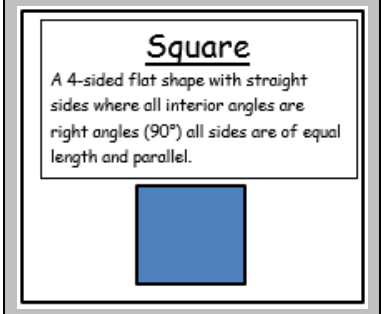
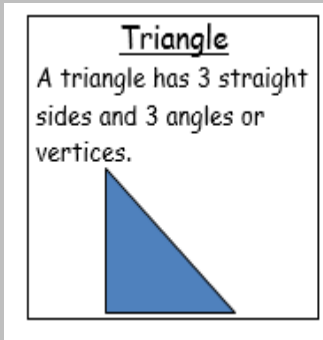
	1.OA.5-Relate counting to addition and subtraction 1NBT.1-Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	W.1.6 – With guidance and support of adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. SL1.1 - Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion). b. Build on others' talk in conversations by responding to the comments of others through multiple exchanges. c. Ask questions to clear up any confusion about the topics and texts under discussion. SL1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.	Part 1: Collaborative 1: Exchanging information and ideas with others through oral collaborative conversations on a range of social and academic topics. Collaborative 3: Offering and supporting opinions and negotiating with others in communicative exchanges. Interpretive 5: Listening actively to spoken English in a range of social and academic contexts. Productive 11: Supporting own opinions and evaluating others' opinions in speaking and writing. Productive 12: Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas. Part 2: Structuring Cohesive Texts 2: Understanding cohesion. Expanding and Enriching Ideas 3: Using verbs and verb phrases. Expanding and Enriching Ideas 4: Using nouns and noun phrases. Connecting and Condensing Ideas 6: Connecting ideas.
	This section is designed to give lesson suggestions for teaching the concepts needed to complete the tasks. In order to complete this task, students need to be able to: • Have an understanding of manipulatives as tools, not toys (i.e.. base ten blocks, ten frames,	Bloom's: 3 Q12: Scoring Rubric This task is done in groups or pairs. Scoring can be done by informal observation or	











number lines, hundreds chart, linker cubes, rekenrek, two color counters, abacus, straws, cups, beans, beads, and yarn).

• identify plane shapes (triangle, circle, rectangle, square, trapezoid, semi-circle)

• Draw plane shapes (triangle, circle, rectangle, square, trapezoid, semi-circle)

•Add double digit numbers.

Assessments

• Pre-assessment: Give students the pre-assessment during the previous buffer days.

• Post-assessment will be done by day 20.

• Formative assessments (i.e. observations, whiteboards, exit tickets, tasks)

Strategy Building Routine (Mini Lesson: 5-10 minutes):

• Day 1: Sorting pattern blocks by shape
• Day 2: Counting sides and vertices on triangles
• Day 3: Counting sides and vertices on squares
• Day 4: Counting side and vertices on rectangles

Task 1 Suggested Teaching and Learning Progression:

Day 1: Introduce Engaging Scenario and Task 1 to provide purpose (task 1 will be completed on day 5)

Show the powerpoint and talk about the shapes on the playground or walk out to the playground and find shapes outside.

Days 1-4: As a class, make posters that define a shape. Do two shapes a day, or go at a pace that works for your class.

- ❖ Give pairs or groups some plane figures to look at on paper. Have them discuss the attributes of the shape.
- ❖ As a class, make a poster to describe the shape.
- ❖ Make a corresponding page in the book for each shape.
- ❖ Each day, re-read the shape pages previously made. Have students discuss the shape in pairs using the sentence frames:
  - What shape is this? This is a _____.
  - How many straight sides does a _____ have? A _____ has ___ straight sides.
  - How many vertices does a _____have? A _____ has _____ vertices.
  - How is a _____ different from a _____?
  - How is a _____ the same as a _____?

Refer to the signs samples in the resources for anchor posters.

You can use the shapes flip book for students to record definitions. * Sample in resources

checking for understanding throughout lesson.

Instructional Strategies			
All Students	SWD	ELs	Enrichment
• Count to 120 • Work with number sentences • Use manipulatives • Write numerals • Represent addition and subtraction problems with drawings • FactsWise • California Math Expressions • Number Talks • Math Journals • Collaborative group work • Paired work/practice • Counting Collections • Refer to Resource document for videos Collaborative communication (think/pair/share, productive partners)	See IEP	• Additional vocabulary development • Vocabulary cards with pictures (resource available) • Bilingual assistant (if available) • Use of ELD time to support math curriculum language (not vocabulary) • GLAD strategies • SDAIE strategies Sentence frames (resource available)	• Use higher numbers • Student presentations • Leadership opportunities • Higher level DOK prompts • Refer to Learning Progression

Authentic Performance Task 2

Name:	Designing Signs to go on the Playground Equipment	Suggested Length	Days: 5 Mins/Day: 50

Standards Addressed	Priority Standards	
	CCSS Math	Standards for Mathematical Practice
	1.G.1 – Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size);-build and draw shapes to possess defining attributes.	X Make sense of problems and persevere in solving them ☐Reason abstractly and quantitatively ☐Construct viable arguments and critique the reasoning of others X Model with mathematics X Use appropriate tools strategically X Attend to precision X Look for and make use of structure ☐Look for and express regularity in repeated reasoning

Supporting Standards		
CCSS Math	CCSS ELA	NG ELD

	1.OA.5-Relate counting to addition and subtraction 1NBT.1-Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	SL1.1 - Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion). b. Build on others' talk in conversations by responding to the comments of others through multiple exchanges. c. Ask questions to clear up any confusion about the topics and texts under discussion. SL1.2 - Ask and answer questions about key details in a text read aloud or information presented orally or through other media. SL1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.	Part 1: Collaborative 1: Exchanging information and ideas with others through oral collaborative conversations on a range of social and academic topics. Collaborative 3: Offering and supporting opinions and negotiating with others in communicative exchanges. Interpretive 5: Listening actively to spoken English in a range of social and academic contexts. Productive 11: Supporting own opinions and evaluating others' opinions in speaking and writing. Productive 12: Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas. Part 2: Structuring Cohesive Texts 2: Understanding cohesion. Expanding and Enriching Ideas 3: Using verbs and verb phrases. Expanding and Enriching Ideas 4: Using nouns and noun phrases. Connecting and Condensing Ideas 6: Connecting ideas.
Teaching and Learning Progression	This section is designed to give lesson suggestions for teaching the concepts needed to complete the tasks. Day 1: Introduce Engaging Scenario and Task 2 to provide purpose (task 2 will be completed on day 5). **Strategy Building Routine** (Mini Lesson: 5-10 minutes): • Day 1: partner share shape definitions circle and semicircle		Bloom's: 3 DOK: 2 Scoring Rubric This task is done in groups or pairs. Scoring can be done by informal observation or checking for understanding

	• Day 2: partner share shape definitions square and rectangle • Day 3: partner share shape definitions triangle and trapezoid • Day 4: partner share shape definitions all shapes **Days 1-4**: • Practice composing shapes on white boards • Practice defining shapes in journals or white boards. • Practice representing objects for shapes in word problems. (Use squares to represent 4 houses on the street, use triangles to represent trees, etc.) • Continue to compose shape flip book. • Using manipulatives, have students describe the attributes of shapes in complete sentences. • As a class, create/review anchor posters for shapes. **Day 5**: Complete Task 2 Students should use any manipulatives or tools that are used in class to complete task 2. Students may work in groups to create posters or signs to go on their playground. If available, students can use the computer to create posters.	throughout lesson.

Instructional Strategies			
All Students	SWD	ELs	Enrichment
• Count to 120 • Work with number sentences • Use manipulatives • Write numerals • Represent addition and subtraction problems with drawings • FactsWise • California Math Expressions • Number Talks • Math Journals • Collaborative group work • Paired work/practice • Counting Collections • Refer to Resource document for videos Collaborative communication (think/pair/share, productive partners)	• See IEP	• Additional vocabulary development • Vocabulary cards with pictures (resource available) • Bilingual assistant (if available) • Use of ELD time to support math curriculum language (not vocabulary) • GLAD strategies • SDAIE strategies Sentence frames (resource available)	• Use higher numbers • Student presentations • Leadership opportunities • Higher level DOK prompts • Refer to Learning Progression

Authentic Performance Task 3

<table>
<tr><td>Name:</td><td colspan="3">Task 3: How many children can be on the playground?</td><td>Suggested Length</td><td>Days: 5
Mins/Day: 50</td></tr>
<tr><td rowspan="5">Standards Addressed</td><td colspan="5">Priority Standards</td></tr>
<tr><td colspan="3">CCSS Math</td><td colspan="2">Standards for Mathematical Practice</td></tr>
<tr><td colspan="3">1.NBT.4 – Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten
1.NBT.5 – Given a two-digit number, mentally find ten more or ten less than the number, without having to count; explain the reasoning used.</td><td colspan="2">X Make sense of problems and persevere in solving them
☐Reason abstractly and quantitatively
☐Construct viable arguments and critique the reasoning of others
X Model with mathematics
X Use appropriate tools strategically
X Attend to precision
X Look for and make use of structure
☐Look for and express regularity in repeated reasoning</td></tr>
<tr><td colspan="5">Supporting Standards</td></tr>
<tr><td>CCSS Math</td><td>CCSS ELA</td><td>NG ELD</td><td colspan="2"></td></tr>
</table>

	1.OA.5-Relate counting to addition and subtraction 1NBT.1-Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. 1.OA.6 – Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; make 10 (eg, 8 + 6= 8+ 2 +4= 10 + 4=14); decomposing a number leading to a ten (eg, 13 – 4 = 13 – 3- 1 = 10 – 1 = 9); using the relationship between addition and subtraction (eg, knowing that 8 + 4 =12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (eg, adding 6 = 7 by creating the known equivalent 6 + 6+ 1 = 12 + 1 = 13). 1.NBT.2 – Understand that two digits of a two-digit number represent amounts of tens and ones.	W.1.6 – With guidance and support of adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. SL1.1 - Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one .at a time about the topics and texts under discussion). b. Build on others' talk in conversations by responding to the comments of others through multiple exchanges. c. Ask questions to clear up any confusion about the topics and texts under discussion. SL1.2 - Ask and answer questions about key details in a text read aloud or information presented orally or through other media. SL1.3. Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.	Part 1: Collaborative 1: Exchanging information and ideas with others through oral collaborative conversations on a range of social and academic topics. Collaborative 3: Offering and supporting opinions and negotiating with others in communicative exchanges. Interpretive 5: Listening actively to spoken English in a range of social and academic contexts. Productive 11: Supporting own opinions and evaluating others' opinions in speaking and writing. Productive 12: Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas. Part 2: Structuring Cohesive Texts 2: Understanding cohesion. Expanding and Enriching Ideas 3: Using verbs and verb phrases. Expanding and Enriching Ideas 4: Using nouns and noun phrases. Connecting and Condensing Ideas 6: Connecting ideas.
Teaching and Learning Progression Task 3-chart a: **Equipment** / **Total students: (Students On + Students**	This section is designed to give lesson suggestions for teaching the concepts needed to complete the tasks. Day 1: Introduce Engaging Scenario and Task 3 to provide purpose (task 3 will be completed on day 5). **Days 1-4**: • As a class, practice adding single/ double digit equations and number stories by using:		Bloom's: 3 / DOK: 2 Scoring Rubric This task is done in groups or pairs. Scoring can be

	Waiting)
Total Number of students on the playground at one time:	

Task 3-chart b:

Kindergarten Teacher	**Number of Students**
Total number of K students	

manipulatives, drawings, and adding in expanded form.

- Use base ten blocks to practice creating a ten when adding ones.
- Use a variety of strategies to add double digit numbers and multiple digit numbers with base ten, drawing tens and ones, tally marks, expanded form, etc.
- Students could create number stories in groups and create a poster to show their understanding.
- Add double digits vertically: add ones and then tens to facilitate regrouping in second grade.

Refer to the signs samples in the resources for anchor posters.

Day 5: Complete Task 3

Students should use any manipulatives or tools that are used in class to complete task 3.

- As a class, gather data needed to complete task 3.
- Using your sketch and the Equipment and Shape Chart, use chart a to figure out how many students should be on the playground at one time.
- Use chart b to help find out how many Kindergarten students are at your school:

Sample Task 3

1. Using your sketch and the Equipment and Shape Chart, figure out how many students should be on each item at on time.

Equipment	**Total students:** **(Students On + Students Waiting)**
Hopscotch	**2+5=7**
Four square	**4+9=13**
Slide	**1+5=6**
Jungle Gym	**6+10=16**

1. Have student use tally marks,

done by informal observation or checking for understanding throughout lesson.

manipulatives, drawings, or other tools to add all of the students together. If students have only learned to add two numbers, group the numbers into pairs and add and so on.
7+13= 20 20+ 22= 42
6+16= 22

2. Find out how many Kindergarten students are at your school:

Kindergarten Teacher	Number of Students
Teacher 1	25
Teacher 2	26
Teacher 3	25
Teacher 4	27
Total number of K students	103

Instructional Strategies

All Students	SWD		ELs
• Count to 120 • Work with number sentences • Use manipulatives • Write numerals • Represent addition and subtraction problems with drawings • FactsWise • California Math Expressions • Number Talks • Math Journals • Collaborative group work • Paired work/practice • Counting Collections • Refer to Resource document for videos Collaborative communication (think/pair/share, productive partners)	• See IEP	• Additional vocabulary development • Vocabulary cards with pictures (resource available) • Bilingual assistant (if available) • Use of ELD time to support math curriculum language (not vocabulary) • GLAD strategies • SDAIE strategies Sentence frames (resource available)	• Use higher numbers • Student presentations • Leadership opportunities • Higher level DOK prompts • Refer to Learning Progression

Authentic Performance Task 4

<table>
<tr><td>Name:</td><td colspan="2">Recess Schedule: Using the charts from Task 3, make a schedule for recess times with the right number of students on the playground at one time.</td><td>Suggested Length</td><td>Days: 5
Mins/Day: 50</td></tr>
<tr><td rowspan="6">Standards Addressed</td><td colspan="4">Priority Standards</td></tr>
<tr><td colspan="2">CCSS Math</td><td colspan="2">Standards for Mathematical Practice</td></tr>
<tr><td colspan="2">1.NBT.4 – Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten

1.NBT.5 – Given a two-digit number, mentally find ten more or ten less than the number, without having to count; explain the reasoning used.

1.MD.3 – Tell and write time in hours and half-hours using analog and digital clocks.</td><td colspan="2">X Make sense of problems and persevere in solving them
☐Reason abstractly and quantitatively
☐Construct viable arguments and critique the reasoning of others
☐Model with mathematics
X Use appropriate tools strategically
X Attend to precision
☐Look for and make use of structure
☐Look for and express regularity in repeated reasoning</td></tr>
<tr><td colspan="4">Supporting Standards</td></tr>
<tr><td>CCSS Math</td><td>CCSS ELA</td><td colspan="2">NG ELD</td></tr>
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Teaching and Learning Progression	Day 1: Introduce Engaging Scenario and Task 4 to provide purpose (task 4 will be completed on day 5). **Strategy Building Routine** (Mini Lesson: 5-10 minutes): • Day 1: Practice moving analog clock hands to designated times. • Day 2: practice writing digital times. • Day 3: practice drawing hands of analog clocks to designated times. • Day 4: Practice writing times on digital clocks.		Bloom's: 3 DOK: 2 Scoring Rubric This task is done in groups or pairs. Scoring can be done by informal observation or checking for understanding throughout lesson.

<table>
<tr><td></td><td colspan="2">Days 1-4:
Identify analog and digital clocks.
Identify parts of the analog clock.
Tell time on a digital clack to the hour and half hour.
Tell time on an analog clock to the hour and the half.
Identify the half hour designation as ½ of an hour.
Relate ½ hour to the semicircle.
Count minutes in a half hour as 30 minutes.
Introduce the fact that each number/section of the clock represents 5 minutes.
1 hour is 60 minutes.
As a class, create anchor posters for the types of clocks (analog and digital) identify the parts of the analog clock.
Sample schedules are in the resources.
Day 5: Complete Task 4
Students should use any manipulatives or tools that are used in class to complete task 4.</td><td></td></tr>
<tr><td colspan="4">Instructional Strategies</td></tr>
<tr><td>All Students</td><td>SWD</td><td>ELs</td><td>Enrichment</td></tr>
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Use manipulatives
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FactsWise
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Number Talks
Math Journals
Collaborative group work
Paired work/practice
Counting Collections
Refer to Resource document for videos
Collaborative communication (think/pair/share, productive partners)</td><td>See IEP</td><td>Additional vocabulary development
Vocabulary cards with pictures (resource available)
Bilingual assistant (if available)
Use of ELD time to support math curriculum language (not vocabulary)
GLAD strategies
SDAIE strategies
Sentence frames (resource available)</td><td>Use higher numbers
Student presentations
Leadership opportunities
Higher level DOK prompts
Refer to Learning Progression</td></tr>
</table>

Authentic Performance Task 5

Name:	Presentation Present your plan to the principal and the kindergarten classes. You will need to include all of your tasks and a paragraph stating why you chose the equipment you did. You can show your tasks in a folder, on a poster or in any other way that shows your plan clearly. Good Luck!	Suggested Length	Days: 5 Mins/Day: 50

Standards Addressed

Priority Standards

CCSS Math	Standards for Mathematical Practice
1.G.1 – Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes. 1.MD.3 – Tell and write time in hours and half-hours using analog and digital clocks. 1.NBT.4 – Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten 1.NBT.5 – Given a two-digit number, mentally find ten more or ten less than the number, without having to count; explain the reasoning used.	X Make sense of problems and persevere in solving them ☐Reason abstractly and quantitatively ☐Construct viable arguments and critique the reasoning of others ☐Model with mathematics X Use appropriate tools strategically X Attend to precision ☐Look for and make use of structure ☐Look for and express regularity in repeated reasoning

Supporting Standards

CCSS Math	CCSS ELA	NG ELD

	1.OA.5-Relate counting to addition and subtraction 1NBT.1-Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. 1.OA.3 – Apply properties of operations as strategies to add and subtract. Examples: if 18 + 3 = 11 is known, then 3 + 8 = 11 is also known (commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12 (associative property of addition.) 1.OA.6 – Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; make 10 (eg, 8 + 6= 8+ 2 +4= 10 + 4=14); decomposing a number leading to a ten (eg, 13 – 4 = 13 – 3- 1 = 10 – 1 = 9); using the relationship between addition and subtraction (eg, knowing that 8 + 4 =12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (eg, adding 6 = 7 by creating the known equivalent 6 + 6+ 1 = 12 + 1 = 13). 1.NBT.2 – Understand that two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: a. ten can be thought of as a bundle of tens and ones-called a "ten." b. the numbers from 11-19 are composed of a ten and a one, two, three, four, five, six, seven, eight, or nine ones. c. the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	W.1.1 – Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, and provide some sense of closure. W.1.6 – With guidance and support of adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. SL1.1 - Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. a. Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion). b. Build on others' talk in conversations by responding to the comments of others through multiple exchanges. c. Ask questions to clear up any confusion about the topics and texts under discussion. SL1.2 - Ask and answer questions about key details in a text read aloud or information presented orally or through other media. SL1.3. Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood. SL1.5 - Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings. SL1.6 - Produce complete sentences when appropriate to task and situation. 1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Print all upper- and lowercase letters. b. Use common, proper, and possessive nouns. c. Use singular and plural nouns with matching verbs in basic sentences (e.g., He hops; We hop). d. Use personal, possessive, and indefinite pronouns (e.g., I, me, my; they, them, their; anyone, everything). e. Use verbs to convey a sense of past, present, and future (e.g., Yesterday I walked home; Today I walk home; Tomorrow I will walk home). f. Use frequently occurring adjectives. g. Use frequently occurring conjunctions (e.g., and, but, or, so, because). h. Use determiners (e.g., articles, demonstratives). i. Use frequently occurring prepositions (e.g., during, beyond, toward).	Part 1: Collaborative 1: Exchanging information and ideas with others through oral collaborative conversations on a range of social and academic topics. Collaborative 3: Offering and supporting opinions and negotiating with others in communicative exchanges. Interpretive 5: Listening actively to spoken English in a range of social and academic contexts. Productive 11: Supporting own opinions and evaluating others' opinions in speaking and writing. Productive 12: Selecting and applying varied and precise vocabulary and language structures to effectively convey ideas. Part 2: Structuring Cohesive Texts 2: Understanding cohesion. Expanding and Enriching Ideas 3: Using verbs and verb phrases. Expanding and Enriching Ideas 4: Using nouns and noun phrases. Connecting and Condensing Ideas 6: Connecting ideas.

Teaching and Learning Progression	Day 1: Introduce Engaging Scenario and Task 54 to provide purpose (task 5 will be completed on day and presented throughout the week). • **Days 1-5**: Students will present their proposals as the teacher sees fit. This can be done individually or in groups. Students can present to the principal, the kinder teachers or to a mock audience.	Bloom's: 3	DOK: 3
		Scoring Rubric: This task is done in groups or pairs. Scoring can be done by informal observation or checking for understanding throughout lesson.	

Instructional Strategies			
All Students	SWD	ELs	Enrichment
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Engaging Scenario

Detailed Description (situation, challenge, role, audience, product or performance)
Description: Great News! You have an appointment with the principal. The principal has asked you to design a new playground for your school. It will be for the kindergarten students and they want it to be fun and educational. You will design the equipment and the blacktop area and include signs that describe the shapes that make up the playground items. You will also prepare a schedule to help

plan recess times. All of this will be presented to the principal. You can use a poster, a PowerPoint, a written paper or another format if you choose.

S- Planning a playground

C- The playground needs to be designed for preschoolers

R- Designer/ Presenter

A- The principal/ preschool students

P- The blueprint of your design

Feedback to Curriculum Team Reflect on the teaching and learning process within this unit of study. What were some successes and challenges that might be helpful when refining this unit of study?		
	Successes	Challenges
Student Perspective		
Teacher Perspective		