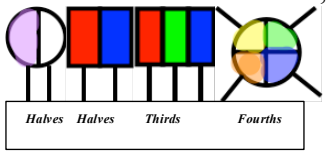
Grade Level	2nd	**Content Area**	Mathematics
Course Title (grades 9-12 Only)	NA		
Expected Prior Knowledge *List the knowledge/skills mastered earlier in the year that are foundational to the mastery of the Required Standard.*	The scholars will have mastered the previous skills in first grade of distinguishing between defining attributes such as closed shapes versus non defining attributes such as color, size, and orientations; build and draw shapes to possess defining attributes The scholars will have mastered first grade skills to compose two-dimensional shapes to create a composite shape. The scholars will have mastered composition of three-dimensional shapes to create a composite shape. The scholars will have mastered partitioning circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares. The scholars will have knowledge of earlier second grade work to recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.[1] Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. The scholars will have knowledge and skill to partition a rectangle into rows and columns of same-size squares and count to find the total number of them. The scholars will know and understand the word partition and the meaning of parts or breaking something into parts.		
Alignment to Program of Instruction *Describe how the methods of instruction found in this sequence of lessons align to the Program of Instruction described in the application package.*	The Arizona College and Career math standards form the basis for The Grande Innovation Academy's math curriculum. Scholars will learn standards using the Arizona College and Career strands building from year to year. EngageNY will be used along with manipulatives to build conceptual understanding. First in Math online will be used for developing automaticity with math facts to increase mathematical fluency. Scholars, Kindergarten through Eighth Grade, will annually participate in The Grande Innovative Academy's Math Olympics program to generate motivation for math fluency.		
Standard Number* and Description *The standard number and description (see instructions) of the Standard being instructed and assessed to mastery in the curriculum sample.*	**2.G.A.3** Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words whole, halves, thirds, half of, a third of, etc. and describe the equal shares of two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.		
Materials/Resources Needed *List all items the teacher and students will need for the entire sequence of instruction (excluding common consumables)*	* Dry erase crayons * Dry erase boards * Rulers * Paper plates * Paint, cardstock		

	* String * Pink paper squares * Yellow paper squares * Note cards

******Standard Number***: *For English Language Arts (Reading and Writing), use Grade, Strand, Standard (e.g., 3.RI.2). For K-8 Math, use Grade, Domain, Cluster, Standard (e.g., 6.EE.B.7). For HS Math, use Conceptual Category-Domain, Cluster, Standard (e.g., A-REI.C.6).*

Lesson (add as needed)	**Instructional Strategies -** *List and describe teacher actions, lesson by lesson, which will provide students with opportunities to engage the grade-level rigor defined by the Required Standard(s). Indicate alignment of instructional strategies to specific component(s) or content/skill(s) of the Required Standard/component.*	**Student Activities -** *Describe the activities, lesson by lesson, in which students will engage to allow them to master the grade-level rigor defined by the Required Standard(s). Indicate alignment of student activities to specific component(s) or content/skill(s) of the Required Standard/component.*
1	**Anticipatory Set:** Teacher will (TW) post a picture of an M & M and a whole graham cracker on the mimeo with two anticipatory questions, "What does an equal fraction look like?" and "What does partition look like when a circle or rectangle is in equal parts**?"** **Objective and Purpose:** TW post on board for scholars to write in interactive daily math journal. Scholars will partition circles and rectangles into equal shares and describe those shares as halves, thirds, and fourths for mastery. **Instructional Delivery: Whole Group** TW hand out templates with partitioned circles and rectangle from previous lesson. TW direct the scholars to cut their templates into thirds and paste appropriately into their interactive math journals. TW introduce key points. **Key Points:** • Define partition as making shares by dividing • Define equal fractions as having the same value even though they may look different • Halves are two equal shares • Fourths are equal shares of four	**Anticipatory Set:** The scholars will draw a comparison chart of equal and unequal shares using halves and fourth in their interactive daily math journals using pictures of an M & M and a whole graham cracker. **Objective and Purpose:** Scholars will write posted objective and purpose in interactive daily math journal. **Instructional Delivery: Whole Group** The scholars will cut their templates of partitioned circles and rectangles into thirds and paste appropriately into their math journals. **Modeling:** Scholars will observe teacher defining what partitioning of shares means. Scholars will write definition in interactive daily math journal. Scholars will draw equal fractions having the same value that look different in their interactive daily math journal. Scholars draw a picture of circles and rectangles that show halves and fourths in equal shares in their interactive daily math journal. Scholars draw three equal shares of a shape. **Check for Understanding** (CFU, using Teach Like a Champ) Scholar stands as teacher gives Check for Understanding signal of Get Ready get Ready, scholar." Scholar replies with response of halves mean two equal shares." If scholar doesn't respond in five seconds, scholar still needs to be ready as there is no opt out and teacher will come back again.

	• Introduction of thirds: partitioning into three equal shares **Modeling:** TW model by writing on the board what the definition of partitioning of shares is. TW draw equal fractions having the same value that look different. TW draw a picture of circles and rectangle that show halves and fourths in equal shares. TW introduce thirds by partitioning shape into thirds or three equal shares. **Check for Understanding** (CFU, using Teach Like a Champ) TW circulate room and say "Get Ready, Get Ready, scholar name" to check for definition of shares. "Get Ready, Get Ready, and scholar. What do halves mean?" TW wait no more than five seconds for response. If no response TW calls on another scholar while circulating room, then goes back to scholar with no response, says "What did scholar say?" **Guided Practice:** The scholar will participate in a centers exercise to promote concept development in fractions of halves, thirds, and fourths. TW distribute identical circle and rectangle templates for scholars to insert into their personal white boards. TW distribute rulers, dry erase crayons, and erasers for personal white boards at each small group. TW guide scholars to divide rectangles and circles into halves, thirds, and fourths with ruler and dry erase crayons. TW circulate, checking for scholar understanding at each fraction level. **Independent Practice:** TW provide scholars with problem sets to do their personal best with an exit ticket and allotted time of 10 minutes. **Closure/Exit Ticket:** TW pass out note cards to scholars and instruct them to draw three rectangles, one divided into halves, one into quarters, and one into thirds. TW call on scholars one by one to review exit ticket for understanding and closure	**Guided Practice: Small Groups** Scholars will engage in small groups listening for guidance from teacher. Scholars will divide rectangles and circles into halves, thirds, and fourths with rulers, as directed by teacher, and proceed to color in appropriate fraction shares. **Independent Practice** The scholars will complete six independent problem sets using crayons to visualize their description of halves, thirds, and fourths. Scholars will have ten minutes to complete their problem sets. Scholars are expected to do their personal best with high quality work correctly completing all six problems for mastery. **Closure/Exit Ticket:** Scholars will draw three rectangles on their notecard and divide one in halves, quarters, and thirds. Scholars will wait for teacher to call for closure and check for understanding.
2	**Anticipatory Set:** TW ask, "Who has eaten pizza? What shape is a pizza?" TW cold call on 2 – 3 scholars. TW then ask, "Who has eaten a rectangular pizza? Today	**Anticipatory Set:** The scholars will sit on the carpet and raise their hands accordingly. Two or three scholars will name the shape of pizza as they are called upon.

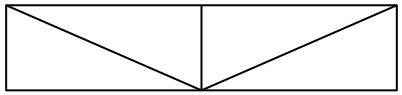
	we are going to look at how circles and rectangles are divided into pieces." **Objective and Purpose:** TW post objectives onto the board for scholars to write into their interactive daily math journals**.** The scholars will write the objective: Scholars will describe a whole number of equal parts including 2 halves, 3 thirds and 4 fourths to recognize that equal shares of a circle or rectangle can have different shapes. **Instructional Delivery: Whole Group** TW describe verbally and/or in written form that halves are two equal shares, thirds are equal shares of three, and fourths are four equal shares. TW allow choice to differentiate for different types of learners such as ELL, visual, auditory, and spatial. TW display examples of paper plates for a circular shape and card stock for a rectangular shape demonstrating halves, thirds, and fourths. TW attach string numeric items appropriate to fraction shares with halves, thirds, and fourths labeled.  **Key Points:** • Define equal fractions as having the same value even though they may look different • Halves are two equal shares • Thirds are equal shares of three • Fourths are four equal shares **Modeling:** TW will model definition of equal fractions having the same value even though they might look different by pointing to circular and rectangular shape. TW will model that halves are two equal shares by showing examples on the board. TW will model that thirds are shares of three by pointing to and defining example on board. TW will model fourths are four equal shares by pointing to and describing example on board.	**Objective and Purpose:** The scholars will write in the lesson objective and purpose in their interactive daily math journals. The scholars will describe a whole number of equal parts including 2 halves, 3 thirds, and 4 fourths to recognize that equal shares of a circle or rectangle can have different shapes. **Instructional Delivery: Whole Group** The scholars will color, cut, paste, and label halves, thirds, and fourths template in their daily interactive math journals. **Modeling:** The scholars will observe as teacher describes halves, thirds, and fourths of painted paper plates and cardstock examples that are on the board. **Check for Understanding** (CFU, using Teach Like a Champ) Scholar stands as teacher gives Check for Understanding signal of Get Ready get Ready, scholar." Scholar replies by showing teacher examples of halves from the board." If scholar doesn't respond in five seconds, scholar still needs to be ready as there is no opt out and teacher will come back again. **Guided Practice: Small Group/Pairs** The scholars will place the pink and yellow squares on top of each other with their partner. After time verification to prove the wholes are the same. The scholars will fold their paper squares into halves according to the color of their square. The scholars will draw a line on the fold of their partitioned square.

	Check for Understanding (CFU, using Teach Like a Champ) TW circulate room and say "Get Ready, Get Ready, scholar name" to check for definition of shares. "Get Ready, Get Ready, and scholar. Show me which shapes are halves." TW wait no more than five seconds for response. If no response TW calls on another scholar while circulating room, then goes back to scholar with no response, says "What did scholar say?" **Guided Practice: Small Groups/Pairs** TW guide scholars to increase recognition that equal halves can have different shapes. TW cut a square in half and ask scholars how many halves there are. Scholars will respond chorally "two". TW respond "Good, how many halves make a whole?" Scholars will chorally respond "two". TW reply "Good, now let's use paper squares to show halves in two different ways". TW distribute one pink square and one yellow square per pair of scholars. TW ask, "how can we tell if your square is the same size as your partner's?" TW direct scholars with pink squares to make triangular halves. TW direct scholars with yellow squares to make rectangular halves. TW direct scholars to draw a line on the fold of their partitioned squares. TW say, "We want to know if the way each of these squares is divided shows halves, two equal pieces of equally sized squares". TW cut each demonstrative square into halves. TW ask, "What did you notice about each of the halves we cut from each square?" TW ask, "do these show half of the same size square even though they are different shapes?" (Pause) "Well let's inquire about that." TW tape the rectangle to the board. TW cut the triangle into fourths and put the triangle fourths on top of the rectangle half to see if they are exactly the same". **Independent Practice** TW provide scholars with the choice of circular paper plates or rectangular card stock to show two different ways to partition and paint fractions of thirds and fourths. TW provide note cards for scholars to label their fractions appropriately. Scholars must appropriately partition	 The scholars will cut on the line of each square so that they have a rectangular half and a triangular half. The scholars will respond, "one half is a rectangle and one half is a triangle." The scholars with the triangular halves will fold one triangle in half and in half again then cut along the folds. The scholars will position their four triangular pieces so that they fit exactly on top of the rectangle. The scholars will then switch positions allowing the other scholar to repeat the activity. **Independent Practice** The scholars will partition and paint thirds and fourths on circular paper plates and/or rectangular cardstock. The scholars will use note cards to label their fractions into thirds and fourths. The scholars will describe their partitioned shapes (e.g. "The yellow is one quarter or one-fourth of four-fourths"). Scholars must appropriately partition and label all fractions to show mastery. **Closure/Exit Ticket:** Scholars will give thumbs up and wait for teacher to come to check for understanding and mastery. Teacher will hole punch notecard to verify closure.

	and label all fractions to show mastery. **Closure/Exit Ticket:** TW circulate room as scholars give thumbs up to show they have completed independent practice. TW hole punch notecards with correct fractions.	
S.A.	*Provide an opportunity for the student to complete the summative assessment items which is clearly separate from instruction and guided or independent practice, and in which the student is assessed independently. In the Student Activities column, provide a brief description of the summative assessment (S.A.) items that will allow students to demonstrate mastery of the rigor of the Required Standard(s)/components, and the context in which the items will be administered.*	For the assessment, scholars will identify and partition shapes using words and pictures. The scholar will complete the assessments to show mastery of the standard.

Summative Assessment #1 Given the following instructions, the scholar will solve. A total of 12 points is possible for this assessment. Scholars will receive a maximum of 4 points for correctly identifying (a) a maximum of 4 points for correctly identifying (b) and a possible 4 points for correctly identifying (c). (See answer key) Scholar mastery will be set at 9 points. (75%)

Complete each statement by circling the correct answer based on the following figure:



a. One small triangle is what portion of the figure?
   1 fourth **1 half** **1 third**

b. One square is what portion of the figure?

   1 fourth **1 half** **1 whole**

c. One rectangle that is not a square is what portion of the figure?
   1 fourth **1 half** **1 whole**

Summative Assessment 2: Given the following instructions, the scholar will solve. A total of 12 points is possible for this assessment. Scholars will receive a maximum of 4 points for correctly identifying (a) a maximum of 4 points for correctly identifying (b) and a possible 4 points for correctly identifying (c). (See answer key) Scholar mastery will be set at 9 points. (75%)

Summative Assessment #2

2. Split the pizza below so Shane, Raul, and John all have an equal share. (a) Label each student's share with his name. (b) c) What fraction of the pizza did the boys eat all together?

Summative Assessment 3: Given the following instructions, the scholar will solve. A total of 12 points is possible for this assessment. Scholars will receive a maximum of 4 points for correctly identifying (a) a maximum of 4 points for correctly identifying (b) and a possible 4 points for correctly identifying (c). (See answer key) Scholar mastery will be set at 9 points. (75%)

Partition and shade the following shapes. Each rectangle or circle is one whole.

a. 1 half

b. 2 thirds

c. 3 fourths

Answer Key:

1a. 1 fourth
1b. 1 half
1c. 1 whole

2. 1 whole

3a.

3b.

3c.

Answer Key	Evidence of solid reasoning with a correct answer. (4 Points each correct answer)
Summative Assessment Number 1 **12 points**	The scholar correctly identifies: *1 small triangle as one fourth of the rectangle *1 square as one half of the rectangle *1 rectangle as the whole
Summative Assessment Number 2 **12 points**	The scholar successfully: *Partitions the pizza into three equal shares *Labels each student's share with his name *Identifies the whole fraction of the pizza the boys ate all together (1)
Summative Assessment Number 3 **12 points**	The scholars are able to partition all shares correctly. The scholars are able to shade all shares correctly.