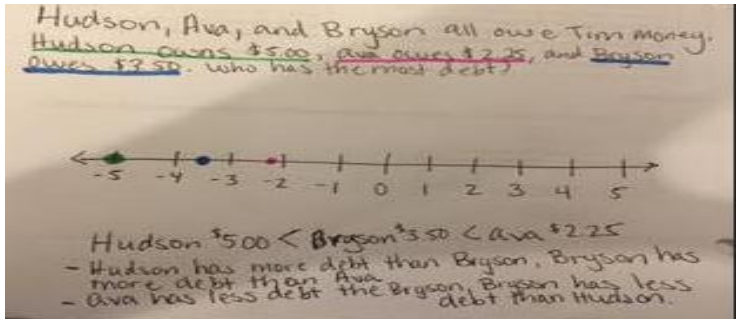
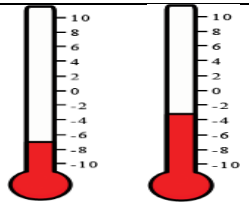
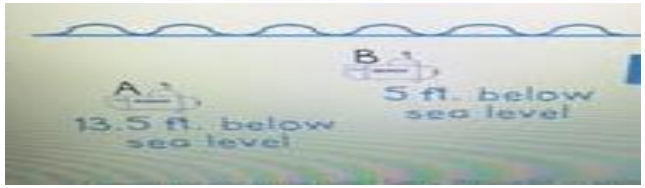
Curriculum Sample Template – 8 Pages Max. (12 pages for integrated ELA sample)

Grade Level	6	**Content Area**	Math
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(s).*	Integers Equalities such as 7 >3 and -7 < 3 and can tell which one is greater or less than from a two points of rational numbers on a number line. Students know the absolute value of *|–30| = 30* which is the distance that -30 is from 0 on a number line. Students know how to find the distance between two rational numbers such as 2 and -34= *|36|=36* using absolute value. Students understand that positive and negative numbers are used together to describe quantities having opposite directions or values. Students understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.		
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.*	Pensar Academy utilizes a Blended Learning (BL) educational model that includes Direct Instruction (DI), Small Group Intervention, and Projects Based Learning (PBL) for students to achieve mastery of the Arizona College and Career Readiness Standards (ACCRS). Lessons are comprised of the 21st century skills of critical thinking, collaboration, communication, and creativity. Pensar Academy ensures that all students can reach mastery through the use of Universal Design for Learning (UDL) in the preparation of lessons that incorporate multiple learning styles, such as visual, auditory, tactile and kinesthetic. Pensar Academy's rotational model has embedded Response to Intervention (RTI) logistics to ensure that students who did not meet mastery are provided intervention immediately following the lesson to increase their understanding of the material. Students who are at the mastery level (a minimum of 80%) after the direct instruction will have the opportunity for enrichment through the use of Study Island and teacher constructed online learning activities. All students will apply learned content and skills learned through this rotational model in PBL extension periods. These components ensure that, at Pensar Academy, will students receive an individualized education comprised of 21st century skill building and optimal success in surpassing the ACCRS.		
Standard Number* and Description *The standard number and description of the Required Standard(s) being instructed and assessed to mastery in the curriculum sample.*	6.NS.C.7 - Understand ordering and absolute value of rational numbers. b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write –3 oC > –7o C to express the fact that –3 oC is warmer than –7 oC. c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. *For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars*.		
Materials/Resources Needed *List all items the teacher and students will need for the entire sequence of instruction (excluding common consumables)*	Computer, Projector, Document Camera, set of fake money, thermometer		

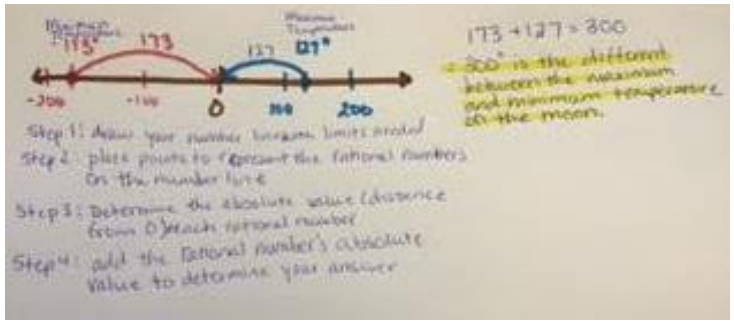
* ***Standard Number****: For English Language Arts (Reading and Writing), use Grade, Strand, Standard (e.g., 3.RI.2). For K-8 Math, use Grade, Domain, Cluster, Standard (e.g., 6.EE.B.7). For HS Math, use Conceptual Category-Domain, Cluster, Standard (e.g., A-REI.C.6).*

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	**Objective:** Teacher will (TW) state the objective. Student will be able to (SWBAT) order rational numbers in a real world context using a number line to: • Write an inequality • Interpret the inequality of the ordering • Explanation statements **Anticipatory Set (AS)**: TW will pose the following real world problem: Hudson, Ava, and Bryson all owe Tim money. Hudson owes $5.00, Ava owes $2.25, and Bryson owes $3.50. Who has the most debt? TW will have students discuss with their partner. **Teacher Model/Inquiry:** TW model solving the real world context problem from the AS under the document camera to write of inequality, interpret, and generate an explanation statement. Step 1: TW model labeling each rational number to be graphed with a color. Step 2: TW model placing the points on the number line in the corresponding colors. Step 3: TW model their metacognition for interpretation the information of the number line. Step 4: TW model writing the inequality to order who has the most debt to Tim. Step 5: TW model writing the explanation statements.  TW have students communicate orally to their partner to summarize the process the teacher used to solve the real world context problem. **Guided Practice:** Teacher and students will solve this real world context word problems together. **Jason, Misty, and Lily collected soda cans. They returned them for the deposit at the store. Jason made $2.25, Misty made $3.75, and Lily made $1.50. Use a number line to interpret, write of inequality, and generate an explanation statement.**TW call on students to come do a step	**Objective:** Students will (SW) state the objective to their partner. **AS:** Students will think about the questions from the teacher. SW discuss with their partner who has the most debt. **Teacher Model/Inquiry:** SW listen to teacher and watch the model. SW copy the teacher's model into their notebook. SW copy the 5 steps into their notebooks. SW communicate orally to their partner to summarize the process the teacher used to solve the real world context problem. **Guided Practice:** SW complete the 5 steps (from model to solve the real world context word problem. SW go up to the document camera and complete a step when call on by the teacher. SW agree or disagree orally with the step completed by another student when called on. SW will have a justification for agreeing or disagreeing. **Check for Understanding:** SW answer CFU's questions when call on. SW will share with neighbor. **Independent Practice:** Students will complete the independent practice **Closure:** Student will select one question from the list of three. Students will be paired with a student designated as A and the other is B. Random student A will be directed to rephrase student B's response. **Small group Re-teaching**: Student who did not achieve mastery will attend a small group session. SW use fake money to develop a concrete understanding. SW will place the fake money on the number line. **Extensions:** Students who achieve mastery will use the computer program Study Island to complete additional questions pertaining to the standard.

	under the document camera. After a student completes a step, the TW call on a student to agree or disagree with the step. **Check for Understanding**: TW ask multiple CFU's (call on non-volunteer to restate steps, ask students summarize learning, ask student share with their neighbor) to ensure sufficient progress. **Independent Practice:** Students will be given five similar real-world problem context word problem with rational numbers to order using a number line to interpret, write and inequality, and generate an explanation statement. Students will need to get 4 out of 5 (80%) to achieve mastery and move into the extension. **Closure:** Teacher will put 3 cognitive closure questions of the overhead. 1. How does this lesson to previous learning? 2. How can I use this lesson in real life? 3. How would I teach this lesson to a friend? **Small Group Re-Teaching**: TW model the example word problem in the teacher model and guided practice using fake money to develop a concrete understanding.	
2	**Objective:** Teacher will (TW) state the objective. Student will be able to (SWBAT) order rational numbers in a real world context using a number line to: • Write an inequality • Interpret the inequality of the ordering • Explanation statements **Anticipatory Set (AS)**: TW have students discuss the lesson from the day before. TW have students brainstorm a written list other real world situations that are inequalities. TW will call on students to share from their situations. TW write the real world situations on the board. After the list is generated TW will explain that there are a variety of real world situation such as: temperature, above and below sea level, debits/credit ect. **Teacher Model/Inquiry:** TW model solving the real world context problem from the AS under the document camera to write of inequality, interpret, and generate an explanation statement. Step 1: TW model labeling each rational number to be graphed with a color. Step 2: TW model placing the points on the number line in the corresponding colors. Step 3: TW model their metacognition for interpretation the information of the number line. Step 4: TW model writing the inequality to order who the temperatures. Step 5: TW model writing the explanation statements. TW will model an additional step of drawing a picture. One of the thermometers shows -3°C and the other shows -7°C. Which thermometer shows which temperature? Which is the colder temperature? Write an inequality to interpret and generate an explanation statement.	**Objective:** Students will (SW) state the objective to their partner. **AS:** In pairs, SW brainstorm a list of real world situations that incorporate inequalities. SW will share with the class when called on. **Teacher Model/Inquiry:** SW listen to teacher and watch the model. SW copy the teacher's model into their notebook. SW communicate orally to their partner to summarize the process the teacher used to solve the real world context problem. **Guided Practice:** SW complete the 5 steps (from model to solve the real world context word problem. SW go up to the document camera and complete a step when call on by the teacher. SW agree or disagree orally with the step completed by another student when called on. SW will have a justification for agreeing or disagreeing. **Check for Understanding:** SW answer CFU's questions when call on. SW will share with neighbor. **Independent Practice:** Students will complete the independent practice **Closure:** Student will select one question from the list of three. Students will be paired with a student designated as A and the other is B. Random student A will be directed to rephrase student B's response. **Small group Re-teaching**: Student who did not achieve mastery will attend a small group session. SW use hands on materials such as thermometers to develop concrete understanding. **Extensions:** Students who achieve mastery will use the computer program Study Island to complete additional questions pertaining to the standard.

	 TW have students communicate orally to their partner to summarize the process the teacher used to solve the real world context problem. **Guided Practice:** Teacher and students will solve this real world context word problems together. If submarine A is hovering at 13.5 ft below sea level and submarine B is hovering at 5 ft below sea level. Which submarine is deeper? Write an inequality to interpret, and generate an explanation statement.  **Check for Understanding**: TW ask multiple CFU's (call on non-volunteer to restate steps, ask students summarize learning, ask student share with their neighbor) to ensure sufficient progress. **Independent Practice:** Students will be given five similar real-world problem context word problem with rational numbers to order using a number line to interpret, write and inequality, and generate an explanation statement. Students will need to get 4 out of 5 (80%) to achieve mastery and move into the extension. **Closure:** Teacher will put 3 cognitive closure questions of the overhead. 1. How does this lesson to previous learning? 2. How can I use this lesson in real life? 3. How would I teach this lesson to a friend? **Small Group Re-Teaching**: TW model the example word problem in the teacher model and guided practice hands on items such as thermometers to develop a concrete understanding.	
3	**Objective:** TW state objective to students. SWBAT determine if a quantity is positive and negative in real-life situations with rational numbers using absolute value by: • Sorting situations into positive and negative situations • Explaining their justification for deciding if a situation is a positive or negative situation **AS:** Teacher will show pictures of situations that can be negative and positive qualities. These situations are as follows: 1. Bank accounts in the positive and	**Objective:** SW state objective to their partner **AS:** SW discuss together as a class how the pictures can have a negative or positive quality. **Teacher Model/Inquiry:** SW will watch and listen to teacher model. SW explain if they agree or disagree that the situation is positive or negative. **Guided Practice:** SW sort the real world situations into negative and positive situations in groups of two. SW will discuss with their partner during the

	negative 2.Debits and credits to accounts, Below and above sea level, Temperature- below and above 0°C and/or 32°F, and Elevation **Teacher Model/Inquiry:** TW model sorting real world situations such as: 1. The dolphin jumped 5 feet above sea level, 2. Johnny debited $20 dollars from his account, 3. The airplane is flying at an altitude of 10,000 ft above sea level. **Guided Practice:** TW have students will sort 20 printed situations into a positive and a negative quantities. For example, Joey deposited $20 in his account. This would go into the positive quality/situations pile. TW monitor student work. TW ask students to explain the justification for sorting situations. **Check for Understanding:** Teacher will use questioning strategies to ask multiple CFU's (call on non-volunteer to restate steps, ask students summarize learning, ask student share with their neighbor) to ensure sufficient progress. **Independent Practice:** Students will be given five similar real-world situation to determine if it is negative or positive quality. Students will need to get 4 out of 5 (80%) to achieve mastery and move into the extension. **Closure:** Teacher will put 3 cognitive closure questions of the overhead. TW will have students share with partner and call on non-volunteers to share their response. 1. How can I use this new learning in my real-life? 2. Have you ever experienced one of these situations? 3. How would I teach this lesson to a friend?	activity their justification for deciding if the quality is positive or negative. SW explain to teacher when asked. **Check for understanding:** SW answer CFU's questions when call on. SW will share with neighbor. **Closure:** SW select a cognitive closure stem and write their response on a post-it note. SW share with their neighbor and class if called upon. **Small group Re-teaching**: Student who did not achieve mastery will attend a small group session. SW draw pictures on the situations to have a pictorial representations (semi-concrete) of the situation. SW look at situations on the computer such as: an airplane flying, a dolphin swimming below sea level ect. **Extensions:** Students who achieve mastery will use the computer program Study Island to complete additional questions pertaining to the standard.
4	**Objective:** SWBAT will compare two rational numbers in a real-world situation by: • Using a visual model (number line) to determine the positive or negative quantity • Using absolute value to determine the positive or negative quantity • Brainstorming real world situations **AS:** TW put following review problems on the board. 1. 2 and -34 2. -5 and 893. 89 and 101 4. -35 and -60. Students will find the distance between these two points on a number line using absolute value. TW will call on students to share their answer. **Teacher Model/Inquiry:** First, TW will give the students this real-life situation that use rational numbers. Bank accounts can be positive or negative. TW have students brainstorm in groups two other real world situations. TW will call on students to share and write the real world situations on the board. TW put this problem under the document camera. **The temperature on the Moon vary from -173° C to 127° C. Find the difference between the maximum and minimum temperatures.**	**Objective:** SW state the objective to the partner **AS:** SW complete the problems with the partner. SW share their answer with the class when called on. **Teacher Model/Inquiry:** SW have two minutes to brainstorm real world situations that include rational numbers. SW share with the class. SW will listen and watch teacher two models. SW copy down the teacher visual model and the steps to solve real world situations with rational numbers. SW explain the step in the own words orally to their partner. **Guided Practice:** SW solve the real world situation for rational number. SW draw a visual model (number line) and then complete the steps 1-5 to solve for the absolute value. SW will answer teacher generated questions for number 1 as they complete it as a class. SW will work in collaborative groups of two to solve #2 and #3. SW share their visual model under the document when selected. SW share and explain their thinking when selected. **Check for Understanding:** SW decide if the visual model and answer is correct. They will put thumb-up for agree and thumb-down for disagree. SW will explain the thinking when selected. **Independent Practice:** SW complete the independent practice.



TW model the following steps to solve: step 1: draw a visual model (number line) with the limits needed. Step 2: plce points to represent the rational numbers on the number line. Step 3: Determine the absolute value (distance from 0) of each rational number. Step 4: add the rational number's absolute value to determine you answer. TW will model the computation needed (173+127=300). TW model writing the answer which is 300 degrees is the different between the maximum and minimum temperatures on the moon. TW model using the steps above to complete this problem. **If Phoenix is 1117 ft above sea level and there is an airplane flying 20,250 feet above sea level. What is the distance between Phoenix and the airplane? Draw a visual using a number line and solve using absolute value.**

Guided Practice: TW solve the following problems using a combination of whole group and partner to complete #1-#3.

State	Alabama	California	Florida	Louisiana
Lowest Elevations (ft)	0	-282	0	-8
Highest Elevations (ft)	2407	14494	345	535

1. Using the table above. What is the difference between the lowest and highest elevation of California? Draw a visual using a number line and solve using absolute value.
2. A seagull is flying 32 ft above sea level. The seagull dives 22 ft below sea level. What is the total distance travel? Draw a visual using a number line and solve using absolute value.
3. The melting point of mercury is -37°F and its boiling point is 672° F. What is the difference between the boiling point and the melting point? Draw a visual using a number line and solve using absolute value.

Closure: For cognitive closure the students will pick one of the sentence stems to complete. The will write their response. The teacher will collect responses and randomly share several.

	Check for Understanding: TW will have students come and put their visual models under the document camera for #2 and #3 and share their answer. TW will have students agree or disagree using thumbs-up/down. **Independent Practice:** Students will be given five similar real-world situation to draw a visual model and solve using absolute value. Students will need to get 4 out of 5 (80%) to achieve mastery and move into the extension. **Closure:** Teacher will put 3 cognitive closure questions of the overhead. TW will collect responses and share several. 1. How can I use this new learning in my real-life? 2. How can I use this new learning in Science? 3. How would I teach this lesson to a friend?	
5	**Projects Based Learning Component**	**Projects Based Learning Component-**The corresponding project will be determined by the curriculum team during the summer of 2016. Please refer to A.5 for essential details of the committee.
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.*	The S.A. includes three assessment items through which students demonstrate their master of writing, interpretation, and explain statements to order rational numbers, students will draw visual models to understand the absolute value of a rational number's distance from 0 on the number line on item #1. Items #2-3 the students will use the table of state's elevations to calculate the absolute. The total for summative assessment items #1-3 is 15 points. Students need to achieve at least 12 out of 15 to obtain an 80% or higher which is considered mastery.

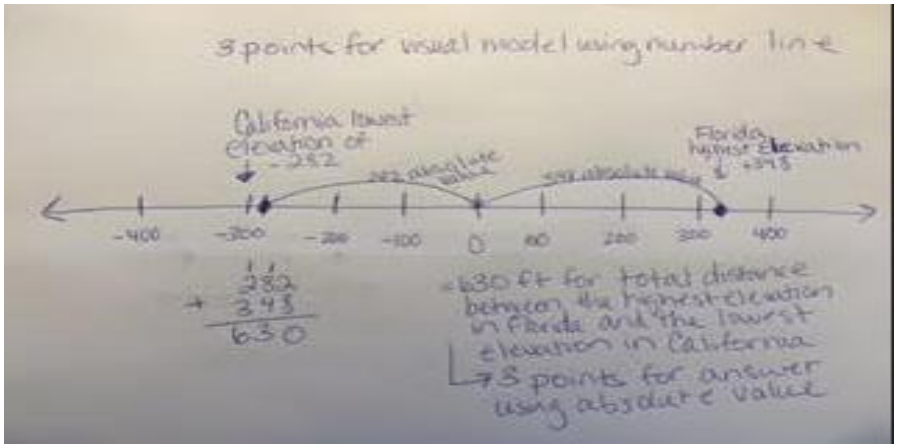
Summative Assessment Items and Scoring: *Below, provide at least three Summative Assessment Items that together accurately measure student mastery of the application of the content and/or skills as defined by the grade-level rigor in the Required Standard(s). For each assessment item, provide an answer key or scoring rubric which clearly describes how assessment items are to be scored and how points will be awarded, such that mastery of the application of the content and/or skills as defined by the grade-level rigor in the Required Standard is clearly demonstrated by an acceptable score.*

Summative Assessment Item 1 (clearly identify answer key/scoring rubric, and acceptable score): **Directions:** Use the table below to answer the summative assessment item #1. Read the real world situation using positive and negative quantities. 6 points total. 3 points for the visual model and 3 points for solving.

State	Alabama	California	Florida	Louisiana
Lowest Elevations (ft)	0	-282	0	-8
Highest Elevations (ft)	2407	14494	345	535

1. Find the difference between the highest elevation in Florida and the lowest elevation in California. Draw a visual using a number line and solve using absolute value to find the difference.

Answer Key:



Summative Assessment Item 2 (clearly identify answer key/scoring rubric, and acceptable score): 6 points
Directions: Read the real world situation using positive and negative quantities.
The San Francisco Peak in Northern Arizona 12,633 feet above sea level. Flagstaff is 7010 ft above sea level. What is the distance between the two? What is the absolute value of each rational number? 6 points

Absolute Value of San Francisco Peak's elevation: _____ (2 points) Absolute Value of Flagstaff's elevation: _____ (2 points)
Answer: _____ (2 points)

Answer Key:
Absolute Value of San Francisco Peak's elevation: __12,633__ (2 points) Absolute Value of Flagstaff's elevation: __7010__ (2 points)
Answer: ___19,643 ft distance between the elevations of the San Francisco Peak and Flagstaff (2 points)

Summative Assessment Item 3 (clearly identify answer key/scoring rubric, and acceptable score): (add as needed):
Directions: Read the real world situation using positive and negative quantities.
A man jumps off a cliff that is 50 feet above sea level. He dives 17 feet below sea level. What is the total distance travel? (3 points)
Answer Key: 57 ft traveled