Send as an attachment via email to adlerml@scsk12.org. Save file as: LessonPlans\_Last NameFirstInitial\_MonthDay

 Example: LessonPlans\_AdlerA\_Aug10

Boxes will expand as necessary when you type. Due by 11:59 Friday of week before scheduled plans.

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| Teacher | Teri Lindsey |
| Class | 8th Math |

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|  | **Date: 11-28** | **Date: 11-29** | **Date: 11-30** | **Date: 12-1** | **Date: 12-2** |
| **Standard**(Reference State, Common Core, ACT College Readiness Standards and/or State Competencies.) | 8.G.A.2 Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.8.G.A.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.* |
| **Objective**(Clear, Specific, and Measurable, student-friendly) | * Students know that corresponding angles, alternate interior angles, and alternate exterior angles of parallel lines are equal in measure. Students know that when these pairs of angles are equal in measure, then lines are parallel.
* Students know that corresponding angles of parallel lines are equal in measure because of properties related to translation. Students know that alternate interior angles of parallel lines are equal in measure because of properties related to rotation.
* Students present informal arguments to draw conclusions about angles formed when parallel lines are cut by a transversal.
 | * Students know the angle sum theorem for triangles; the sum of the measures of the interior angles of a triangle is always 180°.
* Students present informal arguments to draw conclusions about the angle sum of a triangle.
 | * Students know a third informal proof of the angle sum theorem.
* Students know how to find missing interior and exterior angle measures of triangles and present informal  arguments to prove their answer is correct.
 | Module 2End of Module AssessmentSpiraled Skills Assessment | MAP Test |
| **Connections to Prior Knowledge** | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills.Lesson 11 Exit Ticket | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills.Lesson 12 Exit TIcket | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills.Lesson 13 Exit Ticket |  |  |
| **Guiding Questions**(Motivator / HookAn Essential Question encourages students to put forth more effort when faced with complex, open-ended, challenging, meaningful and authentic questions.) | How can we determine if two angles are congruent if we know that they are formed by a transversal crossing parallel lines? | How can we use parallel lines to find the measures of angles of a triangle? | How can we use parallel lines to find the measures of angles of a triangle? | How can we determine if two angles are congruent if we know that they are formed by a transversal crossing parallel lines?How can we use parallel lines to find the measures of angles of a triangle? |  |

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| **Instructional Strategies**(Step-By-Step Procedures – SequenceDiscover / Explain – Direct InstructionModeling Expectations – “I Do”Questioning / Encourages Higher Order ThinkingGrouping StrategiesDifferentiated Instructional Strategies to Provide Intervention & Extension, **Literacy Task**) | Module 2, Lesson 12* TTW call on a student to draw a pair of random (non-parallel) lines and label them appropriately. All students will do the same on their paper.
* TTW ask the student to draw a transversal that intersects both lines and label it appropriately. All students will draw the same on their papers.
* TTW ask for a student to model how to use a protractor to measure each of the angles.
* Students will work with a partner to measure and record all angles formed.
* TTW guide a discussion about their observations.
* TTW distribute index cards for students to use to create a pair of parallel lines and then have students also draw a transversal to intersect both lines again.
* TSW repeat the steps to measure and record each angle.
* TTW display the discussion questions from the classwork materials.
* TTW ask students to determine which basic rigid motions could be used to prove each pair of congruent angles.

(translation for corresponding, rotation for alternate int. and ext.)* TTW define transversal, corresponding, alternate interior and exterior in context, as needed.)
 | Module 2, Lesson 13* TTW display

the drawing of 3 triangles and discuss the equations given stating that the sum of the angles is 180.* TTW state that we will use 3 facts we already know to prove that the sum is 180.
	+ The measure of a straight angle is 180.
	+ Corresponding angles are congruent.
	+ Alternate interior angles are congruent.
* TTW explain that there are two ways to extend the side(s) of any triangle to create parallel lines cut by a transversal.

(point out the Z)* TTW call on a student to draw a triangle and then instruct him/her to extend the bottom ray and draw a segment parallel to the left side of the triangle. Look for Z and corresponding angles.
* TTW allow students to work in pairs to complete Exploratory Challenge 1 and then guide a discussion, followed by Exploratory Challenge 2 in the same manner.
 | Module 2, Lesson 14* TTW demonstrate using the diagonal of a rectangle to prove that the sum of the interior angles of a triangle is 180.
* TTW call on a student to draw a triangle. Then extend each side of the triangle to create exterior angles.
* TTW write 2 equations showing that the sum of the interior angles of the triangle is 180 and the sum of one of the interior angles and its adjacent exterior angle is also 180.
* Encourage students to use their knowledge of corresponding and alternate angles to create an argument.
* TTW introduce vocab embedded in the lesson through exposure to use in context.
* TTW use the equation from the teachers’ resources to create an argument.
* TTW guide a discussion to solidify the concept that exterior angles are equal to the sum of the measures of the two remote interior angles.
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| **Differentiated Tasks**(Activities based on students’ needs and learning styles, IEP modifications) | TTW guide students through several examples and gradually release them to work independently.Below Expectation:TTW provide support as needed as students work on assignment.At expectation:TSW work independently on assignment and participate in verbal discussion.Above expectation:TSW create additional examples and complete a written explanation proving congruence. | TTW guide students through several examples and gradually release them to work independently.Below Expectation:TTW provide support as needed as students work on assignment.At expectation:TSW work independently on assignment and participate in verbal discussion.Above expectation:TSW create additional examples and complete a written explanation proving congruence. | TTW guide students through several examples and gradually release them to work independently. Below Expectation:TTW provide support as needed as students work on assignment.At expectation:TSW work independently on assignment and participate in verbal discussion.Above expectation:TSW create additional examples and complete a written explanation proving congruence.ntly. |  |  |
| **Assessment** (Aligned with the Lesson ObjectiveFormative / SummativePerformance-Based/RubricFormal / Informal) | **Formative:**Problem set/exit ticket | **Formative:**Problem set/exit ticket | **Formative:**Problem set/exit ticket | **Summative:****End of Module Assessment** |  |
| **Closure**(Reflection / Wrap-UpSummarizing, Reminding, Reflecting, Restating, Connecting) | Lesson summary:**Angles that are on the same side of the transversal in corresponding positions (above each of** $L\_{1}$**and** $L\_{2}$ **or below each of** $L\_{1}$ **and** $L\_{2}$**) are called *corresponding angles*. For example,** ∠2 **and** ∠4 **are corresponding angles.****When angles are on opposite sides of the transversal and between (inside) the lines** $L\_{1}$ **and** $L\_{2}$**, they are called *alternate interior angles*. For example,** ∠3 **and** ∠7 **are alternate interior angles.****When angles are on opposite sides of the transversal and outside of the parallel lines (above** $L\_{1}$ **and below**$L\_{2}$**), they are called *alternate exterior angles*. For example,** ∠1 **and** ∠5 **are alternate exterior angles.****When parallel lines are cut by a transversal, any corresponding angles, any alternate interior angles, and any alternate exterior angles are equal in measure. If the lines are not parallel, then the angles are not equal in measure.**The student will complete an exit ticket at the beginning of the next class period as a bellringer. | Lesson Summary:**All triangles have a sum of measures of the interior angles equal to** 180°**.****The proof that a triangle has a sum of measures of the interior angles equal to** 180° **is dependent upon the knowledge of straight angles and angle relationships of parallel lines cut by a transversal.**The student will complete an exit ticket at the beginning of the next class period as a bellringer. | Lesson Summary:* We learned another proof as to why the sum of the measures of the interior angles of a triangle are equal to  180° with respect to a triangle being exactly half of a rectangle.
* We learned the definitions of exterior angles and remote interior angles.
* The sum of the measures of the remote interior angles of a triangle is equal to the measure of the related exterior angle.

The student will complete an exit ticket at the beginning of the next class period as a bellringer. |  |  |
| **Resources/Materials**(Aligned with the Lesson ObjectiveRigorous & Relevant) | Eureka Math, Module 2, Lessons 12Parent Tip Sheets**Additional Resource(s)**[**CCSS Flip Book with Examples of each Standard**](http://www.azed.gov/azccrs/files/2013/11/high-school-ccss-flip-book-usd-259-2012.pdf) | Eureka Math, Module 2, Lesson 13Parent Tip Sheets**Additional Resource(s)**[**CCSS Flip Book with Examples of each Standard**](http://www.azed.gov/azccrs/files/2013/11/high-school-ccss-flip-book-usd-259-2012.pdf) | Eureka Math, Module 2, Lesson 14Parent Tip Sheets**Additional Resource(s)**[**CCSS Flip Book with Examples of each Standard**](http://www.azed.gov/azccrs/files/2013/11/high-school-ccss-flip-book-usd-259-2012.pdf) | Eureka Math, Module 2Parent Tip Sheets**Additional Resource(s)**[**CCSS Flip Book with Examples of each Standard**](http://www.azed.gov/azccrs/files/2013/11/high-school-ccss-flip-book-usd-259-2012.pdf) | Eureka Math, Module 2, Lesson 12Parent Tip Sheets**Additional Resource(s)**[**CCSS Flip Book with Examples of each Standard**](http://www.azed.gov/azccrs/files/2013/11/high-school-ccss-flip-book-usd-259-2012.pdf) |