Send as an attachment via email to [adlerml@scsk12.org](mailto: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: 11-15** | **Date: 11-16** | **Date: 11-16** | **Date: 11-17** | **Date: 11-18** |
| **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 rations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them. | | | | |
| **Objective**  (Clear, Specific, and Measurable, student-friendly) | * Students learn that sequences of rotations preserve lengths of segments as well as degrees of measures of angles. ƒ * Students describe a sequence of rigid motions that would map a triangle back to its original position after being rotated around two different centers. | Students describe a sequence of rigid motions that maps one figure onto another | Students perform sequences of rigid motions to map a variety of figures onto another figure. | * Students know the definition of congruence and related notation, that is,. * Students know that to prove two figures are congruent, there must be a sequence of rigid motions that maps one figure onto the other.  * Students know that the basic properties of congruence are similar to the properties for all three rigid motions (translations, rotations, and reflections). | * 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. ƒ * 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. ƒ * Students present informal arguments to draw conclusions about angles formed when parallel lines are cut by a transversal. |
| **Connections to Prior Knowledge** | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills. | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills. | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills. | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills. | Checks for Understanding each day will make connections to prior knowledge by providing concentrated practice of previous learned skills. |
| **Guiding Questions**  (Motivator / Hook  An Essential Question encourages students to put forth more effort when faced with complex, open-ended, challenging, meaningful and authentic questions.) | Does the order in which you rotate a figure around different centers have an impact on the final location of the figure’s image? | What sequence of rigid motions will map a given figure onto another figure? | What sequence of rigid motions will map a given figure onto another figure? | Why move things around? | Why are vertical angles equal in measure? |

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| **Instructional Strategies**  (Step-By-Step Procedures – Sequence  Discover / Explain – Direct Instruction  Modeling Expectations – “I Do”  Questioning / Encourages Higher Order Thinking  Grouping Strategies  Differentiated Instructional Strategies to Provide Intervention & Extension, **Literacy Task**) | Eureka Math, Module 2, Lesson 9  Exploratory Challenge:  Students will perform a series of rotations and answer questions to guide their understanding of the outcomes and relationships formed when performing such rotations. | Eureka Math, Module 2, Lesson 10A  TTW model Example 1 using think aloud strategies and asking strategic questions to guide students to discover the effects of a series of transformations.  Video Presentation:  <http://youtu.be/O2XPy3ZLU7YE>  Students will complete Exercises 1-5 independently, but with discussion after each problem. | Eureka Math Module 2, Lesson 10B  TTW model various examples of sequences of rigid motions, asking strategic questions to guide students to make connections of all content from previous lessons.  TSW practice a variety of sequences. | Eureka Math  Module 2, Lesson 11  TTW provide Example 1 as the Connection to Prior Knowledge during the bellringer. TTW open the lesson by discussing answers to the bellringer questions.  TTW model Example 2 and ask strategic questions to guide students to understand that if there is a sequence of rigid motions to map figure R onto R’, there is a series of inverse rigid motions to map R’ back to R. Therefore, we can prove congruence of each figure to the other.  TTW guide students to complete Exercise 1a, then students will work in pairs to complete 1b and 1c.  After students have completed Exercise 1, TTW guide a discussion to solidify understanding of congruence. TTW call on a pair of students who completed Exercise 2 to explain to class. | Eureka Math,  Module 2, Lesson 12  TTW set up the Exploratory Challenge and allow students 7 minutes to complete it.  TTW guide a discussion about students’ observations.  TTW guide students to recall what they previously learned about vertical angles and ask how that information applies to this example.  TTW set up the second Exploratory Challenge and allow students to work in pairs to complete it.  TTW guide a discussion to lead students to see that a special set of circumstances exists when parallel lines are involved.  TTW develop the vocabulary:  Transversal  Alternate angles  Interior angles  Corresponding angles  After discussing vocabulary, students will complete parts a, b, c. |
| **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. | TTW guide students through several examples and gradually release them to work independently. | TTW guide students through several examples and gradually release them to work independently. | Below Expectation:  TTW work with students to complete parts b and c.  At Expectation:  Pairs of students will work independently to complete parts b and c.  Enrichment:  Complete Exercise 2 | Below Expectation:  TTW work with students to complete parts a, b, and c.  At Expectation:  Students will work independently to complete parts a, b and c.  Enrichment:  Given a diagram of parallel lines with a transversal and some measurements of angles labeled, TSW label the remaining angle measurements. |
| **Assessment**  (Aligned with the Lesson Objective  Formative / Summative  Performance-Based/Rubric  Formal / Informal) | **Formative:**  Problem set/exit ticket | **Formative:**  Problem set/exit ticket | **Summative:**  Mid-Module Assessment | **Formative:**  Problem Set/Exit TIcket | **Formative:**  Problem Set/Exit TIcket |
| **Closure**  (Reflection / Wrap-Up  Summarizing, Reminding, Reflecting, Restating, Connecting) | Lesson Summary:   * Sequences of rotations have the same properties as a single rotation: * A sequence of rotations preserves degrees of measures of angles. * A sequence of rotations preserves lengths of segments. ƒ * The order in which a sequence of rotations around different centers is performed matters with respect to the final location of the image of the figure that is rotated. ƒ * The order in which a sequence of rotations around the same center is performed does not matter. * The image of the figure will be in the same location.   The student will complete an exit ticket at the beginning of the next class period as a bellringer. | Lesson Summary:  Summarize, or have students summarize, the lesson and what they know of rigid motions to this point: ƒ  We can now describe, using precise language, how to sequence rigid motions so that one figure maps onto another.  The student will complete an exit ticket at the beginning of the next class period as a bellringer. |  | Lesson Summary:  Given that sequences enjoy the same basic properties of basic rigid motions, we can state three basic properties of congruences:  (Congruence 1) A congruence maps a line to a line, a ray to a ray, a segment to a segment, and an angle to an angle.  (Congruence 2) A congruence preserves lengths of segments.  (Congruence 3) A congruence preserves measures of angles.  The notation used for congruence is  . | Lesson Summary:   * When a pair of parallel lines are cut by a transversal, then any corresponding angles, any alternate interior angles, and any alternate exterior angles are equal in measure.  * The reason that specific pairs of angles are equal in measure is because of the properties we learned about the basic rigid motions, specifically that they are angle-preserving. ƒ * When a pair of nonparallel lines are cut by a transversal, any corresponding angles, any alternate interior angles, and any alternate exterior angles are not equal in measure. |
| **Resources/Materials**  (Aligned with the Lesson Objective  Rigorous & Relevant)  **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, Lessons 7-10  Parent 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, Lessons 7-10  Parent 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, Lessons 7-10  Parent 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 11  Parent 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 12  Parent 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) |