CMS Lesson Plan

Teacher: McQueen Lesson Date: Week of December 7

Subject: 8th Grade Math

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| **GSE Assessment Limits/Standards:** **MGSE8.G.1** Verify experimentally the congruence properties of rotations, reflections, and translations: lines are taken to lines and line segments to line segments of the same length; angles are taken to angles of the same measure; parallel lines are taken to parallel lines. **MGSE8.G.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. **MGSE8.G.3** Describe the effect of dilations, translations, rotations and reflections on two- dimensional figures using coordinates. **MGSE8.G.4** Understand that a two- dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two- dimensional figures, describe a sequence that exhibits the similarity between them.  **MGSE8.G.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. | **Tuesday** |
| **Lesson Objective/Learning Intention:** Determine how to rotate an image by180, 90, and 270 degrees about the origin clockwise and counter clockwise? |

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| **TIME** | **INSTRUCTIONAL SEQUENCE** | **FORMATIVE ASSESSMENT** |
|  |  |  Note: A variety of formative assessments should be used at key points throughout the lesson. |
| 10 min | **Get started/Drill/Do Now:** Review Reflections, Translations sequence |  |
| 5 Min | **Engage/Motivation:**  Video <https://learnzillion.com/lesson_plans/5758> Demonstration of how a 90 degree angle look with their arms, demonstrate 180 and 270… Students can also demonstrate with their arms counter clockwise and clockwise… |  |
| 15 min | **Whole Group Instruction:** Students will take brief Cornell notes on Rotations and Dilations  |  |
|  min | **Group Practice/Small Group Instruction:**  |  |
| 20 min | **Independent Practice**: Students will practice problems on rotations throughout the daily lesson. Students will work on various problems on rotations to check for understanding.  |  |
|  min | **Evaluate Understanding/Assessment:** *(How will I know if students have achieved today’s objective?)*  |  |
| 5 min | **Closing Activities/Summary/DLIQ:** DLIQ in their math notebooks  |  |
|  | **Enrichment/Extension/Re-teaching/Accommodations:** *(How will my lesson satisfy the needs of all learners?)* |  |

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| **Resources/Instructional Materials Needed:** *Video* [*https://learnzillion.com/lesson\_plans/5758*](https://learnzillion.com/lesson_plans/5758) |
| **Notes:** |

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| **Structure** | **Instructional Strategies Used- Please highlight, bold, or underline** |
| Whole Group | -Anticipatory guides/sets -Book/author talks -Cornell Notes-Close Reading -Questioning the Author (QtA) -Question-Answer-Relationships (QAR)-Text annotation -Think aloud -Think/Pair/Share |
| Guided Practice/Small group | -Anticipatory guides/sets -Book/author talks -Cornell Notes-Close Reading -Literature Circles -Questioning the Author (QtA)-Question-Answer-Relationships (QAR) -Reading conferences -Reciprocal teaching-Strategy groups -Text annotation -Think aloud-Think/Pair/Share -Writing Conferences |
| Independent Practice | -Anticipatory guides/sets -Book/author talks -Cornell Notes-Close Reading -Literature Circles -Questioning the Author (QtA)-Question-Answer-Relationships (QAR) -Reading conferences -Reciprocal teaching-Strategy groups -Text annotation -Think aloud-Think/Pair/Share -Writing Conferences |

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| **GSE Assessment Limits/Standards:** **MGSE8.G.1** Verify experimentally the congruence properties of rotations, reflections, and translations: lines are taken to lines and line segments to line segments of the same length; angles are taken to angles of the same measure; parallel lines are taken to parallel lines. **MGSE8.G.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. **MGSE8.G.3** Describe the effect of dilations, translations, rotations and reflections on two- dimensional figures using coordinates. **MGSE8.G.4** Understand that a two- dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two- dimensional figures, describe a sequence that exhibits the similarity between them.  **MGSE8.G.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. | **Thursday** |
| **Lesson Objective/Learning Intention:** Determine how to rotate an image by 90,180, and 270 degrees about a fixed point, clockwise and counterclockwise? |  |

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| **TIME** | **INSTRUCTIONAL SEQUENCE** | **FORMATIVE ASSESSMENT** |
|  |  |  Note: A variety of formative assessments should be used at key points throughout the lesson. |
| 10 min | **Get started/Drill/Do Now:** (What meaningful activity will students complete as soon as they enter the classroom?)2 Rotation problems (about the origin) |  |
| 5 min | **Engage/Motivation:** Quick review of clockwise counterclockwise, and degree measurements (using arms) |  |
| 40 min | **Whole Group Instruction:** Students will take Cornell notes on how to rotate and image about a point. Independent practice will be incorporated during the lesson on this portion of rotations (30 minutes). Students will then begin sequence of transformations practice for translations, reflections, and rotations. |  |
|  min | **Group Practice/Small Group Instruction:** (teacher-facilitated group discussion, student or teacher-led collaboration, student conferencing, re-teaching or intervention, writing process) |  |
|  min | **Independent Practice**: (individual practice, discussion, writing process.)  |  |
|  min | **Evaluate Understanding/Assessment:** (How will I know if students have achieved today’s objective?)  |  |
|  15 min | **Closing Activities/Summary/DLIQ:** Students will have a TOD reviewing a sequence of transformation as well as complete their DLIQ in their notebooks. |  |
|  | **Enrichment/Extension/Re-teaching/Accommodations:** (How will my lesson satisfy the needs of all learners?) |  |

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| **Resources/Instructional Materials Needed:** (What do I need in order to teach the lesson?) |
| **Notes:** |

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| **Structure** | **Instructional Strategies Used- Please highlight, bold, or underline** |
| Whole Group | -Anticipatory guides/sets -Book/author talks -Cornell Notes-Close Reading -Questioning the Author (QtA) -Question-Answer-Relationships (QAR)-Text annotation -Think aloud -Think/Pair/Share |
| Guided Practice/Small group | -Anticipatory guides/sets -Book/author talks -Cornell Notes-Close Reading -Literature Circles -Questioning the Author (QtA)-Question-Answer-Relationships (QAR) -Reading conferences -Reciprocal teaching-Strategy groups -Text annotation -Think aloud-Think/Pair/Share -Writing Conferences |
| Independent Practice | -Anticipatory guides/sets -Book/author talks -Cornell Notes-Close Reading -Literature Circles -Questioning the Author (QtA)-Question-Answer-Relationships (QAR) -Reading conferences -Reciprocal teaching-Strategy groups -Text annotation -Think aloud-Think/Pair/Share -Writing Conferences |

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| **GSE Assessment Limits/Standards:** **MGSE8.G.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. **MGSE8.G.3** Describe the effect of dilations, translations, rotations and reflections on two- dimensional figures using coordinates. **MGSE8.G.4** Understand that a two- dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two- dimensional figures, describe a sequence that exhibits the similarity between them.  | **Friday** |
| **Lesson Objective/Learning Intention:**Determine how to dilate a figure within the coordinate plane.  |

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| **TIME** | **INSTRUCTIONAL SEQUENCE** | **FORMATIVE ASSESSMENT** |
|  |  |  Note: A variety of formative assessments should be used at key points throughout the lesson. |
| 10 min | **Get started/Drill/Do Now:** 1. Reflection over a line (i.e. y = 5)
2. Translation using translation notation
3. Pythagorean Theorem word problem
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| 10 min | **Engage/Motivation:** What are real world examples of dilations? Students will brainstorm and provide various examples of dilations. |  |
|  40 min | **Whole Group Instruction:** Students will take brief Cornell notes on dilations. As a class we will use the I do, we do, you all do, you do method. Independent practice will be incorporated during the lesson on the lesson of dilations (30 minutes). Students will then continue sequence of transformations practice for translations, reflections, and rotations. |  |
| 10 min | **Group Practice/Small Group Instruction:** Students will work in small groups to practice select problems to ensure understanding with peers. Students will use the think pair share method to solving and analyzing problems.  |  |
|  min | **Independent Practice**: (individual practice, discussion, writing process.)  |  |
| 10 min | **Evaluate Understanding/Assessment:** Ticket Out the Door on dilations |  |
| 5 min | **Closing Activities/Summary/DLIQ:** Students will write their DLIQ in their math notebooks. |  |
|  | **Enrichment/Extension/Re-teaching/Accommodations:** *(How will my lesson satisfy the needs of all learners?)* |  |

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| **Resources/Instructional Materials Needed:** *Powerpoint presentation, practice problems from the textbook* |
| **Notes:** |

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| Guided Practice/Small group | -Anticipatory guides/sets -Book/author talks -Cornell Notes-Close Reading -Literature Circles -Questioning the Author (QtA)-Question-Answer-Relationships (QAR) -Reading conferences -Reciprocal teaching-Strategy groups -Text annotation -Think aloud-Think/Pair/Share -Writing Conferences |
| Independent Practice | -Anticipatory guides/sets -Book/author talks -Cornell Notes-Close Reading -Literature Circles -Questioning the Author (QtA)-Question-Answer-Relationships (QAR) -Reading conferences -Reciprocal teaching-Strategy groups -Text annotation -Think aloud-Think/Pair/Share -Writing Conferences |