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***MISSION***

***The Faculty and staff of Chadwick R-1 Schools in partnership with parents and the community, will establish high standards of learning and high expectations for achievement while providing comprehensive guidance for success****.*

*Subject: Geometry*

*Grade Level: 9-12*

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| ***August/September/October:***  Similarity, Proof & Geometry ***10 Weeks*** |

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| **ESSENTIAL MEASURABLE LEARNING OBJECTIVES** | **CROSSWALK TO STANDARDS** | | | | |
| **GLEs/CLEs** | **PS**  **(Standards of Mathematical Practice)** | **CCSS** | **MATH** | **DOK**  **(per GLE/CLE)** |
| 1. **Use transformations to show similarity in triangles.** | **N.1.B.GE**  **N.2.D.GE**  **N.3.D.GE** | **3.3**  **1.10**  **3.2** | **G-SRT.1**  **G-SRT.2**  **G-SRT.3** | **MP5**  **MP1**  **MP1** | **3**  **2**  **3** |
| 1. **Prove theorems involving similarity such as Triangle Proportionality, Side-Side-Side Similarity, Side-Angle-Side Similarity, and Triangle Angle Bisector Theorems.** | **N.3.E.GE** | **3.2** | **G-SRT.4**  **G-SRT.5** | **MP1** | **2** |
| 1. **Use the Pythagorean Theorem and its converse, Special Right Triangles and Geometric Mean proportions to solve right triangle problems.** | **A.3.A.GE** | **1.6** | **G-SRT.6**  **G-SRT.8** | **MP4** | **2** |
| 1. **Use sine, cosine, and tangent to solve right triangle problems and real-life problems.** | **A.3.A.GE**  **G.1.A.GE**  **G.4.B.GE** | **1.6**  **3.5**  **3.3** | **G-SRT.7**  **G-MG.1**  **G-MG.2**  **G-MG.3** | **MP4**  **MP2**  **MP2** | **2**  **3**  **3** |
| 1. **Use the Law of Sines and Law of Cosines to solve triangles. (+) \*(+) denotes an extension topic** | **M.2.B.GE** | **3.1** | **G-SRT.9**  **G-SRT.10**  **G-SRT.11** | **MP2** | **2** |

Multiple Assessments given during the unit.

Unit Assessment given at end of unit.

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| ***November: Extending to Three Dimensions 4 Weeks*** |

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| **ESSENTIAL MEASURABLE LEARNING OBJECTIVES** | **CROSSWALK TO STANDARDS** | | | | |
| **GLEs/CLEs** | **PS** | **CCSS** | **MATH** | **DOK**  **(per GLE/CLE)** |
| 1. **Explain area and volume formulas.** | **N.1.B.GE**  **N.2.D.GE**  **M.2.C.GE** | **3.3**  **1.10**  **3.1** | **G-GMD.1**  **G-GMD.1**  **G-GMD.1** | **MP5**  **MP1**  **MP2** | **3**  **2**  **2** |
| 1. **Use volume formulas to solve problems.** | **N.2.D.GE N.3.E.GE**  **A.2.B.GE** | **1.10**  **3.2**  **3.2** | **G-GMD.1 G-GMD.3**  **G-GMD.3** | **MP1**  **MP1**  **MP4** | **2**  **2**  **2** |
| 1. **Identify the relationship between two-dimensional and three-dimensional objects.** | **N.1.B.GE** | **3.3** | **G-GMD.4** | **MP5** | **3** |
| 1. **Apply geometric concepts in modeling situations.** | **N.1.B.GE**  **G.4.A.GE** | **3.3**  **3.3** | **G-MG.1**  **G-MG.1** | **MP5**  **MP2** | **3**  **3** |

Multiple Assessments given during the unit.

Unit Assessment given at end of unit.

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| ***December:***  1st Semester Completion ***2 Weeks*** |

These two weeks are used to complete any objectives that have not been covered and to prepare for the semester finals.

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| **ESSENTIAL MEASURABLE LEARNING OBJECTIVES** | **CROSSWALK TO STANDARDS** | | | | |
| **GLEs/CLEs** | **PS** | **CCSS** | **MATH** | **DOK**  **(per GLE/CLE)** |
| 1. **Students will use coordinates to prove simple geometric theorems algebraically including slope criteria for parallel and perpendicular lines.** | **G.1.A.GE**  **A.4.A.GE** | **3.5**  **1.6** | **G-GPE.4**  **G-GPE.5** | **MP1**  **MP3** | **3**  **3** |
| 1. **Students will use ratios to find the point on a given segment that divides it into a given ratio.** | **N.3.E.GE** | **3.2** | **G-GPE.6** | **MP1**  **MP2** | **2** |
| 1. **Students will use coordinates to compute perimeter and area.** | **G.2.A.GE** | **3.3** | **G-GPE.7** | **MP1** | **3** |
| 1. **Students will find the equations of parabolas given the focus and directrix.** | **G.2.A.GE** | **3.3** | **G-GPE.2** | **MP1** | **3** |

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| ***January/February: Coordinate Geometry 7 Weeks*** |



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| ***March: Probability 3 Weeks*** |

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| **ESSENTIAL MEASURABLE LEARNING OBJECTIVES** | **CROSSWALK TO STANDARDS** | | | | |
| **GLEs/CLEs** | **PS**  **(Standards of Mathematical Practice)** | **CCSS** | **MATH** | **DOK**  **(per GLE/CLE)** |
| **Objective 1:** Understand independent and conditional probability and use them to interpret data | N.1.B.GE  N.2.D.GE  G.4.A.GE  D.4.B.I2 | 1.2  1.6  2.7  3.1  3.5  3.6  4.1 | S-CP.1  S-CP.2  S-CP.3  S-CP.6  S-CP.4  S-CP.7 | MP1  MP2  MP3  MP4  MP5  MP6  MP7  MP8 | 1  2 |
| **Objective 2: Apply the rules of probability to compute probabilities of events using geometric models (Linear, area &/or coordinate).** | N.1.B.GE  N.2.D.GE  G.4.A.GE  D.4.B.I2 | 1.2  1.6  2.7  3.1  3.5  3.6  4.1 | S-CP.1  S-CP.2  S-CP.3  S-CP.4  S-CP.7 | MP1  MP2  MP3  MP4  MP5  MP6  MP7  MP8 | 1  2 |

Multiple Assessments given during the unit.

Unit Assessment given at end of unit.

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| ***April: Circles 4 Weeks*** |

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| **ESSENTIAL MEASURABLE LEARNING OBJECTIVES**  **.** | **CROSSWALK TO STANDARDS** | | | | |
| **GLEs/CLEs** | **PS**  **(Standards of Mathematical Practice)** | **CCSS** | **MATH** | **DOK**  **(per GLE/CLE)** |
| 1. Students will apply knowledge of arcs, inscribed and central angles of circles to calculate arc measures, arc lengths or area of sectors. | N.1.B.GE  N.2.D.GE  N.3.D.GE  G.1.A.GE  M.2.C.GE | 1.4  1.6  2.7  3.4  3.5  3.7 | G-C.2  G-C.5 | **MP1**  **MP2**  **MP4** | 1  2 |
| 2. Students will apply knowledge of relationships between secants, tangents and chord to angle / arc measures of a circle. | N.1.B.GE  N.2.D.GE  N.3.D.GE  G.1.A.GE  M.2.C.GE | 1.4  1.6  2.7  3.4  3.5  3.7 | G-C.2  G-C.3  G-GPE.4 | MP1  MP2  MP3  MP4  MP6 | 1  2 |
| 3. Students will apply knowledge of the equations of a circle. | N.1.B.GE  N.2.D.GE  N.3.D.GE  G.1.A.GE  M.2.C.GE  G.2.A.GE  G.3.A.GE  G.4.B.GE | 1.4  1.6  2.7  3.4  3.5  3.7 | G-C.2  G-C.3  G-GPE.4  G-GPE.1 | MP1  MP2  MP3  MP4  MP6 | 1  2 |

Multiple Assessments given during the unit.

Unit Assessment given at end of unit.

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| ***May:***  2nd Semester Completion ***2 Weeks*** |

These weeks are used to complete any objectives that have not been covered and to prepare for the semester finals.