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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.GEN.2.D.GEG.4.A.GED.4.B.I2 | 1.21.62.73.13.53.64.1 | S-CP.1S-CP.2S-CP.3S-CP.6S-CP.4S-CP.7 | MP1MP2MP3MP4MP5MP6MP7MP8 | 12 |
| **Objective 2: Apply the rules of probability to compute probabilities of events using geometric models (Linear, area &/or coordinate).** | N.1.B.GEN.2.D.GEG.4.A.GED.4.B.I2 | 1.21.62.73.13.53.64.1 | S-CP.1S-CP.2S-CP.3S-CP.4S-CP.7 | MP1MP2MP3MP4MP5MP6MP7MP8 | 12 |

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.GEN.2.D.GEN.3.D.GEG.1.A.GEM.2.C.GE | 1.41.62.73.43.53.7 | G-C.2G-C.5 | **MP1****MP2****MP4** | 12 |
| 2. Students will apply knowledge of relationships between secants, tangents and chord to angle / arc measures of a circle. | N.1.B.GEN.2.D.GEN.3.D.GEG.1.A.GEM.2.C.GE | 1.41.62.73.43.53.7 | G-C.2G-C.3G-GPE.4 | MP1MP2MP3MP4MP6 | 12 |
| 3. Students will apply knowledge of the equations of a circle. | N.1.B.GEN.2.D.GEN.3.D.GEG.1.A.GEM.2.C.GEG.2.A.GEG.3.A.GEG.4.B.GE | 1.41.62.73.43.53.7 | G-C.2G-C.3G-GPE.4G-GPE.1 | MP1MP2MP3MP4MP6 | 12 |

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.