CHILLICOTHE
HIGH SCHOOL

Geometry Extended Standards Syllabus
CHS Special Education Department

Contact Information: Parents may contact me by phone, email, or visiting the school.
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CCSD Vision Statement: The Chillicothe City School District will provide tomorrow's leaders with a high quality education by developing high expectations and positive personal relationships among students, staff, and community members.

CCSD Mission Statement: The Chillicothe City School District empowers students to learn, to lead, and to serve.

Course Description and Prerequisite(s) from Course Handbook:
Geometry - 262
State Course #: 111200
Prerequisite: Algebra I
Required Option — Grade: 9-10
Graded Conventionally — Credit: 1
Course Description:

A study of two and three-dimensional geometry including representing problem situations using geometric models, deductive reasoning, and geometry from an algebraic perspective. The fundamental purpose of the course in Geometry is to formalize and extend students' geometric experiences from the middle grades. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Close attention should be paid to the introductory content for the Geometry conceptual category found in the high school CCSS. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

Learning Targets: Defined below for clarity are the Unit Titles, Big Ideas of every Unit taught during this course, and the Essential Questions to be answered to better understand the Big Ideas. A student's ability to grasp and answer the Essential Questions will define whether or not he or she adequately learns and can apply the skills found in Big Ideas. This will ultimately define whether or not a student scores well on assessments administered for this course.

- **1st Quarter**
  - **Unit I Title: Geometry Basics and Congruence**
    - **Big Idea #1:** I can identify point, line, line segment, angles, and perpendicular and parallel lines.
      - *Essential Question #1: Can I identify a point, line, and line segment?*
      - *Essential Question #2: Can I identify right, acute, obtuse, and straight angles, and put them in order by size?*
      - *Essential Question #3: Can I identify parallel and perpendicular lines?*
    - **Big Idea #2:** I can identify transformations.
      - *Essential Question #1: Can I identify shapes that have been translated (slid)?*
      - *Essential Question #2: Can I identify shapes that have been reflected (flipped)?*
      - *Essential Question #3: Can I identify shapes that have been rotated (turned)?*
      - *Essential Question #4: Can I, when given a geometric shape and told to rotate, reflect, or translate the figure, draw the transformed figure?*
    - **Big Idea #3:** I can identify figures that have line symmetry?
      - *Essential Question #1: Can I identify figures that have a line of symmetry?*
      - *Essential Question #2: Can I identify figures that have rotational symmetry?*
  - **Unit II Title: Proving Triangle Congruence**
    - **Big Idea #1:** I can prove that two triangles are congruent.
      - *Essential Question #1: Can I determine whether two triangles are congruent using SSS?*
      - *Essential Question #2: Can I determine whether two triangles are congruent using SAS?*
      - *Essential Question #3: Can I determine whether two triangles are congruent using ASA?*
- **2nd Quarter**
  - **Unit III Title: Proving Geometric Theorems**
    - **Big Idea #1:** I can identify various types of angles.
      - *Essential Question #1: Can I identify a pair of vertical, complementary, supplementary, corresponding, alternate interior, or alternate exterior angles?*
      - *Essential Question #2: Can I, when given a pair of angles and a missing angle measurement, find the missing angle measurement?*
    - **Big Idea #2:** I can bisect a line and construct a right angle.
      - *Essential Question #1: Can I bisect a line using a ruler or compass and label the midpoint?*
      - *Essential Question #2: Can I create a pair of perpendicular lines using a ruler or compass and mark the right angle?*

        - **Big Idea #3:** I can identify congruent sides and angles of triangles and parallelograms.
            - *Essential Question #1: Can I identify right, equilateral, and isosceles triangles?*
            - *Essential Question #2: Can I identify congruent sides of triangles and parallelograms?*
            - *Essential Question #3: Can I identify congruent angles of triangles and parallelograms?*
            - *Essential Question #4: Can I sort two-dimensional shapes based on their properties?*
    - **Unit IV Title: Geometric Constructions and Similarity**
        - **Big Idea #1:** I can make geometric constructions.
            - *Essential Question #1: Can I construct a line segment given its endpoints?*
            - *Essential Question #2: Can I construct a circle given a center and a radius?*
            - *Essential Question #3: Can I construct a right triangle on a coordinate plane and identify the parts?*
        - **Big Idea #2:** I can identify similar figures
            - *Essential Question #1: Can I identify which shape is bigger, smaller, or the same size as another (dilation)?*
            - *Essential Question #2: Can I identify which shape is similar on a coordinate plane?*
            - *Essential Question #3: Can I describe or select why two figures are or are not similar?*
- **MID-TERM EXAM**

- **3rd Quarter**
    - **Unit V Title: Circles**
        - **Big Idea #1:** I can identify the parts of a circle.
            - *Essential Question #1: Can I identify the parts of a circle: radius, diameter, circumference, chord, and arc?*
            - *Essential Question #2: Can I calculate the diameter when given the radius and the radius when given the diameter?*
            - *Essential Question #3: Can I identify a circle inscribed in a triangle and a circumscribed circle about a triangle?*
        - **Big Idea #2:** I can find arc lengths and areas of sectors of a circle.
            - *Essential Question #1: Can I identify the arc of a circle?*
            - *Essential Question #2: Can I identify the sector of a circle?*
            - *Essential Question #3: Can I identify the central angle of a circle?*
    - **Unit VI Title: Expressing Geometric Properties with Equations**
        - **Big Idea #1:** I can use coordinates to prove simple geometric theorems.
            - *Essential Question #1: Can I identify special triangles, quadrilaterals, and circles on the coordinate plane?*

        - *Essential Question #2: Can I find the perimeter of quadrilaterals drawn on a coordinate plane?*
        - *Essential Question #3:*
    - **Big Idea #2:** I can explain concepts related to the coordinate plane.
        - *Essential Question #1: Can I identify the slope of parallel and perpendicular lines on a coordinate plane.*
        - *Essential Question #2: Can I describe and calculate the relationship between two parallel lines and two perpendicular lines.*
        - *Essential Question #3: Can I find the length of a vertical or horizontal line on a coordinate grid?*
        - *Essential Question #4: Can I find the midpoint of a vertical or horizontal line on a coordinate grid?*
    - **Big Idea #3:** I can find the area and perimeter of shapes on the coordinate plane.
        - *Essential Question #1: Can I find the perimeter of shapes on the coordinate plane?*
        - *Essential Question #2: Can I find the area of shapes on the coordinate grid?*

- **4th Quarter**
    - **Unit VII Title: Geometric Area and Volume**
        - **Big Idea #1:** I can explain area formulas and use them to solve problems.
            - *Essential Question #1: Can I explain what area means?*
            - *Essential Question #2: Can I explain what each variable represents in the area formula?*
            - *Essential Question #3: Can I calculate the area and compare the areas of similar and non-similar two-dimensional objects?*
        - **Big Idea #2:** I can understand that three-dimensional objects have volume.
            - *Essential Question #1: Can I explain what volume means?*
            - *Essential Question #2: Can I explain what each variable represents in the volume formula?*
            - *Essential Question #3: Can I calculate the volume and compare the volumes of similar and non-similar three-dimensional objects?*
        - **Big Idea #3:** I can visualize the relationship between two and three dimensional objects.
            - *Essential Question #1: Can I name common two and three dimensional shapes?*
            - *Essential Question #2: Can I distinguish between objects that do and don't have volume?*
            - *Essential Question #3: Can I identify the faces and cross sections of three dimensional shapes?*
    - **Unit VIII Title: Modeling with Geometry**
        - **Big Idea #1:** I can identify geometric concepts and shapes in the real world.
            - *Essential Question #1: Can I match the shape of real world objects to two dimensional shapes?*

        - *Essential Question #2: Can I match the shape of real world objects to three dimensional shapes?*
    - **Big Idea #2:** I can apply concepts of density based on area and volume in modeling situations.
        - *Essential Question #1: Can I calculate the density of a given situation?*
        - *Essential Question #2: Can I calculate and compare the densities of two datasets in the same modeling situation?*
    - **Big Idea #3:** I can compare the areas or volumes of real world objects.
        - *Essential Question #1: Can I compare the area of real-world objects?*
        - *Essential Question #2: Can I compare the volume of real-world objects?*
- **END OF COURSE EXAM**

Course Materials:

- Google Chromebook
- Earbuds
- Paper
- Pencil

Electronic Resources:

- Google Classroom
- Quizlet
- Kahoot
- Khan Academy
- ALEKS
- IXL

Course Expectations:

- Students **WILL NOT** use cell phones. If caught using the cell phone, the teacher will use the 5 step discipline procedures.
- Students are expected to keep their Chromebook completely closed and earbuds/headphones off their person during instruction.
- Students are expected to have materials every day: Chromebook, paper, notebook, pencil or pen.
- Students will be expected to complete all assignments on time.
- Students will participate in classroom discussion/activities.
- Students will check their individual Progress Book grades regularly.
- No outside food or beverages will be allowed in the classroom.

Grading:

Unit Exams	50%
Assessments (Including: Quizzes, Essays, Labs, and Projects)	30%
Class work/Homework	20%

- Each nine week's grade comprises 20% of a student's final grade.

- The Mid-Term Exam and End of Course Exam each comprise 10% of a student's final grade.

Grading Scale:
The grading scale for Chillicothe High School can be found in the student handbook or online at http://www.chillicothe.k12.oh.us/1/Content2/studenthandboook.

Late Work: Late work will be subject to the Board-adopted policy on assignments that are submitted late (to be reviewed in class).

- Regardless of the absence type (excused, unexcused, OSS, etc.), students are expected to make up work and be held accountable for learning all material they missed.
- Any student who is absent from school will receive one (1) additional day for every day he/she missed to make up his/her work for full credit (100%).
- Any student who exceeds the allotted time to turn in an assignment for full credit may still submit work late for partial credit.
    - Any student who turns in work up to 1 week late must at least be given the opportunity to earn 75% on that assignment.
    - Any student who turns in work between 1 and 2 weeks late must at least be given the opportunity to earn 60% on that assignment.
- The end of the 9 weeks is the cut off point for teachers to accept late work from students for full or partial credit unless the teacher decides to give the student an incomplete for the 9 weeks due to extenuating circumstances.

Performance Based Section: Writing Assignments/Exams/Presentations/Technology
One or more of the End of Unit Exams may be Performance Based. According to the Ohio Department of Education, "Performance Based Assessments (PBA) provides authentic ways for students to demonstrate and apply their understanding of the content and skills within the standards. The performance based assessments will provide formative and summative information to inform instructional decision-making and help students move forward on their trajectory of learning." Some examples of Performance Based Assessments include but are not limited to portfolios, experiments, group projects, demonstrations, essays, and presentations.

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After you have reviewed the preceding packet of information with your parent(s) or guardian(s), please sign this sheet and return it to me so that I can verify you understand what I expect out of each and every one of my students.

Student Name (please print): _____

Student Signature: _____

Parent/Guardian Name (please print): _____

Parent/Guardian Signature: _____

Date: _____