

Geometry CP and Honors Course Compendium

UNITS OF STUDY*

- Unit 1 Constructions and Transformations
- Unit 2 Introduction to Proof through Congruency
- Unit 3 Dilations, Similarity, and Trigonometry
- Unit 4 Quadrilaterals and Coordinate Geometry
- Unit 5 Circles
- Unit 6 Measurement
- Unit 7 Probability

GEOMETRY CP Credits: 5

Prerequisite: Algebra 1 CP Grades: 9, 10, 11, 12

This course is intended 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. Students apply transformations in this course to support a deeper understanding of the geometric concepts. This course is the study of the size, shape, and position of figures in space. It consists of the development of an understanding of mathematical proof, the improvement of the quality of thinking in non-mathematical situations, the introduction of the manner in which algebra and geometry complement each other, and the realization of plane and space relationships. Through the Mathematical Practice Standards students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

GEOMETRY HONORS Credits: 5

Prerequisite: Placement Grade 9 OR Algebra 1 CP with a final average of 91 with teacher recommendation Grade: 9, 10

This course differs from the non-honors course in the scope, pace and level of difficulty. This course is intended 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. Students apply transformations in this course to support a deeper understanding of the geometric concepts. This course is the study of the size, shape, and position of figures in space. It consists of the development of an understanding of mathematical proof, the improvement of the quality of thinking in non-mathematical situations, the introduction of the manner in which algebra and geometry complement each other, and the realization of plane and space relationships. Through the Mathematical Practice Standards students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**See individual units for Pacing Guide, NJSL Standards, Transfer Skills, Enduring Understandings, Essential Questions, Learning Objectives, Key Vocabulary, Skills, Resources, & Assessments*

INTERDISCIPLINARY CONNECTIONS

NJSLS Companion Standards Grades 9-12 (Reading & Writing in Science & Technical Subjects)

RST.9-10.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

RST.9-10.8. Determine if the reasoning and evidence in a text support the author’s claim or a recommendation for solving a scientific or technical problem.

21st Century Life and Careers

CRP1. Act as a responsible and contributing citizen and employee.

CRP2. Apply appropriate academic and technical skills.

CRP4. Communicate clearly and effectively and with reason.

CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.

CRP11. Use technology to enhance productivity.

9.3.ST.5 Demonstrate an understanding of the breadth of career opportunities and means to those opportunities in each of the Science, Technology, Engineering & Mathematics Career Pathways.

9.3.ST.6 Demonstrate technical skills needed in a chosen STEM field.

Technology

8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

A. Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems, and operations.

8.1.12.A.CS2 Select and use applications effectively and productively.

E. Computational Thinking: Programming: Computational thinking builds and enhances problem-solving, allowing students to move beyond using knowledge to creating knowledge.

8.2.12.E.1 Demonstrate an understanding of the problem-solving capacity of computers in our world.

MODIFICATIONS / ACCOMMODATIONS

GENERAL CONSIDERATIONS FOR DIVERSE LEARNERS		
English Language Learners	Students Receiving Special Education Services	Advanced Learners
<ul style="list-style-type: none"> - Personal glossary - Text-to-speech - Extended time - Simplified / verbal instructions - Frequent breaks <p>WIDA Can Do Descriptors for Grade 9-12 WIDA Essential Actions Handbook FABRIC Paradigm Wall Township ESL Grading Protocol</p> <p>Use WIDA Can Do Descriptors in coordination with Student Language Portraits (SLPs).</p>	<ul style="list-style-type: none"> - Small group/One to one - Additional time - Review of directions - Student restates information - Space for movement or breaks - Extra visual and verbal cues and prompts - Preferential seating - Follow a routine/schedule - Rest breaks - Verbal and visual cues regarding directions and staying on task - Checklists - Immediate feedback <p>Students receiving Special Education programming have specific goals and objectives, as well as accommodations and modifications outlined within their Individualized Education Plans (IEP) due to an identified disability and/or diagnosis. In addition to exposure to the general education curriculum, the instruction is differentiated based upon the student's needs. The IEP acts as a supplemental curriculum guide inclusive of instructional strategies that support each learner.</p> <p>Considerations for Special Education Students 6-12 National Center on Universal Design for Learning - About UDL UDL Checklist UDL Key Terms</p>	<ul style="list-style-type: none"> - Use of high level academic vocabulary/texts - Problem-based learning - Pre-assess to condense curriculum - Interest-based research - Authentic problem-solving - Homogeneous grouping opportunities <p>Knowledge and Skill Standards in Gifted Education for All Teachers Pre-K-Grade 12 Gifted Programming Standards Gifted Programming Glossary of Terms</p>
		Students with 504 Plan
		Teachers are responsible for implementing designated services and strategies identified on a student's 504 Plan.
At Risk Learners / Differentiation Strategies		
<ul style="list-style-type: none"> Alternative Assessments Games and Tournaments Group Investigations Learning Contracts Leveled Rubrics Homogeneous Grouping Online Math Practice 	<ul style="list-style-type: none"> Multiple Intelligence Options Project-Based Learning Varied Supplemental Activities Tiered Activities/Assignments Graphic Organizers Choice of Activities Mini-Workshops to Reteach or Extend Think-Pair-Share by readiness Use of Collaboration of Various Activities 	<ul style="list-style-type: none"> Jigsaw Flexible Grouping Goal-Setting with Students Homework Options Open-Ended Activities Varied Product Choices Stations/Centers Work Alone/Together

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