**Geometry Units Outline**

**2024-2025**

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| **Unit 0** | Geometric Constructions |
| **Learning Targets:** | **Learning Target 0A: Make Geometric Constructions (G-CO.D)**  ¨ I can construct perpendicular bisectors and angle bisectors. (Lessons 3, 5)  ¨ I can construct a parallel and perpendicular line through a given point and line. (Lesson 6)  ¨ I can construct equilateral triangles or squares. (Lessons 4, 7)  ¨ I can follow instructions to create a construction. (Lessons 1-8)    **Learning Target 0B: Explain Geometric Constructions (G-CO.D)**  ¨ I can use precise mathematical language to describe a construction. (Lessons 1-9)  ¨ I can identify and explain why parts in a construction are congruent. (Lessons 3-9)  ¨ I can identify and explain why a point is equidistant from two other points. (Lessons 1, 3, 4 5) |
| **Assessment(s) for Evidence** | Unit Quizzes  Unit Tests  Cool Downs  Activities/Teacher Observation |
| **Resources/Links** | Illustrative Mathematics online textbook @ [im.kendallhunt.com](https://im.kendallhunt.com/HS/students/2/index.html)  Teacher Canvas Page  Student Companion Guide linked [here](https://livedmpsk12ia-my.sharepoint.com/:w:/g/personal/kimberly_wermerskirchen_dmschools_org/EX9ydB7VXHFJpQZsX2FJ1xYBpolKxIM32tAf4rJjSfM73Q?e=PGlv65)  How to use a [compass video](https://www.youtube.com/watch?v=G8r3qacVdKw)  How to construct a [perpendicular bisector video](https://www.youtube.com/watch?v=hhjujo8XFkA&list=PLHRatQsym1_gRLx7yYs5-64jBvH238jKj&index=12)  How to construct an [angle bisector video](https://www.youtube.com/watch?v=VYbRcqXQ_W4&list=PLHRatQsym1_gRLx7yYs5-64jBvH238jKj&index=1)  Online video source [Unit 1 Geometry](https://www.youtube.com/watch?v=Rupj6TuOeAY&list=PLxIInkhOzP8FaMP6qzRjcKbaMIMYekA-t)  Online video [review Unit 1](https://youtu.be/A5QxrHkWUt4?si=3J4xXIM1G9pTBHXp) |

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| **Unit 1** | Rigid Transformations |
| **Learning Targets:** | **Learning Target 1A: Describe Rigid Transformations**  **Given a figure and the description of a transformation**,   * I can determine the figure's image after the transformation. (Lessons 10, 13) * I can describe the sequence of transformations necessary to take a figure onto another figure. (Lessons 10, 13, 17) * I can describe a reflection by specifying the line of reflection and noticing reflection symmetry. (Lesson 11, 15) * I can describe a translation by stating the directed line segment. (Lesson 12) * I can describe a rotation by stating the center, direction, and angle of rotation and notice rotational symmetry. (Lesson 14, 15, 16)   **Learning Target 1B: Prove theorems about lines, angles, and triangles.**   * I can label and make conjectures from diagrams. (Lesson 19) * I can use transformations or angle measurements to prove why vertical angles are always congruent and, when lines are parallel, corresponding angles and alternate interior angles are congruent. (Lesson 19, 20) * I can prove the angles in a triangle sum to 180 degrees. (Lesson 21) |
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| **Unit 2** | Congruence |
| **Learning Targets:** | **Learning Target 2A: Use rigid motion to prove figures are congruent (not using measurements such as distances and angle measures, or the coordinate plane). (G.CO.B)**   * I can identify parts that correspond in congruent figures from a visual and from a congruence statement (Lessons 1, 2, 3, 5) * I can write congruence statements (Lessons 1, 2, 3, 5) * I can determine if a series of rigid transformations will map one figure to another. (Lessons 1, 3, 5, 6, 7, 9) * I can explain that if all corresponding sides and angles are congruent, then two triangles are congruent. (Lesson 3)   **Learning Target 2B: Prove Geometric Theorems about triangles and quadrilaterals (not using measurements such as distances and angle measures, or the coordinate plane). (G.CO.B, G.CO.C)**   * I can prove triangles are congruent using Triangle Congruence Theorems (Lessons 4,6,7,9,10) * I can justify the statements I make in a proof using math vocabulary. (All lessons) * I can critique and correct the reasoning in a proof. (Lesson 10, 11, 12, 14, 15)   **Learning Target 2C: Apply Geometric Theorems and Definitions to find missing measurements in figures. (G.CO.B, G.CO.C)**   * I can identify congruent angles and justify my reasoning using mathematical theorems. (for example: vertical angles, parallel lines and a transversal, corresponding parts of congruent triangles, the definition of bisect, and properties of isosceles triangles and parallelograms) (Lesson 2, 6, 7, 8, 9, 12, 13, 14) * I can identify congruent segments and justify my reasoning using mathematical theorems. (for example: corresponding parts of congruent triangles, the definition of bisect, properties of isosceles triangles and parallelograms) (lesson 2, 6, 7, 8, 9, 12, 13, 14) * I can determine the measurement of angles and justify my reasoning using mathematical theorems. (for example: parallel lines and a transversal, the definition of a linear pair, properties of parallelograms, and the triangle-angle sum theorem) (Lessons 2, 6, 7, 8, 9, 12, 13, 14) |
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