



Marietta City Schools
2023–2024 District Unit Planner

Grade 7 Mathematics

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|-------------------|---|-----------------|---|----------------------------|------------|
| Unit title | Unit 4: Making Relevant Connections with Geometry | MYP year | 2 | Unit duration (hrs) | 22.5 hours |
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Mastering Content and Skills through INQUIRY (Establishing the purpose of the Unit): *What will students learn?*

GA DoE Standards

Standards

7.GSR.5 Solve practical problems involving angle measurement, circles, area of circles, surface area of prisms and cylinders, and volume of cylinders and prisms composed of cubes and right prisms.

7.MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.

Concepts/Skills to support mastery of standards

- Measure angles with and without a protractor. (GSR 5.1-5.2)
- Solve multi-step with supplementary, complementary, and vertical angles.(GSR 5.3)
- Derive the formulas for circumference and area of a circle.(GSR 5.4)
- Describe the relationship between pi and radius and diameter.(GSR 5.4)
- Solve real-world problems given the formulas for the area and circumference.(GSR 5.5)
- Solve real-world problems involving surface area of right prisms and cylinders.(GSR 5.6)
- Describe cross-sections from slicing three-dimensional figures. (GSR 5.7)
- Find the volume of geometric figures and explore volume as a measurable attribute of cylinders and right prisms(GSR 5.8)

Vocabulary

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|--------|---------------|----------------------|----------------------|-----------------|-------------------|
| Area | Circumference | Supplementary angles | Complementary angles | Vertical angles | Pi |
| Radius | Diameter | Adjacent angles | Two-dimensional | Volume | Three-dimensional |

| Key concept | Related concept(s) | Global context |
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| Form The shape and underlying structure of an entity or piece of work, including its organization, essential nature and external appearance. | Measurement, Space | Orientation in space and time |
| Statement of inquiry | | |
| We can use formulas to model structures and relationships in the real world. | | |
| Inquiry questions | | |
| <p>Factual</p> <ul style="list-style-type: none"> • What is pi? • What is the relationship between supplementary angles? • What is the relationship between complementary angles? • What is a cross-section? <p>Conceptual</p> <ul style="list-style-type: none"> • How are all circles related? • How are area and circumference of a circle related? • How do relationships between sides and angles help you identify and describe shapes? <p>Debatable</p> <ul style="list-style-type: none"> • Is there a best method for finding surface area? | | |
| MYP Objectives | Assessment Tasks | |
| <i>What specific MYP objectives will be addressed during this unit?</i> | <i>Relationship between summative assessment task(s) and statement of inquiry:</i> | <i>List of common formative and summative assessments.</i> |

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| <p>Criterion A: Knowing and Understanding</p> <p>Criterion C: Communication in Mathematics</p> | | <p><u>Formative Assessment(s):</u></p> <p>Unit 4 CFA</p> <p><u>Summative Assessment(s):</u></p> <p>Unit 4: Geometry</p> <p>MYP: Pizza Task</p> |
| <p>Approaches to learning (ATL)</p> | | |
| <p>Category: Self Management</p> <p>Cluster: Organization, Affective, & Reflection Skills</p> <p>Skill Indicator: Keep an organized and logical system of information files/notebooks.</p> | | |

Learning Experiences

Add additional rows below as needed.

| Objective or Content | Learning Experiences | Personalized Learning and Differentiation |
|--|---|---|
| <p>7.MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.</p> <p>7.GSR.5 Solve practical problems involving angle measurement, circles, area of circles, surface area of prisms and cylinders, and volume of cylinders and prisms composed of cubes and right prisms.</p> <ul style="list-style-type: none">• 7.GSR.5.1 Measure angles in whole non-standard units.• 7.GSR.5.1 Measure angles in whole nonstandard units. • 7.GSR.5.2 Measure angles in whole number degrees using a protractor. | <p>CLE - Which Wedge is Right</p> | <p>In this learning plan, students will use a non-standard measurement for angles and then explore finding the measurement of angles using common-sized wedges.</p> |
| <p>7.MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals.</p> <p>7.GSR.5 Solve practical problems involving angle measurement, circles, area of circles, surface area of prisms and cylinders, and volume of cylinders and prisms composed of cubes and right prisms.</p> <p>7.GSR.5.4 Explore and describe the relationship between pi, radius, diameter, circumference, and area of a circle to derive the formulas for the circumference and area of a circle.</p> <p>7..GSR.5.6 Solve realistic problems involving surface area of right prisms and cylinders.</p> | <p>CLE - Cross sections</p> <p>Cross Sections - teacher</p> <p>Cross Sections - student</p> | <p>In this learning plan, students will determine the dimensions of figures given the area or volume.</p> |

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| <p>7.MP: Display perseverance and patience in problem-solving. Demonstrate skills and strategies needed to succeed in mathematics, including critical thinking, reasoning, and effective collaboration and expression. Seek help and apply feedback. Set and monitor goals. 7.GSR.5 Solve practical problems involving angle measurement, circles, area of circles, surface area of prisms and cylinders, and volume of cylinders and prisms composed of cubes and right prisms. • 7.GSR.5.4 Explore and describe the relationship between pi, radius, diameter, circumference, and area of a circle to derive the formulas for the circumference and area of a circle. • 7.GSR.5.5 Given the formula for the area and circumference of a circle, solve problems that exist in everyday life.</p> | <p>CLE- Deriving Circle Relationships Part 1</p> <p>Deriving Circle Relationship Part 1 - student</p> <p>Deriving Circle Relationships Part 1 - teacher</p> | <p>In this learning plan, students make a connection between the circumference and diameter of circles and derive the formula for the circumference of a circle.</p> |
| Content Resources | | |
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