

GEOMETRY: CONCEPTS & CONNECTIONS



Welcome to the Geometry: Concepts and Connections Course! Our goal is to help you understand the mathematics your child will be learning in this course. This letter will explain the mathematics expectations and supporting resources to support student learning in the course. For additional support and questions, please contact your child's teacher at their school.

In Geometry: Concepts & Connections is the first required course in high school mathematics. The mathematical practice standard, **G.MP**, will allow students to demonstrate skills and strategies needed to succeed in the course, including critical thinking, reasoning, effective collaboration and expression. Students should be able to use the content learned in this course to create a mathematical model to explain real-life phenomena. Students should be able to navigate fluently between mathematical representations that are presented numerically, algebraically, and graphically. Students should also be able to determine, identify, and use appropriate quantities for representing the situation.

MATHEMATICS CONCEPTS

MATHEMATICAL MODELING

Model real-life situations

PATTERNING & ALGEBRAIC REASONING

interpret and operate with polynomials

PROBABILISTIC REASONING

solve problems involving compound events and analyze probability distributions

DATA & STATISTICAL REASONING

examine two-way frequency tables to model categorical data

GEOMETRIC & SPATIAL REASONING

experiment and define rigid transformations

generate valid arguments and prove theorems

define and describe properties of dilations to establish and prove similarity

examine side ratios of similar triangles; explore and understand sine and cosine

explore the concept of radian measure and special right triangles

examine theorems involving circles and derive arc length and area of a sector

develop informal arguments using arguments and Cavalieri's principle; solve problems involving volume



How will your child engage when learning mathematics?

<u>Positive Mathematical Mindsets</u>	<u>Mathematical Practices</u>
<p>Fostering positive mathematical mindsets is essential to support your child's mathematical growth and development.</p>	<p>Mathematical practices are the habits of mind for learners to demonstrate as they are engaging in exploring the mathematics content.</p>
<u>Mathematical Modeling</u>	<u>Statistical Reasoning</u>
<p>Students will be expected to engage in the cycle for Mathematical Modeling in all learning tasks and activities to support student engagement at the highest level.</p>	<p>Students will be expected to engage in the four-part statistical problem-solving process K-12 by asking statistical questions, collecting data, analyzing data, and interpreting the results.</p>

Scan the QR code for more information and access to all links within this document.



Getting to know your child's teacher is important and communication with them throughout the year will support your child's individual growth while learning mathematics. The resource links below are provided to help support learning at home as you engage your child in meaningful work while they are learning mathematics. If at any time you have additional questions or need to request additional support, please reach out to your child's teacher.

GEORGIA'S K-12
MATHEMATICS STANDARDS
2021

STANDARDS
DOCUMENT

Make
Mathematics
Count GA

PARENT VIDEO
SERIES



DIGITAL
LEARNING PLANS

Georgia Numeracy Project
Numeracy Intervention Resource

GEORGIA
NUMERACY PROJECT
TASKS & ACTIVITIES

Richard Woods, Georgia's School Superintendent

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