

2022-2023 Curriculum Map: Geometry

Timeline	Content	Standards and Demonstrators	Activities	I Can...	Resources
Aug. 10 -Aug. 26	Points, Lines and Planes Aug. 11-12	MA-HS-3.1.1 Students will analyze and apply spatial relationships (not using Cartesian coordinates) among points, lines and planes (e.g., betweenness of points, midpoint, segment length, collinear, coplanar, parallel, perpendicular, skew). DOK 2 MA-HS-3.1.2 MA-HS-3.4.1 Students will identify definitions, axioms and theorems, explain the necessity for them and give examples of them.	Practice ACT Test Questions (Daily bell ringers)	...use basic geometry terminology to compare points, lines and planes. ...identify a segment and a ray. ...use the Segment Addition Postulate to solve for an unknown. ...use the midpoint and distance formulas to solve for unknowns. ...identify and compare right, obtuse and acute angles. ...use the Angle Addition Postulate to solve for an unknown. ...determine if a pair of angles are complementary or supplementary. ...identify and label angle pairs and vertical or a linear pair. ...setup and solve equations using the properties of angle pairs.	PowerPoints, additional practice problems from internet
	Segments Aug. 15-17	MA-HS-1.5.2 Students will use equivalence relations (reflexive, symmetric, transitive). MA-HS-3.1.2 Students will use spatial relationships to prove basic theorems.			
	Midpoint, Distance and Slope Aug. 18-19				
	Angles Aug. 22-23 Angle Pairs Aug. 24-25 CHAPTER 1 TEST Aug. 26	MA-HS-3.1.3	Twizzlers and Starburst Activity		
Aug. 29 - Sept. 23	Parallel and Perpendicular Lines Aug. 29-Sept. 2	MA-HS-3.1.1 Students will analyze and apply spatial relationships (not using Cartesian coordinates) among points, lines and planes (e.g., betweenness of points, midpoint, segment length, collinear, coplanar, parallel, perpendicular, skew). DOK 2 MA-HS-3.4.1 Students will identify definitions, axioms and theorems, explain the necessity for them and give examples of them.	Practice ACT Test Questions (daily bellringers)	...identify angle pairs that are congruent or supplementary. ...determine if two lines are parallel. ...find the value of the missing angles. ...find the slope of a line. ...write the equation of a line. ...determine if two lines are perpendicular.	PowerPoints, Internet, additional practice problems.
	Prove Lines Parallel Sept. 6-8		Quiz Fridays		
	Slopes of Lines Sept 12-14		*Electronic devices will be used for		
	Angles in Polygons Sept 15-16	MA-HS-3.1.5	*Electronic devices will be used for		
	Equations of Lines CHAPTER 2 TEST - Sept 23		Letter to the Board: For or against Calculators		
Sept. 26 - Oct. 28	Algebraic Proofs Sept. 26-27		*Electronic devices will be used for CERT's practice	...use properties of mathematics to write an algebraic proof. ...use properties of mathematics to write angle proofs. ...use properties of angles and mathematics to write proofs for angle pairs. ...prove that two lines are parallel.	Additional problems from the internet
	Prove Segments and Angles Sept. 28-30	MA-HS-3.1.3			
	Prove Angle Pairs Sept. 28-30	MA-HS-3.1.3 MA-HS-3.1.4 Students will use angle relationships to prove basic theorems. MA-HS-3.3.1	Quiz Fridays		
	Congruent Triangles Oct. 3-7		*Electronic devices will be used for CERT's practice	...identify if two triangles are congruent using SSS, SAS, ASA, AAS, and HL. ...write a proof to show that two triangles are congruent. ...solve for missing sides and angles if two triangles are congruent.	PowerPoints, additional practice problems from internet
	SSS, SAS, ASA, AAS, HL Oct. 17-21		Practice ACT Test Questions (Daily bellringers)	...identify if a triangle is an isosceles, equilateral, or scalene. ...find missing sides and angles of isosceles and equilateral triangles.	
	Isosceles and Equilateral Triangles Oct. 24-26 CHAPTER 3 TEST - Oct. 28				
Oct. 31 - Dec. 16	Areas of Triangles, Trapezoids, Rhombi, and Parallelograms Oct. 31 - Nov. 4			...find the area of a triangle. ...find the area of a parallelogram. ...find the area of a rhombus. ...find the area of a kite. ...find the area of a trapezoid. ...find the circumference of a circle. ...find the area of a sector.	PowerPoints, additional practice problems from internet
	Circumference, Areas of Circles and Sectors Nov. 9-11	MA-HS-3.1.6 Students will know the definitions and basic properties of a circle and will use them to prove basic theorems and solve problems.	Practice ACT Test Questions (daily bell ringers)		
	Areas of Regular Polygons Nov. 14-16		Quiz Fridays		
	Surface Area of Prisms and Cylinders Nov. 17-22	MA-HS-2.1.1 Students will determine the surface area and volume of right rectangular prisms, pyramids, cylinders, cones and spheres in real-world and mathematical problems. DOK 2 MA-HS-2.1.2 Students will describe how a change in one or more dimensions of a geometric figure affects the perimeter, area and volume of the figure. DOK 3 MA-HS-3.1.11 Students will visualize solids and surfaces in three-dimensional space when given two-dimensional representations (e.g., nets, multiple views) and create two-dimensional representations for the surfaces of three-dimensional objects.	HUMANITIES: Platonics Solids Activity	...find the surface area of a prism. ...find the surface area of a cylinder. ...find the surface area of a pyramid. ...find the surface area of a cone. ...find the surface area of a sphere. ...find the volume of a prism. ...find the volume of a cylinder. ...find the volume of a pyramid. ...find the volume of a cone. ...find the volume of a sphere.	PowerPoints, additional practice problems from internet
	Surface Area of Pyramids and Cones Nov. 28-30		Use formula sheets from test to review		
	Volume of prisms and cylinders Dec. 1-5				
	Volume of Pyramids and Cones Dec. 6-9		Practice ACT Test Questions		
	Surface Area and Volume of Spheres Dec. 12-14 CHAPTER 10 TEST Dec. 16		Quiz Fridays		
Jan. 2 - Jan. 20	Ratios and Proportions Jan. 2-4		Practice ACT Test Questions	...write a ratio to compare two values. ...reduce a ratio to simplest form. ...write a proportion and solve. ...determine if two polygons are similar based on their ratios. ...determine if two triangles are similar using AA, SSS, SAS. ...use the Proportionality Theorem to solve for missing sides.	PowerPoints, additional practice problems from internet
	Similar Polygons Jan. 7-9	MA-HS-3.1.12 MA-HS-3.1.13			
	Similarity - AA, SSS, SAS Jan. 10-16				
	Proportionality Theorem CHAPTER 5 TEST Jan. 17-18 Jan. 20		Quiz Fridays		
Jan. 23 - Jan. 27	Triangle Sum Theorem Jan. 23 - 25			...give the definition of the Triangle Sum Theorem. ...use the Triangle Sum Theorem to find missing angles.	
	Pythagorean Theorem Jan. 26-27	MA-HS-2.1.3 Students will apply definitions and properties of right triangle relationships (right triangle trigonometry and the Pythagorean theorem) to determine length and angle measures to solve real-world and mathematical problems. DOK 3	Practice Test Questions	...label the sides of Special Right Triangles. ...use the properties of Special Right Triangles to find the missing sides.	

