Updated August 2024

Marking Period	Unit Title	Recommended Instructional Days
4	Circumference and Area	10-15

Domain: Geometry

NJSLS Strand:

Key:

Major Cluster

Supporting Cluster

Additional Cluster

G.C.A.1: Prove that all circles are similar.

G.C.A.2: Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.

G.C.A.4 (+): Construct a tangent line from a point outside a given circle to the circle.

G.C.B.5: Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the

Progress Indicator:
Tests ● Quizzes ● Practice problems for homework ● Online textbook ● Worksheets ● Leveled assessments

Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit

Essential Questions:

1. **What type of number is π?**
2. **How do you find Arc Length?**
3. **Explain Radian Measure?**
4. **What does population density mean?**

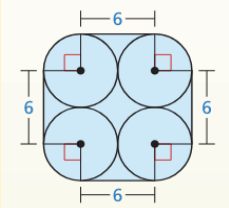
Activity Description:

- **Circumference and Arc Length**
- **Areas and Circles and Sectors**
- **Areas of Polygons**
- **Modeling with Area**

Interdisciplinary Connections:
Topic 9 Project
Design a Solar collector
Giant solar power plants are not the only place to see parabolic trough collectors, you might find a water purifier made from a single 6ft x 4ft mirror in a neighbor's backyard. You and your classmates will analyze parabolas and design a solar collector for use in your school or community.

Career Readiness, Life Literacies and Key Skills **Content: Solar Engineering; Construction. NJSLS#: GPE.A.2)**
(Next Generation Science Standards ETS1-2, PS3-3)

Spot Light On:

angle as the constant of proportionality; derive the formula for area of a sector.		**Holocaust** **LESSON: History of Antisemitism and the Holocaust** **GRADE LEVEL:** Adaptable for grades 7–12 **SUBJECT:** Multidisciplinary **TIME REQUIRED:** Approximately 60–75 minutes (extensions available) **This is a *foundational* lesson that introduces key concepts and information to students.** **RATIONALE** One of the factors leading to the Holocaust was a long history of antisemitism in Germany, Europe, and the world. The Nazi-led government built on existing beliefs and prejudices in creating a racial ideology that resulted in the persecution and murder of Jews in Europe. Antisemitism alone did not lead to the Holocaust, but it was a necessary precursor, contributing to an environment in which prejudice, hate speech and violence could occur. This lesson will focus on the history of antisemitism and its role in the Holocaust to better understand how prejudice and hate speech can contribute to violence, mass atrocity, and genocide. Learning about the origins of hatred and prejudice encourages students to think critically about antisemitism today. Included is a review of key definitions distinguishing fact, opinion, and belief when analyzing historical events. **NOTE:** This lesson is not intended as a crisis response to antisemitic acts on campuses but rather an approach to understanding the historical origins of antisemitism. **<u>Example Tasks:</u>** **Task 1:** Find the perimeter of the shaded region.  **Task 2:**

		A slice of pizza with an area of 38 square inches 68° has been removed from the pizza. What is the diameter of the whole pizza?  **Task 3:** Find the measure of a central angle of a regular polygon with 11 sides.
Mathematics Practices 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reason of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.		
Social and Emotional Learning: ***Competencies***	**Social and Emotional Learning:** ***Sub-Competencies***	

Self- awareness Social Awareness Self- Management Relationship Skills Responsible Decision-Making	Recognizing the importance of self-confidence in handling daily tasks and challenges. Demonstrate an awareness of the expectations for social interactions in a variety of ways. Demonstrate an understanding of the need for mutual respect when viewpoints differ. Recognize the skills needed to establish and achieve personal and educational goals. Utilize positive communication and social skills to interact effectively with others. Develop, implement, and model effective problem solving and critical thinking skills.	

Assessments (Formative) ***To show evidence of meeting the standard/s, students will successfully engage within:***	**Assessments (Summative)** ***To show evidence of meeting the standard/s, students will successfully complete:***
Formative Assessments: ● Entry and Exit Slips ● Quizzes ● Self Assessments	**Benchmarks:** ● Chapter Tests ● Projects ● LinkIT **Summative Assessments:** ● District Assessments ● Midterms ● Standardized Tests

Differentiated Student Access to Content:
Teaching and Learning *Resources/Materials*

Core Resources	**Alternate Core Resources** ***IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core Resources**

• Textbooks websites • Achieve the core • Khan Academy • Desmos • GeoGebra	• Skill building worksheets • Math Manipulatives	• Dictionary for native languages • Videos in their native language.	• Leveled Assessments • Enrichment worksheets

Supplemental Resources

Technology:
- **Chromebooks, Graphing Calculators, Online math manipulatives**

Other:
- **Zoom and Google Meets, Schoology, Interactive Textbooks, Private Tutoring**

Differentiated Student Access to Content:
Recommended *Strategies & Techniques*

Core Resources	**Alternate Core Resources** ***IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core**
• **Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat**	• **Utilize a multi-sensory (VAKT) approach during instruction, provide alternate presentations of skills by varying the method (repetition, simple explanations, additional examples, modeling, etc.), modify test content and/or format, allow students to retake test for additional credit, provide additional times and preferential seating as needed, review, restate and repeat directions, provide study guides, and/or break assignments into segments of shorter tasks.**	• **Extend time requirements, preferred seating, positive reinforcement, check often for understanding/review, oral/visual directions/prompts when necessary, supplemental materials including use of an online bilingual dictionary, and modified assessment and/or rubric.**	• **Create an enhanced set of introductory activities, integrate active teaching/learning opportunities, incorporate authentic components, propose interest-based extension activities, and connect student to related**

NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	**Disciplinary Concept: Creativity and Innovation**	
	Core Ideas:	**With a growth mindset, failure is an important part of success**
	Performance Expectation/s:	**9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).**
	Career Readiness, Life Literacies, & Key Skills Practices	
	Act as a responsible and contributing community member and employee. **Attend to financial well-being.** **Consider the environmental, social and economic impacts of decisions.** **Demonstrate creativity and innovation.** **Utilize critical thinking to make sense of problems and persevere in solving them.** **Model integrity, ethical leadership and effective management.** **Plan education and career paths aligned to personal goals.** **Use technology to enhance productivity, increase collaboration and communicate effectively.** **Work productively in teams while using cultural/global competence.**	

New Jersey Legislative Statutes and Administrative Code (place an "X" before each law/statute if/when present within the curriculum map)									
	Amistad Law: *N.J.S.A. 18A 52:16A-88*		Holocaust Law: *N.J.S.A. 18A:35-28*		LGBT and Disabilities Law: *N.J.S.A. 18A:35-4.35*	**X**	Diversity & Inclusion: *N.J.S.A. 18A:35-4.36a*		Standards in Action: *Climate Change*