Daniel McLaughlin Therrell High School
[Subject Group Overview]
Yearly Planner
SY 2024-2025

Teacher(s)	Hamed Sanusi, Spaulding Karlton, Dr. Giles Jacqueline		Year - Grade	Year 5 -10th Grade	Subject	Mathematics
	Name of Course		Geometry			
Unit #	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Unit length (4 to 8 weeks)	4 Weeks	4 Weeks	4 Weeks			
Unit title	"The Power of Polynomials: Unveiling Patterns and Solving Mysteries" Polynomials	*"Building the Blocks: Exploring Geometric Foundations, Constructions, and Proofs"?* Geometric Foundations, Constructions, and Proof	"Perfectly Aligned: Unlocking the Secrets of Congruence"? Exploring Congruence	"Scaling the Heights: Exploring the Power of Similarity" Similarity	"Triangular Mysteries: Unraveling the Secrets of Right Triangles" Right triangle trigonometry	"Circles in Motion: Unveiling the Geometry of Roundness" Making sense of circles
Learner Profile (Select 2)	Inquirer	Inquirer, Risk-Taker	Inquirer			
Key concept (Select only 1-2)	Logic	Relationships	Relationship, Transformation			
Related concept(s) (Select 2-3)	Representation	Models, Patterns, Representation	Symmetry, Similarity			
Global context + Global context exploration	Globalization and sustainability	Scientific and technical innovation	Scientific and Technical Innovation			
Statement of Inquiry Note: must include the Global Context Exploration, Key Concepts & Related Concepts	Representation of the consumption of a natural resource helps in the justification of logic.	Models help us identify relationships between patterns.				
Current Event or Real Life Connection	Polynomials are used when designing structures like bridges and roller coasters.	Basic Geometry is used in construction.				

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| Inquiry Questions
• **Factual**
• **Conceptual**
Debatable | *Factual Questions*
1. *What is the definition of a polynomial?*
2. *How do you identify the degree of a polynomial?*
3. *What is the difference between a monomial, binomial, and trinomial?*

Conceptual Questions
1. *Why is the degree of a polynomial important in determining its behavior?*
2. *How do polynomial functions model real-world phenomena?*
3. *In what ways do the zeros of a polynomial relate to its graph?*

Debatable Questions
1. *Are polynomials the most versatile mathematical tool for modeling real-life problems?*
2. *Should technology replace manual methods in solving polynomial equations?*
3. *Can all real-world scenarios be accurately represented by polynomial models?* | *Factual questions*
1. *What are proofs?*
2. *What are acute, obtuse, and right angles?*
3. *What are complementary and supplementary angles?*

Conceptual questions
1. *What is the relationship between different types of angles and shapes?*
2. *How does geometry connect to other areas of mathematics?*

Debatable questions

1. *Can all geometric problems be solved through construction alone?*
2. *Is geometry more useful in everyday life compared to other branches of mathematics?* | | | | |

Subject-group objective(s)/ Assessment Criteria	Objective C- Communicating 1. Use appropriate mathematical language (notation, symbols, and terminology) in both oral and written explanations.	*Criterion D: Applying Mathematics* 1. ID relevant elements of authentic real-life problems. 2. select appropriate mathematics when solving authentic real-life problems. 3. apply the selected mathematics successfully to reach a solution. 4. justify the degree of accuracy of a solution. 5. justify whether a solution makes sense in real life.				
ATL skills + ATL Skill indicators	*Critical thinking* 1. *Propose and evaluate a variety of solution* *Communication* 2. *Effectively presenting ideas*	*Information literacy skills* 1. Understand and use technology systems *Critical-thinking skills* 1. Propose and evaluate a variety of solutions				

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| Content
● Topics
● Skills
● Knowledge | *Students will*
1. *Learn key terms (e.g., binomial, trinomial, monomial, and polynomials).*
2. *Learn that polynomials are algebraic expressions containing numbers and variables*
3. *Measure and calculate the degree of the monomial.*
4. *Learn how to add and subtract polynomials.*
5. *Learn how to multiply polynomials.* | *Students will*
1. *Learn key geometric terms (e.g., point, line, angle).*
2. *Measure and calculate perimeter and area.*
3. *Identify and classify shapes.*
4. *Use tools for geometric constructions.*
5. *Develop reasoning skills for basic proofs.* | | | | |