George Washington High School
Course Syllabus

Course Title: Algebra 1
Instructor Name: Terra Spratley
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- Planning Period/ Office Hours: 5 and 6 Period

Course Description:

The successful mastery of Algebra I is widely considered to be the gatekeeper to success in the study of upper-level mathematics. The study of algebraic thinking begins in kindergarten and is progressively formalized prior to the study of the algebraic content found in the Algebra I Standards of Learning. Included in the progression of algebraic content is patterning, generalization of arithmetic concepts, proportional reasoning, and representing mathematical relationships using tables, symbols, and graphs. All students are expected to achieve the Algebra I standards. The study of Algebra I assists students in generalizing patterns or modeling relevant, practical situations with algebraic models. In order to assist students in developing meaning and connecting algebraic concepts to geometry and statistics, consideration should be given to the sequential development of concepts and skills by using concrete materials to assist students in making the transition from the numeric to the symbolic. Connections between Algebra I and other subject areas through practical applications may assist in helping students attach meaning to the abstract concepts of algebra. These standards require students to use algebra as a tool for representing and solving a variety of practical problems. Tables and graphs will be used to interpret algebraic expressions, equations, and inequalities and to analyze behaviors of functions. These standards include a transformational approach to graphing functions and writing equations when given the graph of the equation. Transformational graphing builds a strong connection between algebraic and graphic representations of functions. Graphing utilities (calculators, computers, and other technology tools) will be used to assist in teaching and learning. Graphing utilities facilitate visualizing, analyzing, and understanding algebraic and statistical behaviors and provide a powerful tool for solving and verifying solutions.

Instructional Philosophy: is a process in which students construct meaning as they acquire new concepts and extend their understanding of familiar concepts. In Algebra I the students will:
- How will you organize the classroom for student learning?
  - The class will have policies and procedures that will be used daily.
    - Follow class agenda (daily)
    - Be on time
- What do you expect of students in terms of participation?
  - Students are required to participate and engage fully in class discussions, note taking, and group assignments.
- Will they work independently or with others?
  - Student will have some individual assignments and group work
- What instructional strategies will you use?
  - One on one sessions
  - Small group instructions
  - Engaging note taking strategies

Major Course Goals:

Unit Name	Standards of Learning (SOL)	Big Ideas	Suggested Time Frame
Unit 0: Think Like a Mathematician	Priority SOL: 7.12, 7.13 Complementary SOL: 8.2, 8.14a, 8.14b	Properties of real numbers	5 days
Unit 1: Solving Linear Equations/Inequalities	Priority SOL: A.4e, A.5a, A.5c Complementary SOL: A.4a, A.4c	Inverse operations	19 days
Buffer Days: Assessment, Enrichment, and Remediation			3 days
Unit 2: Polynomials	Priority SOL: A.2b, A.2c Complementary SOL: A.1a, A.1b, A.2a	Operations of polynomials Factoring and simplification	27 days
Buffer Days: Assessment, Enrichment, and Remediation			5 days
Unit 3: Relations and Functions	Priority SOL: A.7f Complementary SOL: A.7a-e	Multiple representations	10 days
Buffer Days: Assessment, Enrichment, and Remediation			5 days
Unit 4: Linear Functions	Priority SOL: A.6b, A.6c, A.7f, A.9 Complementary SOL: A.6a, A.8	Point and slope Linear curve of best fit	21 days
Buffer Days: Assessment, Enrichment, and Remediation			5 days
Unit 5: Systems of Linear Equations/Inequalities	Priority SOL: A.4e, A.5d Complementary SOL: A.4d, A.5b	Practical Problems Types of solutions	19 days
Buffer Days: Assessment, Enrichment, and Remediation			5 days
Unit 6: Radicals	Priority SOL: A.3c Complementary SOL: A.3a, A.3b	Inverse operation of exponents	9 days
Buffer Days: Assessment, Enrichment, and Remediation			4 days
Unit 7: Quadratic Functions	Priority SOL: A.7f, A.9 Complementary SOL: A.4b, A.7c, A.7d	Scatterplots/Make predictions Roots, zeros, solutions, x-intercepts	16 days
Buffer Days: Assessment, Enrichment, and Remediation			4 days
Unit 8: Show What You Know	Review SOL based on data. Students should have differentiated learning opportunities to continue to show mastery of year-long expectations.		24 days

Course Grading & Assessment Plan: The students will take various formal and informal assessments throughout the school year. These assessments will assist the educator in order to collect and analyze data to support the content taught in class. The three strands tested on the SOL are *Expressions and Operations, Equations and Inequalities, and Functions and Statistics*

****BE AWARE OF THE NEW GRADING POLICIES!****
Grading Scale:
A= 90-100 C= 70-79
B= 80-89 D= 60-69
F= below 60

Grade Weights
- Summative Assessments (Gold Category) = 40%
- Formative "Short-Cycle" Assessments (Silver Category) = 35%
- Classwork/Warm up (Bronze Category) = 25%

Final Exams = 10% of overall grade for high school courses (SOL tests count as final exams)
*Late work and redo policies vary by school

Class Expectations:
Beginning of class ▢ Take a seat, put your phone/headphones away, log on to Canvas , submit any homework assignments, complete the bell-ringer, and wait for further instruction.

During class ▢ Be an active participant in your learning. Listen, collaborate, and ask questions.

End of class ▢ Complete closing assignment, stay in your seat until dismissal by the Teacher.

*Use the link from reference to the student handbook.
https://gwhs.danvillepublicschools.org/cms/one.aspx?portalid=161067&pageid=8026441

Supplies and Materials Needed:
Paper
Pencils
5 subject Notebook
3 ring binder