Washington Township Public Schools

Office of Curriculum & Instruction

Curriculum Guide Checklist

Standard Format

Course Title: Math SAT Review

Submitted By: Ellen Perry **Date:** _____

(Elementary Director or /MS/HS Dept Supervisor please check)

Acceptable	Not Acceptable	N/A		Comments
			I. Cover Page (Course Description)	
			II. Demonstrable Proficiencies (MS & HS only)	
		N/A	III. Scope & Sequence (Elementary only)	
			IV. List of Major Units of Study	
			V. (For each unit of study include the following A-E)	
			A. Unit Overview	
			B. Unit Graphic Organizer (Web)	
			C. Unit Plan	
			1. Topics/Concepts	
			2. Critical Content	
			3. Skill Objectives	
			4. Learning Activities	
			5. Instructional Resources with Title and Page Number	
			6. Evaluation/Assessment	
			7. Core Curriculum Standards/Cumulative Progress Indicator References	
			D. Lesson Plan Detail (Elementary Only)	
			E. Cross-Content Standards Analysis	
			D. Curriculum Modification Page Insert	

Approval: Principal: _____ **Curriculum Director:** _____

Asst. Superintendent: _____

Department Supervisor: _____ **Board of Education:** _____

PLEASE NOTE: **A completed and signed checklist MUST accompany any course of study that is submitted for approval.**

Washington Township Public Schools
Office of Curriculum & Instruction

Course: Math SAT Review

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nder the Direction of: Carole English

Description: This course is designed for a student who has completed Algebr
completed or concurrently enrolled in Geometry. The course will prov
scoring, various test question formats, and explanation of test terminol
as well as strategies to be used for the different types of questions wi
course is for students to improve their test taking skills through familiar
encounter on the SAT mathematics portion.

Joseph A. Vandenberg: *Assistant Superintendent for Curriculum & Instruction*
Barbara E. Marciano: *Director of Elementary Education*
Jack McGee: *Director of Secondary Education*

Written: June 2007
Revised: JUNE 2012
BOE Approval:

DEMONSTRABLE PROFICIENCIES

COURSE TITLE: Math SAT Review

CLASSWORK REQUIREMENTS

Homework , class participation, reading assignments, quizzes, simulated SAT tests, organization to detail, materials such as writing instruments, notebook and handouts.

ATTITUDE & BEHAVIOR

The student will put forth their best effort, cooperate with the teacher and other students, have pride in their work, demonstrate self-control, show respect for self and others, manage time and meet deadlines. The student will demonstrate appropriate classroom behavior as outlined in the student handbook.

COURSE OBJECTIVES/OVERVIEW

A. COURSE CONTENT: SAT scoring, problem types, strategies for attaining maxim score, alternative problem solving techniques, formulas to know, calculator use, knowledge of arithmetic, algebra ,geometry and other math concepts

B. SKILLS: Understanding how the test is scored, as well as when to guess on a question or when to skip a problem. The order of difficulty and pacing are learned Knowing when to use the calculator, and how to plug in or how to plug in answer choices. Students will review content area in arithmetic including, but not limited t definitions, divisibility, fractions, decimals, percentages, ratios, proportions, avera mean, median, mode, intersection and union of sets, standard deviation, probabili and combination. Under the heading of algebra, students will review simple, quadratic, and simultaneous equations, inequalities, and functions. The geometry topics reviewed will include, lines, angles, triangles, trigonometry, circles, quadrat parallelograms, boxes, coordinate geometry and graphs.

C. APPRECIATION OF CONCEPTS The student will appreciate the underlying necessity for mathematics, apply concepts and skills in a logical sequence in orde solve problems, and observe mathematical patterns in the environment.

ATTENDANCE

Attendance: Refer to Board of Education Policy

GRADING PROCEDURES

The final grade will be a composite of quiz scores, homework, tests, and other evaluations that reflect a student's mastery of the areas outlined above. The grading system will be explained to the students by the individual teacher.

MAJOR UNITS OF STUDY

Course Title: Math SAT Review

I. Strategies

II. Arithmetic

III. Algebra

IV. Geometry

Unit Overview

Course Title: Math SAT Review

1

Unit #: 1 **Unit Title:** Strategies

Unit Description:
This unit is ongoing over the course. The SAT reasoning structure will be examined, as well as the types of questions. Strategies such as plugging in numbers and plugging in answer choices will be presented. The order of difficulty will be discussed as well as how estimating answers can save time and provide clues to correct answers.

Enduring Understandings/Generalizations

Students will understand that: Good scores are a composite of good test taking skills combined with solid math concepts.

Guiding Questions

1. How is the test scored?
2. Should a test taker guess on questions?
3. When is guessing a good strategy?
4. How can plugging in work best?
5. How much time should be spent on average for each question?

CURRICULUM – Unit Plan

Course Title: Math SAT Review
Unit Title: Strategies
Time Allocation: Nine Weeks

Core Content Standards and Cumulative Progress Indicators:

Math Practice Standards 1-8

Objectives: The student will better understand

- SAT scoring
- Pacing for the optimal score
- When to guess from among the answer choices
- How estimating is a valuable tool
- How to plug in values for the unknown
- How to plug in answer choices

A. CONTENT/SKILLS	B. LEARNING ACTIVITIES	C. SUGGESTED MATERIALS	D. STUDENT EVALUATION
Unit One: Strategies 1.1 Order of difficulty 1.2 Pacing 1.3 Guessing 1.4 Careless Mistakes 1.5 Plugging in the Answer Choices 1.6 Estimating	1. Teacher lectures and chalk board examples 2. Student centered guided practice 3. Daily warm-up activity from previous lesson or SAT Prep packet or web site 4. Focus Problems 5. Review Questions 6. Power Point Presentation	Math Workout for the New SAT *Princeton Review* The Official SAT Study Guide Calculator Writing materials	1. Homework assignments on each of the lessons covered. Problems will consist of practice sheets. 2.Daily warm-up problems 3. Quizzes 4. Simulated practice tests

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Learners with an IEP	Learners with a 504
Rephrase questions for student clarification.	Ask reflective and extension questions to build on classroom knowledge to develop a deeper understanding.	Use a translator device.	Each special education student has in Individualized Educational Plan (IEP) that details the specific accommodations, modifications, services, and support needed to level the playing field. This will enable that student to access the curriculum to the greatest extent possible in the least restrictive environment. These include: • Variation of time: adapting the time allotted for learning, task completion, or testing • Variation of input: adapting the way instruction is delivered • Variation of output: adapting how a student can respond to instruction • Variation of size: adapting the number of items the student is expected to complete • Modifying the content, process or product Additional resources are outlined to facilitate appropriate behavior and increase student engagement. The most frequently used modifications and accommodations can be viewed here. Teachers are encouraged to use the Understanding by Design Learning Guidelines (UDL). These guidelines offer a set of concrete suggestions that can be applied to any discipline to ensure that all learners can access and participate in learning opportunities. The framework can be viewed here www.udlguidelines.cast.org	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.
Preferential seating – close proximity to teacher.	Pose “What if…” questions.	Provide access to language dictionary, instructor, or any other means to help interpret any language/communication difficulties.		
Redirect student attention.	Have the students share their knowledge	Rephrase questions for student clarification.		
After school availability for help.		Have student create vocabulary flash cards in addition to topical index.		
Internet resources (videos on topic, websites relevant to the particular topic, etc.).				

Unit Overview

Course Title: Math SAT Review

Unit #: 2 **Unit Title:** Arithmetic

Unit Description:
The student will become familiar with the vocabulary pertaining to general math and its application to problem solving on the math portion of the SAT.

Enduring Understandings/Generalizations

Students will understand that: Math has a distinct language for comprehension and application.

Guiding Questions

1. What is the correct order of operations?
2. How is the percent proportion used to find missing values?
3. What are the divisibility rules?
4. The term consecutive even/odd integers determines what?
5. How is standard deviation calculated?
6. How are intersection and union of sets related?
7. How is probability computed?

CURRICULUM – Unit Plan

Course Title: Math SAT Review
Unit Title: Arithmetic
Time Allocation: Three Weeks

Core Content Standards and Cumulative Progress Indicators:

N.Q1,3 S.CP6,9
A.SSE1-3 F.BF2
S.ID1-4

Objectives: Students will have the ability to**:**

- Solve problems using the order of operations
- Use data interpretations to solve problems including mean, median and mode
- Understand and perform operations using integers, odd and even numbers, prime numbers and digits
- Perform operations on problems involving percent.

A. CONTENT/SKILLS	B. LEARNING ACTIVITIES	C. SUGGESTED MATERIALS	D. STUDENT EVALUATION
Unit Two: Arithmetic 2.1 Definitions 2.2 Divisibility 2.3 Fractions 2.4 Decimals 2.5 Percentages 2.6 Ratios 2.7 Proportions 2.8 Averages 2.9 Median, Mode, Sets, Intersections, and Union 2.10 Standard Deviation 2.11 Exponents 2.12 Roots 2.13 Probability and Combinations 2.14 Sequences	1. Teacher lectures and chalk board examples 2. Student centered guided practice 3. Daily warm-up activity from previous lesson or SAT Prep packet or web site 4. Focus Problems 5. Review Questions 6. Power Point Presentation	Math Workout for the New SAT *Princeton Review* The Official SAT Study Guide Calculator Writing materials .	1. Homework is suggested from the following pages: Pg. 12,17,21,27,30,33,37,40, 42,45,48,51,54,60,63,66,69, 131,153,159,164,170 2.Daily warm-up problems 3. Quizzes 4. Simulated practice tests

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Learners with an IEP	Learners with a 504
Rephrase questions for student clarification.	Ask reflective and extension questions to build on classroom knowledge to develop a deeper understanding.	Use a translator device.	Each special education student has in Individualized Educational Plan (IEP) that details the specific accommodations, modifications, services, and support needed to level the playing field. This will enable that student to access the curriculum to the greatest extent possible in the least restrictive environment. These include: • Variation of time: adapting the time allotted for learning, task completion, or testing • Variation of input: adapting the way instruction is delivered • Variation of output: adapting how a student can respond to instruction • Variation of size: adapting the number of items the student is expected to complete • Modifying the content, process or product Additional resources are outlined to facilitate appropriate behavior and increase student engagement. The most frequently used modifications and accommodations can be viewed here. Teachers are encouraged to use the Understanding by Design Learning Guidelines (UDL). These guidelines offer a set of concrete suggestions that can be applied to any discipline to ensure that all learners can access and participate in learning opportunities. The framework can be viewed here www.udlguidelines.cast.org	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.
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After school availability for help.		Have student create vocabulary flash cards in addition to topical index.		
Internet resources (videos on topic, websites relevant to the particular topic, etc.).				

Unit Overview

Course Title: Math SAT Review

Unit #: 3 **Unit Title:** Algebra

Unit Description:
This unit is an over-view of Algebra I and selected Algebra II skills as they pertain to the mathematics section of the SAT. Solving linear and quadratic equations will be stressed. Rational and radical expressions will be simplified.

Enduring Understandings/Generalizations

Students will understand that: Expressions can be simplified and equations can be solved. Inequalities are operated on in the same manner as equations .

Guiding Questions

1. What is the difference between solving an equation and simplifying an expression?
2. How many solutions will any quadratic equation have?
3. What does " f(x) " mean?
4. How do we solve inequalities?

CURRICULUM – Unit Plan

Course Title: Math SAT Review
Unit Title: Algebra
Time Allocation: Three Weeks

Core Content Standards and Cumulative Progress Indicators:

N.RN1-3	A.APR1	F.BF1A,B	
N.Q1-3	A.CED1-4		
A.SSE1-3	A.REI1-4,6,10		

Objectives: Students will have the ability to

- Perform operations using negative numbers
- Perform operations using positive and negative rational exponents and roots of expressions
- Simplify algebraic expressions
- Solve linear, quadratic and simultaneous equations
- Find the value of functions

A. CONTENT/SKILLS	B. LEARNING ACTIVITIES	C. SUGGESTED MATERIALS	D. STUDENT EVALUATION
Unit Three : Algebra 3.1 Simple Equations 3.2 Quadratic Equations 3.3 Simultaneous Equations 3.4 Inequalities 3.5 Functions	1. Teacher lectures and chalk board examples 2. Student centered guided practice 3. Daily warm-up activity from previous lesson or SAT Prep packet or web site 4. Focus Problems 5. Review Questions 6. Power Point Presentation	Math Workout for the New SAT *Princeton Review* The Official SAT Study Guide Calculator Writing materials	1. Homework is suggested from the following pages: Pg. 73, 76,78,80,83, 127,137, 175,179,183,188,222,226 2.Daily warm-up problems 3. Quizzes 4. Simulated practice tests

Unit Modifications for Special Population Students:

Struggling Learners	Gifted and Talented Students (Challenge Activities)	English Language Learners	Learners with an IEP	Learners with a 504
Rephrase questions for student clarification.	Ask reflective and extension questions to build on classroom knowledge to develop a deeper understanding.	Use a translator device.	Each special education student has in Individualized Educational Plan (IEP) that details the specific accommodations, modifications, services, and support needed to level the playing field. This will enable that student to access the curriculum to the greatest extent possible in the least restrictive environment. These include: • Variation of time: adapting the time allotted for learning, task completion, or testing • Variation of input: adapting the way instruction is delivered • Variation of output: adapting how a student can respond to instruction • Variation of size: adapting the number of items the student is expected to complete • Modifying the content, process or product Additional resources are outlined to facilitate appropriate behavior and increase student engagement. The most frequently used modifications and accommodations can be viewed here. Teachers are encouraged to use the Understanding by Design Learning Guidelines (UDL). These guidelines offer a set of concrete suggestions that can be applied to any discipline to ensure that all learners can access and participate in learning opportunities. The framework can be viewed here www.udlguidelines.cast.org	Refer to page four in the Parent and Educator Resource Guide to Section 504 to assist in the development of appropriate plans.
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After school availability for help.		Have student create vocabulary flash cards in addition to topical index.		
Internet resources (videos on topic, websites relevant to the particular topic, etc.).				

Unit Overview

Course Title: Math SAT Review

Unit #: 4 **Unit Title:** Geometry

Unit Description:
Geometry, as it pertains to the Math section of the SAT, will be reviewed. Use of given figures will be demonstrated, whether they are drawn to scale, or not drawn to scale. Relationships that exist between angles formed by parallel lines and a transversal will be investigated. Triangles and their properties will be studied. Assorted types of parallelograms and special parallelograms will be reviewed. Three dimensional shapes will be recapped.

Enduring Understandings/Generalizations

Students will understand that: Geometry concepts have specific rules and formulas that can be applied.

Guiding Questions

1. When is an isosceles triangle also equiangular?
2. What are the properties of parallelograms?
3. How can trigonometry be used to solve right triangles?
4. Which methods can be used to solve right triangles?
5. How are sectors related to circles?
6. How does coordinate Geometry apply to three dimensions?
7. What are the special properties of a rectangle?

CURRICULUM – Unit Plan

Course Title: Math SAT Review
Unit Title: Geometry
Time Allocation: Three Weeks

Core Content Standards and Cumulative Progress Indicators:

G.CO1	G.GPE4-7		
G.SRT2,5,6,8	G.GMD1,3,4		
G.C5	G.MG1		

Objectives: Students will have the ability to

- Recognize what can and cannot be assumed when a geometric representations Notes" Figure not drawn to scale"
- Understand angle relationships and to be able to solve for unknown parts of a triangle and other polygons
- Recognize and use the properties of parallel lines
- Use trigonometry ratios to solve right triangles
- Use the correct formula to calculate area, perimeter , circumference and/or volume of a given geometric figure
- Use coordinate geometry to locate points on a number line, or Cartesian coordinate system.
- Understand side relationships within a right triangle, regular polygon

A. CONTENT/SKILLS	B. LEARNING ACTIVITIES	C. SUGGESTED MATERIALS	D. STUDENT EVALUATION
Unit Four : Geometry 4.1 Definitions 4.2 Lines and Angles 4.3 Triangles 4.4 Trigonometry 4.5 Circles 4.6 Quadrilaterals 4.7 Parallelograms 4.8 Boxes and Cans 4.9 Coordinate Geometry 4.10 Charts and Graphs	1. Teacher lectures and chalk board examples 2. Student centered guided practice 3. Daily warm-up activity from previous lesson or SAT Prep packet or web site 4. Focus Problems 5. Review Questions 6. Power Point Presentation	Math Workout for the New SAT *Princeton Review* The Official SAT Study Guide Calculator Writing materials	1. Homework is suggested from the following pages: Pg. 88, 93, 96, 100, 105, 110, 115, 120, 123, 143, 148, 194, 210, 208, 215, 237, 243, 250, 256 2.Daily warm-up problems 3. Quizzes 4. Simulated practice tests

Unit Modifications for Special Population Students:

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Cross-Content Standards Analysis

Course Title: Math SAT Review **Grade:** 11/12

Unit Title:	Visual and Performing Arts	Comp. Health & Physical Ed.	Language Arts Literacy	Mathematics	Science	Social Studies	World Languages	Technology	Career Education/ Consumer, Family, & Life Skills
Strategies			W.9-10.1, 4 SL.9-10.1 RST.9-10.3-5						9.1.12.A.1 9.1.12.B.1-3 9.1.12.F.2 9.4.12.A.2,5,12,16
Arithmetic			W.9-10.1, 4 SL.9-10.1 RST.9-10.3-5		5.1.12A.2 5.1.12B.2			8.1.12.F.1	9.1.12.A.1 9.1.12.B.1-3 9.1.12.F.2 9.4.12.A.2,5,12,16
Algebra			W.9-10.1, 4 SL.9-10.1 RST.9-10.3-5		5.1.12A.2 5.1.12B.2			8.1.12.F.1	9.1.12.A.1 9.1.12.B.1-3 9.1.12.F.2 9.4.12.A.2,5,12,16
Geometry			W.9-10.1, 4 SL.9-10.1 RST.9-10.3-5		5.1.12A.2 5.1.12B.2				9.1.12.A.1 9.1.12.B.1-3 9.1.12.F.2 9.4.12.A.2,5,12,16

Washington Township Public Schools
Department of Student Personnel Services

CURRICULUM MODIFICATION

The regular curriculum is modified for Special Education students enrolled in both self-contained and resource center classes.

Each special education student has in Individualized Educational Plan (IEP) that details the specific accommodations, modifications, services, and support needed to level the playing field. This will enable that student to access the curriculum to the greatest extent possible in the least restrictive environment. These include:

- Variation of time: adapting the time allotted for learning, task completion, or testing
- Variation of input: adapting the way instruction is delivered
- Variation of output: adapting how a student can respond to instruction
- Variation of size: adapting the number of items the student is expected to complete
- Modifying the content, process or product

Additional resources are outlined to facilitate appropriate behavior and increase student engagement. The most frequently used modifications and accommodations can be viewed here.

Teachers are encouraged to use the Understanding by Design Learning Guidelines (UDL). These guidelines offer a set of concrete suggestions that can be applied to any discipline to ensure that all learners can access and participate in learning opportunities. The framework can be viewed here www.udlguidelines.cast.org