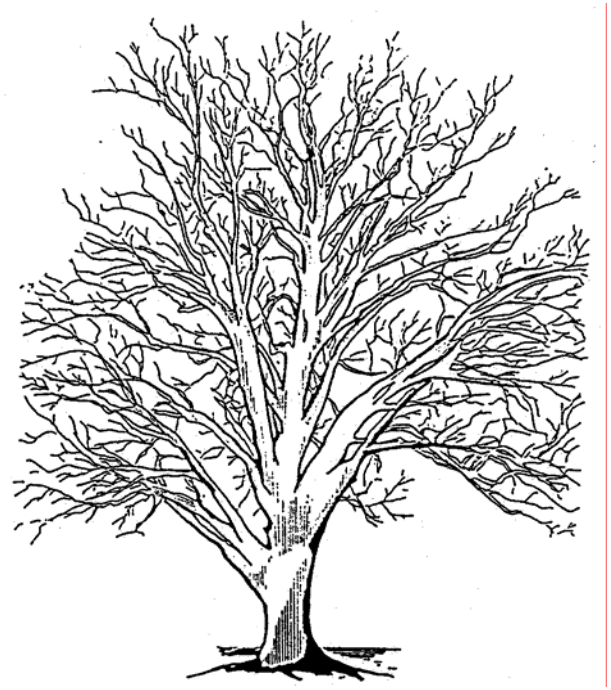
Monroe Township Schools



Curriculum Management System

MTHS Summer Study Program

Introduction to Geometry

Grades 9, 10

July 2006

*** For adoption by all regular education programs as specified and for adoption or adaptation by all Special Education Programs in accordance with Board of Education Policy # 2220.**

Board Approved: June 28, 2006

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Acknowledgments

The following individuals are acknowledged for their assistance in the preparation of this Curriculum Management System:

Writers Names: **Susan Patikowski**

Supervisor Name: **Robert O'Donnell, Supervisor of Mathematics and Educational Technology**

Technology Staff: **Al Pulsinelli**
Reggie Washington
Bill Wetherill

Secretarial Staff: **Debby Gialanella**
Geri Manfre
Gail Nemeth

Monroe Township Schools

Mission and Goals

Mission

The mission of the Monroe Township School District, a unique multi-generational community, is to collaboratively develop and facilitate programs that pursue educational excellence and foster character, responsibility, and life-long learning in a safe, stimulating, and challenging environment to empower all individuals to become productive citizens of a dynamic, global society.

Goals

To have an environment that is conducive to learning for all individuals.

To have learning opportunities that are challenging and comprehensive in order to stimulate the intellectual, physical, social and emotional development of the learner.

To procure and manage a variety of resources to meet the needs of all learners.

To have inviting up-to-date, multifunctional facilities that both accommodate the community and are utilized to maximum potential.

To have a system of communication that will effectively connect all facets of the community with the Monroe Township School District.

To have a staff that is highly qualified, motivated, and stable and that is held accountable to deliver a safe, outstanding, and superior education to all individuals.

INTRODUCTION, PHILOSOPHY OF EDUCATION, AND EDUCATIONAL GOALS

Philosophy

Monroe Township Schools are committed to providing all students with a quality education resulting in life-long learners who can succeed in a global society. The mathematics program, grades K-12, is predicted on that belief and is guided by the following six principals as stated by the National Council of Teachers of Mathematics (NCTM) in the *Principles and Standards for School Mathematics, 2000.* First, a mathematics education requires equity. All students will be given worthwhile opportunities and strong support to meet high mathematical expectations. Second, a coherent mathematics curriculum will effectively organize, integrate, and articulate important mathematical ideas across the grades. Third, effective mathematics teaching requires the following: a) knowing and understanding mathematics, students as learners, and pedagogical strategies, b) having a challenging and supportive classroom environment and c) continually reflecting on and refining instructional practice. Fourth, students must learn mathematics with understanding. A student's prior experiences and knowledge will actively build new knowledge. Fifth, assessment should support the learning of important mathematics and provide useful information to both teachers and students. Lastly, technology enhances mathematics learning, supports effective mathematics teaching, and influences what mathematics is taught.

As students begin their mathematics education in Monroe Township, classroom instruction will reflect the best thinking of the day. Children will engage in a wide variety of learning activities designed to develop their ability to reason and solve complex problems. Calculators, computers, manipulatives, technology, and the Internet will be used as tools to enhance learning and assist in problem solving. Group work, projects, literature, and interdisciplinary activities will make mathematics more meaningful and aid understanding. Classroom instruction will be designed to meet the learning needs of all children and will reflect a variety of learning styles.

In this changing world those who have a good understanding of mathematics will have many opportunities and doors open to them throughout their lives. Mathematics is not for the select few but rather is for everyone. Monroe township Schools are committed to providing all students with the opportunity and the support necessary to learn significant mathematics with depth and understanding. This curriculum guide is designed to be a resource for staff members and to provide guidance in the planning, delivery, and assessment of mathematics instruction.

Educational Goals

Grades 9,10/Introduction to Geometry is an MTHS Summer Study option for entering freshmen and is offered separately for upper classmen who are enrolling in Geometry in the fall. This course will help students obtain a head-start on required course-work by gaining experience in skills and concepts necessary for success in Geometry. This summer study class will focus on topics generally covered in the first quarter of the school year in Gemetry. Student growth will be charted through a pre-test in the beginning of the course and a post-test at the end. Credit is not awarded for this course, however, students will receive a Certificate of Participation. More importantly, students will receive exposure to skills needed to be successful during the school year. Topics included are: Lines, angles, planes, logical reasoning and conditional statements, and parallel and perpendicular lines.

New Jersey State Department of Education
Core Curriculum Content Standards

A note about Mathematics Standards And Cumulative Progress Indicators.

The New Jersey Core Curriculum Content Standards for Mathematics were revised in 2002. The Cumulative Progress Indicators (CPI's) referenced in this curriculum guide refer to these new standards and may be found in the Curriculum folder on the district servers. A complete copy of the new Core Curriculum Content Standards for Mathematics may also be found at: http://www.nj.gov/njded/cccs/s4_math.htm

MTHS Summer Study Program

Introduction to Geometry

Scope and Sequence

Week 1	
I. Introduction and Pre-test	II. Lines, Angles, and Planes a. Identify points, lines, and planes b. Distance and midpoint – on a line graph and a coordinate plane. c. Segment bisectors d. Classify angles e. Angle bisectors f. Special Angle Pairs – adjacent, vertical, linear pair, complementary, supplementary, perpendicular lines.
Week 2	
III. Logical Reasoning and Conditional Statements a. Patterns – next three terms and finding the n^{th} term. b. Conditional Statements – conjectures, if-then statements, truth values, and counterexamples. c. Postulates about points, lines, and segments. d. Algebraic proofs.	

Week 3	
IV. Logical Reasoning and Conditional Statements Continued e. Segment and angle proofs.	V. Parallel and Perpendicular Lines a. Angles formed by a transversal b. Angle relationships formed by parallel lines and a transversal
Week 4	
VI. Parallel and Perpendicular Lines Continued c. Use slope to determine parallel or perpendicular d. Slope-Intercept form e. Identify angle relationships that produce parallel lines and proofs.	V. Post -test

Suggested days of Instruction	**Curriculum Management System** **Grade Level/Subject:** **Grades 9,10/Introduction to Geometry**	**Topic: Lines, Angles, and Planes** **Goal 1: The student will be able to identify and use parts and types of lines, angles, and planes in problems solving.**	
	Objectives / Cluster Concepts / Cumulative Progress Indicators (CPI's) **The student will be able to:**	**Essential Questions** **Sample Conceptual Understandings**	**Instructional Tools / Materials / Technology / Resources / Learning Activities / Interdisciplinary Activities / Assessment Model**
7	1.1. Identify and use points, lines, and planes in space. (CPI 4.2.12 A1)	• *Why do chairs sometimes wobble?* • Identify collinear and coplanar points. • Name points, lines, line segments, and planes both in words and by symbols • Coordinate Geometry: identify the x-axis, y-axis, origin, quadrants, and plot points. • Introduce z-axis (mention) • Two lines intersect to form a point • Two planes intersect to form a line. • Skew lines are in two different planes, never intersect, but are not parallel.	**PROJECT IDEA:** Plotting a picture. Students draw a picture on a coordinate plane, marking points on the grid. Students make a list of 50-100 points that outline their drawing. The list should be in order, so that they could give it to a friend in class and the friend could plot the points and draw the original picture. **RESOURCES:** • Geometry, Glencoe, © 2005 -Review of plotting points pg. 728 -1.1 pg. 6-12 **HSPA:** • Amsco: MATHEMATICS: Preparing for the New Jersey HSPA, Grade 11 (navy blue binding – paperback) - Cluster 2.A.1Geometric Terms – pg. 23-26 • Prentice Hall: New Jersey HSPA Mathematics Comprehensive Review (textbook - purple binding – paperback) - 10.1 Points, Lines, Planes, and Segments pg. 206-210
	1.2. Find the length and midpoint of a segment. (CPI 4.2.12 C1) 1.3. Identify and use segments, midpoints, and segment bisectors. (CPI 4.2.12 C1) **Topic 1: Continued Next Page**	• *I want to make a garden that is 12 feet by 4 feet. If the border pieces are 4 feet long, how many pieces will I need?* • Name distance in words and by symbols. • Find the distance on a number line (whether horizontal or vertical)	**RESOURCES:** • Geometry, Glencoe, © 2005 -1.3 pg. 21-28 -Activity – The Pythagorean Theorem pg. 28

Suggested days of Instruction	Curriculum Management System Grade Level/Subject: **Grades 9,10/Introduction to Geometry**	**Topic: Lines, Angles, and Planes** **Goal 1: The student will be able to identify and use parts and types of lines, angles, and planes in problems solving.**	
	Objectives / Cluster Concepts / Cumulative Progress Indicators (CPI's) **The student will be able to:**	**Essential Questions** **Sample Conceptual Understandings**	**Instructional Tools / Materials / Technology / Resources / Learning Activities / Interdisciplinary Activities / Assessment Model**
	Objectives 1.2 and 1.3 continued. **Topic 1: Continued Next Page**	• Distance formula – $D = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ • Pythagorean theorem: $a^2 + b^2 = c^2$ $leg^2 + leg^2 = hyp^2$ • Midpoint formulas: Number Line: $\frac{x_1 + x_2}{2}$ Coordinate Plane: $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$ Emphasize - coordinates. EX 1: Find AB if A(3, 2) and B(3, -5) EX 2: Find AB if A(-5, 3) and B(7, -2) If M is the Midpoint of $\overline{AB}$. EX 1: AM = 4x – 5, MB = 11 + 2x, find x, AB. EX 2: AB = 14x + 2, AM = 6-3x, find x, MB. EX 3: A(2, -2), B(2,8), find the coordinates of M. EX 4: A(-1,2), M(6,1), find the coordinates of B. • Segment addition postulate – see geometer sketchpad activity pg. 101 • Mark segments congruent with slash marks. • Properties of the Midpoint: Midpoint is exactly in middle. Midpoint cuts the whole segment in half. The distance from the midpoint to either endpoint is equal.	**TECHNOLOGY:** • Prentice Hall Mathematics: - TI – 83/84 PLUS Activities for Algebra, Geometry, and Algebra II (resource workbook) -Perpendicular Bisectors – pg. 53

Suggested days of Instruction	**Curriculum Management System** **Grade Level/Subject:** **Grades 9,10/Introduction to Geometry**	**Topic: Lines, Angles, and Planes** **Goal 1: The student will be able to identify and use parts and types of lines, angles, and planes in problems solving.**	
	Objectives / Cluster Concepts / Cumulative Progress Indicators (CPI's) **The student will be able to:**	**Essential Questions** **Sample Conceptual Understandings**	**Instructional Tools / Materials / Technology / Resources / Learning Activities / Interdisciplinary Activities / Assessment Model**
	1.4. Measure and Classify Angles. (CPI 4.2.12 C1) 1.5. Identify and use congruent angles in problem solving. (CPI 4.2.12 C1) **Topic 1: Continued Next Page**	• *Why when it is the brightest outside does no one use their visors in their cars, yet in the early morning or evening they do?* • Identify the sides, vertex, interior, and exterior of an angle. • Name a ray in words and by symbols. • Name an angle by symbols, using one letter (the vertex), three letters, and a number. • Know the difference between the symbols: $\angle ABC$ and $m\angle ABC$ • Measure an angle using a protractor (optional) • Angles are measured in degrees: Emphasize - students must have degree signs next to angle measures. • Classify Angles as acute, right, obtuse, or straight. • Identify and label congruent angles • Use Algebra to find angle measurements. • Identify and use properties of angle bisectors: Bisector is exactly in middle. Bisector cuts the whole angle in half. The measure of each angle on either side of the bisector is equal. EX. $\overrightarrow{BD}$ is the angle bisector of $\angle ABC$, If $\angle ABD = (8X - 10)^O$ and $\angle DBC = (10x - 20)^o$, find x, $m\angle ABC$ • Angle addition postulate	**RESOURCES:** • Geometry, Glencoe, © 2005 - 1.4 pg. 29-36 **HSPA:** • Prentice Hall: New Jersey HSPA Mathematics Comprehensive Review (textbook - purple binding – paperback) - 10.2 Rays and Angles pg. 211-214 **TECHNOLOGY:** • Prentice Hall Mathematics: - TI – 83/84 PLUS Activities for Algebra, Geometry, and Algebra II (resource workbook) - Angle Bisectors – pg. 55

Suggested days of Instruction	**Curriculum Management System** **Grade Level/Subject:** **Grades 9,10/Introduction to Geometry**	**Topic: Lines, Angles, and Planes** **Goal 1: The student will be able to identify and use parts and types of lines, angles, and planes in problems solving.**	
	Objectives / Cluster Concepts / Cumulative Progress Indicators (CPI's) **The student will be able to:**	**Essential Questions** **Sample Conceptual Understandings**	**Instructional Tools / Materials / Technology / Resources / Learning Activities / Interdisciplinary Activities / Assessment Model**
	1.6. Identify and use special types of angles and pairs of angles. (CPI 4.2.12 C1)	• *Streets intersect to form many different types of angles, discuss the angels of roads around Monroe and Jamesburg.* • Identify and name adjacent angles • Identify vertical angles - congruent • Complementary angles - two angles whose sum is 90^o • Supplementary angles – two angles whose sum is 180^o • Linear Pair of angles form a line; they are supplementary and their sum is 180^o • Perpendicular lines form 4 right angles. • Use Algebra to find angle measurements using each angle type listed above.	**RESOURCES:** • Geometry, Glencoe, © 2005 - 1.5 pg. 37-43 **HSPA:** • Amsco: MATHEMATICS: Preparing for the New Jersey HSPA, Grade 11 (navy blue binding – paperback) - Cluster 2.A.3 – pg. 33-36 **TECHNOLOGY:** • Prentice Hall Mathematics: - TI – 83/84 PLUS Activities for Algebra, Geometry, and Algebra II (resource workbook) - Linear Pairs – pg. 57 - Vertical Angles – pg. 59

Suggested days of Instruction	**Curriculum Management System** **Grade Level/Subject:** **Grades 9,10/Introduction to Geometry**	**Topic: Logical Reasoning and Conditional Statements** **Goal 2: The student will be able to use logical reasoning and conditional statements to solve problems.**	
	Objectives / Cluster Concepts / Cumulative Progress Indicators (CPI's) **The student will be able to:**	**Essential Questions** **Sample Conceptual Understandings**	**Instructional Tools / Materials / Technology / Resources / Learning Activities / Interdisciplinary Activities / Assessment Model**
7	2.1. Identify the next three terms in a pattern. (CPI 4.3.12 A1) 2.2. Find the n^{th} term of an arithmetic pattern. (CPI 4.2.13 A1) 2.3. Use and analyze conditional statements. (CPI 4.2.12 A2, 4.3.12 A2, 4.5.12 D5) **Topic 2: Continued Next Page**	• *If you start a savings account with $500, and add $20 each week, how much money will you have after 1 year?* • Visual patterns – repeating shapes. • Number patterns, arithmetic, geometric, Fibonacci • Repeating patterns: what is the 38^{th} term in GEOMETRYGEO…? What is the 47^{th} digit in $\frac{1}{7}$? Or what is the units digit in 3^{25}? • In the pattern 4, 6, 8, 10, … what are the next three terms? What is the 40^{th} term? What is the n^{th} term? • *Think about some recent advertising campaigns, what is the purpose of a marketing campaign? Why is it important to determine if a statement is true or false?* • Make a conjecture with given information. • State a counterexample for a false conditional statement. EX. If you live in New Jersey, then you live in Monroe. Counterexample - Jamesburg or Old Bridge. • Write conditional statements in if-then form. • Identify the hypothesis and the conclusion in an if-then statement. • Identify a conditional statement, the inverse and the converse of a conditional statement and determine the truth values of each.	**HSPA:** • Amsco: MATHEMATICS: Preparing for the New Jersey HSPA, Grade 11 (navy blue binding – paperback) - Cluster 2.A.4 Inductive and Deductive Reasoning – pg. 36-38 - Cluster 4.A.1 Patterns – pg. 177-181 - Cluster 4.A.2 Sequences and Series – pg. 181-187 - Cluster 4.A.3 Representation of Relationships and Patterns – pg. 188-189 • Prentice Hall: New Jersey HSPA Mathematics Comprehensive Review (textbook - purple binding – paperback) - 13.1 Patterns and Sequences pg. 298-301 **RESOURCES:** • Geometry, Glencoe, © 2005 -2.1 pg. 62-66 -2.3 pg. 75-81

Suggested days of Instruction	**Curriculum Management System** **<u>Grade Level/Subject</u>:** **Grades 9,10/Introduction to Geometry**	**Topic: Logical Reasoning and Conditional Statements** **<u>Goal 2:</u> The student will be able to use logical reasoning and conditional statements to solve problems.**	
	Objectives / Cluster Concepts / Cumulative Progress Indicators (CPI's) **The student will be able to:**	**Essential Questions** **Sample Conceptual Understandings**	**Instructional Tools / Materials / Technology / Resources / Learning Activities / Interdisciplinary Activities / Assessment Model**
	2.4. Identify and use basic postulates about points, lines, and planes. (CPI 4.2.12 A4, 4.5.12 D3, 4.5.12 D5) **Topic 2: Continued Next Page**	• Identify and use postulates about points, lines and planes: - Through any two points there is exactly one line. - Through any three points there is exactly one plane. - A line contains at least two points. - A plane contains at least three points not on the same line. - If two points lie in a plane, then the entire line containing those points lies in that plane. - If two lines intersect then their intersection is exactly one point. - If two planes intersect then their intersection is a line. • Discuss parallel lines and skew lines use two pens or a ruler and a pointer to show skew lines. Illustrate with the edges of a box. • Discuss how to prove something is true, have students give paragraph proofs, verbally.	**RESOURCES:** • <u>Geometry</u>, Glencoe, © 2005 - 2.5 pg. 89-93

Suggested days of Instruction	**Curriculum Management System** **Grade Level/Subject:** **Grades 9,10/Introduction to Geometry**	**Topic: Logical Reasoning and Conditional Statements** **Goal 2: The student will be able to use logical reasoning and conditional statements to solve problems.**	
	Objectives / Cluster Concepts / Cumulative Progress Indicators (CPI's) **The student will be able to:**	**Essential Questions** **Sample Conceptual Understandings**	**Instructional Tools / Materials / Technology / Resources / Learning Activities / Interdisciplinary Activities / Assessment Model**
	2.5. Complete algebraic proofs (CPI 4.2.12 A4, 4.5.12 D3, 4.5.12 D5)	• Review properties of Algebra: - Associative - Commutative - Reflexive - Symmetric - Transitive - Addition and Subtraction - Multiplication and Division - Substitution - Distributive • Solve an algebra problem such as 3(x-2)=42 and state which property is used each step. • Introduce a two-column proof with statements and reasons. • Complete two-column algebraic proofs. • Discuss which of above properties hold true for segments and angles (reflexive, symmetric, and transitive)	**RESOURCES:** • Geometry, Glencoe, © 2005 - 2.6 pg. 94-100
	2.6. Use two-column proofs to prove segment relationships. (CPI 4.2.12 A4) **Topic 2: Continued Next Page**	• *Lawyers must prove each piece of evidence for or against their clients. Can things in math be proven in the same way?* • Review segment addition postulate, midpoint theorem, reflexive, symmetric, and transitive properties with relation to segment congruence. • Complete two column proofs with segment congruence.	**RESOURCES:** • Geometry, Glencoe, © 2005 - 2.7 pg. 101-106

Suggested days of Instruction	Curriculum Management System Grade Level/Subject: **Grades 9,10/Introduction to Geometry**	**Topic: Logical Reasoning and Conditional Statements** **Goal 2: The student will be able to use logical reasoning and conditional statements to solve problems.**	
	Objectives / Cluster Concepts / Cumulative Progress Indicators (CPI's) **The student will be able to:**	**Essential Questions** **Sample Conceptual Understandings**	**Instructional Tools / Materials / Technology / Resources / Learning Activities / Interdisciplinary Activities / Assessment Model**
	2.7. Use two-column proofs to prove angle relationships. (CPI 4.2.12 A4, 4.5.12 D3, 4.5.12 D5)	• Review angle addition postulate, angle bisectors, linear pairs, vertical angles, supplementary and complementary angles, perpendicular angles, reflexive, symmetric, and transitive properties with relation to angle congruence. • Complete two column proofs with angle congruence.	**RESOURCES:** • Geometry, Glencoe, © 2005 - 2.7 pg. 107-114 **ASSESSMENT MODEL:** Assessment questions should be open ended and should follow the general format illustrated in the Essential Questions/Sample Conceptual Understandings section.

Suggested days of Instruction	**Curriculum Management System** **Grade Level/Subject:** **Grades 9,10/Introduction to Geometry**	**Topic: Parallel and Perpendicular Lines** **Goal 3: The student will be able to use angle relationships with parallel and perpendicular lines to solve problems.**	
	Objectives / Cluster Concepts / Cumulative Progress Indicators (CPI's) **The student will be able to:**	**Essential Questions** **Sample Conceptual Understandings**	**Instructional Tools / Materials / Technology / Resources / Learning Activities / Interdisciplinary Activities / Assessment Model**
6	3.1. Identify angles formed by two lines and a transversal. (CPI 4.2.12 A3, 4.2.12 A4, 4.2.12 C1)	• *When a house is built, Construction workers must up walls straight. They use beams in the walls called studs to stabilize the wall. How can the workers determine if the studs are parallel?* • Discuss parallel lines and parallel planes. • Introduce types of angles: Alternate exterior, Alternate interior, Corresponding, Consecutive (Same-Side Interior) • Identify angles when three lines cross (not parallel), and when four lines cross (two sets of parallel lines).	**RESOURCES:** • Geometry, Glencoe, © 2005 - 3.1 pg. 126-131 - Geometer sketchpad activity p. 132 **HSPA:** • Prentice Hall: New Jersey HSPA Mathematics Comprehensive Review (textbook - purple binding – paperback) - Intersecting, Perpendicular, and Parallel Lines pg. 215-219
	3.2. Identify and use angle relationships formed by two parallel lines and a transversal. (CPI 4.2.12 A3, 4.2.12 C1, 4.5.12 C1, 4.5.12 D3) **Topic 3: Continued Next Page**	• *A railroad train travels along two rails. The two rails must be the same distance apart along the entire track. How can we make sure the train will not derail?* • Identify the alternate interior, alternate exterior, and corresponding angles, and identify the congruent angles • Identify the consecutive angles and the supplementary angles, show relationship is supplementary. • Congruent angles can be identified by making a "Z", zigzagging across the transversal. • Perpendicular transversal theorem. • Use algebra to solve problems involving parallel lines and a transversal.	**RESOURCES:** • Geometry, Glencoe, © 2005 - Geometer sketchpad activity pg. 132 - 3.2 pg. 133-138 **TECHNOLOGY:** • Prentice Hall Mathematics: - TI – 83/84 PLUS Activities for Algebra, Geometry, and Algebra II (resource workbook) - Parallel Lines, Related Angles – pg. 61 • Exploring Geometry with The Geometer's Sketchpad (resource workbook) - Angles formed by Intersecting Lines– pg.15 - Properties of Parallel Lines 17

Suggested days of Instruction	**Curriculum Management System** **Grade Level/Subject:** **Grades 9,10/Introduction to Geometry**	**Topic: Parallel and Perpendicular Lines** **Goal 3: The student will be able to use angle relationships with parallel and perpendicular lines to solve problems.**	
	Objectives / Cluster Concepts / Cumulative Progress Indicators (CPI's) **The student will be able to:**	**Essential Questions** **Sample Conceptual Understandings**	**Instructional Tools / Materials / Technology / Resources / Learning Activities / Interdisciplinary Activities / Assessment Model**
	3.3. Use the slope of a line to determine whether two lines are intersecting, parallel, or perpendicular. (CPI 4.2.12 C1, 4.3.12 B2)	• *When driving in the mountains, or a very hilly area, there are signs posted with pictures of a truck and percentages on them. What are these used for, what does the percentage mean?* • Review slope formula: $\frac{x_2 - x_1}{y_2 - y_1}$ • Review relationships of slopes of parallel and perpendicular lines. • Review slope-intercept form of an equation. • Use slope to graph a line: given the slope and a point, given slope-intercept form.	**RESOURCES:** • Geometry, Glencoe, © 2005 - 3.3 pg. 139-144 - pg. 741 – Review graphing using intercepts and slopes. **HSPA:** • Amsco: MATHEMATICS: Preparing for the New Jersey HSPA, Grade 11 (navy blue binding – paperback) - Cluster 2.B.5 Coordinate Geometry – pg. 58-61
	3.4. Write the equation of a line in slope-intercept form. (CPI 4.2.12 C1, 4.3.12 B2, 4.3.12 C1)	• Review slope-intercept form. • Review point-slope form. • Write the equation of a line, given one point and the slope, or given two points. • This is a review lesson from algebra, not an introductory lesson.	**RESOURCES:** • Geometry, Glencoe, © 2005 - 3.4 pg. 145-150
	3.5. Identify angle relationships that produce parallel lines. (CPI 4.2.12 A3, 4.2.12 A4, 4.2.12 C1, 4.3.15 B2, 4.5.12 C1)	• Use two-column proofs and paragraph proofs to prove angle relationships between parallel lines.	**RESOURCES:** • Geometry, Glencoe, © 2005 - 3.5 pg. 151-158 **ASSESSMENT MODEL:** Assessment questions should be open ended and should follow the general format illustrated in the Essential Questions/Sample Conceptual Understandings section.

MTHS Summer Study Program

Introduction to Geometry

COURSE BENCHMARKS

1. The student will be able to identify and use parts and types of lines, angles, and planes in problems solving.

2. The student will be able to use logical reasoning and conditional statements to solve problems.

3. The student will be able to use angle relationships with parallel and perpendicular lines to solve problems.