WARREN COUNTY SCHOOL DISTRICT

Planned Instruction

Course Title: Applied Algebra I

Course Number: 00210

Suggested Educational Level(s) 9th through 12th

Suggested Periods Per Week: 5 **Length of Period**: 40 minutes

Suggested Length Of Course: 1 year

Units Of Credit (If Appropriate): 1

Date Written: November 2004 **Date Approved**: June 13, 2005

Date Reviewed: 2004-2005 **Implementation Year**: 2005-2006

Teacher Certification Required: BS/BA Secondary Education/Mathematics

Standards Addressed:

2.1.11	Numbers, Number Systems, and Number Relationships
2.2.11	Computation and Estimation
2.3.11	Measurement and Estimation
*2.4.11	Mathematical Reasoning and Connection
2.5.11	Mathematical Problem Solving and Communication
2.6.11	Statistics and Data Analysis
2.8.11	Algebra and Functions
2.9.11	Geometry
2.10.11	Trigonometry
	*This is a component of all other standards taught

Relationship to Other Planned Instruction: This is the first year of a three-year sequence of applied material. Reference may be made to the math sequence chart on file in the principal's and guidance offices. Exceptions must be approved by the building principal.

Prerequisites: This course is designed for the student who has earned an average of at least 60% in Pre-Algebra 8, but did not earn greater than 70%.

Special Requirements: Use of scientific and graphing calculators, access to graphing software, access to Internet resources related to approved curriculum materials. Modifications will be made for students with special needs.
Teachers will emphasize standards addressed in the PSSA Anchor Assessment

Writing Team Members:
Suzette Berdine
Terry Hallock
Al Rial
Kathy Rogerson

Review Team Members:
Jenna Albaugh
Joni Butler
Scott Hironimus
Anna Joncas
Sharon Nowacki
Dustin Steiger

COURSE DESCRIPTION:

Applied Algebra I - This course covers algebra theory including the study of whole numbers and integers, positive and negative fractions and decimals, percents, measurement (both metric and English), as well as ratios and proportions with probability and statistics. One and two-step equations and inequalities will be studied as well as problem-solving where applicable.

20 days	I.	Computation, Measurement, and Estimation
45 days	II.	Solving One Variable Linear Equations
25 days	III.	Inequalities
35 days	IV.	Solving Linear Equations Graphically
1-5 days	*	PSSA Review and Test Taking Strategies
10 days	V.	Solving Systems of Linear Equations
15 days	VI.	Law of Exponents
15 days	VII.	Polynomials

170 days

Specific Educational Objectives to be taught:

I. Computation, Measurement and Estimation(2.1.11A, 2.2.11A)

August-September

- Add, Subtract, Multiply and Divide Real Numbers
- Use the order of operations to solve algebraic expressions
- Use concepts of opposite and absolute value
- Estimate answers and determine the amount of error in an estimated answer
- Simplify algebraic expressions by combining like terms

II. Solving One Variable Linear Equations(2.1.11A, 2.2.11A, 2.3.11A, 2.4.11E, 2.5.11A, 2.5.11B, 2.5.11C, 2.8.11C, 2.8.11G, 2.8.11N, 2.8.11S, 2.9.11I, 2.10.11B)

September-October

- Solving 1 step equations (using integers)
- Solving 2 step equations (using integers)
- Solving Multi-step equations (using integers)
- Solving with variable on both sides (using integers)
- Solving equations involving proportions (using integers)
- Translate a word statement into an equation (using integers)
- Word Problems
  - Better buy
  - Percentage problems
  - Number relationships
  - Consecutive numbers
  - Age

III. Inequalities(2.2.11A, 2.2.11F, 2.7.11E, 2.8.11D, 2.8.11J, 2.8.11K, 2.8.11L, 2.8.11N)

November

- Solving 1 step equations (using integers)
- Solving 2 step equations (using integers)
- Solving Multi-step equations (using integers)
- Solving with variable on both sides (using integers)
- Solving compound inequalities (using integers)
- Translate a word statement to an inequality (using integers)

IV. Solving Linear Equations Graphically (2.2.11F, 2.6.11C, 2.8.11F, 2.8.11G, 2.8.11H, 2.8.11L)

December-January

- Relations
- Determine the slope given two points, a graph or an equation
- Graphing linear equations (tables, x-intercept, y-intercept, slope-intercept)
- Determine an equation of a line (standard form, point slope & slope intercept)

* PSSA Review and Test Taking Skills

January-February

V. Solving Systems of Linear Equations (2.6.11B, 2.8.11F, 2.8.11G, 2.8.11H, 2.8.11I)

- Addition and subtraction
- Linear combinations

VI. Law of Exponents (2.1.11A, 2.8.11S)

March

- Multiply like base
- Dividing like base
- Power to a power
- Scientific Notation

VII. Polynomials (2.5.11A, 2.5.11B, 2.5.11C, 2.5.11D, s.8.11S)

April-May

- Adding, subtracting and multiplying polynomials (binomials and trinomials)
- Factoring a polynomial – common monomial

Summative Assessments: A team of WCSD math instructors will develop a district wide summative assessment to be used in all schools.

Required/Approved Textbooks and Materials:

Book Title: Algebra One
Publisher: Glencoe/McGraw-Hill
ISBN #: 0-07-822894-8
Copyright: 2001
Date of Adoption: August 12, 2002