WARREN COUNTY SCHOOL DISTRICT

Planned Instruction

Course Title: Algebra Concepts

Course Number: 00206

Suggested Educational Level 9-12

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

Suggested Length Of Course: 1 year

Units Of Credit (If Appropriate): 1 elective credit

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

Date Reviewed: 2003-2005 **Implementation Year**: 2005-2006

Teacher Certification Required: BS in 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 Connections
2.5.11	Mathematical Problem Solving and Communication
2.6.11	Statistics and Data Analysis
2.7.11	Probability and Predictions
2.8.11	Algebra and Functions
	* This is a component of all other standards taught

Relationship to Other Planned Instruction: This course is an ELECTIVE to be taken by students who have scored below 60% in Pre-Algebra **OR** at or below basic on the PSSA test.

Prerequisites: Score below 60% in Pre-Algebra **or** at or below basic level on PSSA

Special Requirements Scientific calculator, Graphing calculator, Software and Computers. Modifications will be made for students with special needs. Teachers will emphasize the standards addressed in the PSSA Anchor Assessments.

Writing Team Members:

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COURSE DESCRIPTION: This course will include the essentials of Algebra for students scoring below 60% in Pre-Algebra or at the basic or below basic level on the PSSA. Algebra Concepts is an elective credit taken in preparation for a three-year sequence involving Integrated Algebra I, Integrated Algebra II w/Geometry and Applied IV.

Outline of Content Sequence and Recommended Time:

30 days	Numbers and Operations
30 days	Rational Numbers
30 days	Probability and Statistics
25 days	Variables and Expressions
45 days	Solving Equations
*1-5 days	PSSA review and strategies
10 days	Solving Inequalities

Specific Educational Objectives to be Taught:

I. Numbers and Operations

A. Whole Numbers (2.1.11A)

August to September

1. Add/Subtract/Multiply/Divide and Estimate (M11.A.1.2)
2. Exponents (M-11A2.1)
3. Order of Operations (M11A.2.1.1)
4. Word Problems (M11A.3.1.1)

B. **Integers(2.1.11A)**

September

1. Add/Subtract/Multiply/Divide and Estimate (M11A.1.2)
2. Exponents (M11A2.2.1)
3. Order of Operations (M11A3.1.1)
4. Word Problems (M11A.3.1)

II. Rational Numbers (2.1.11A)

A. Decimals → Percents → Fractions (M11A.1.1.1)

B. Add/Subtract/Multiply/Divide and Estimate (M11A.1.2)

C. Exponents (M11A.2.2.1)

September to end of October

D. Order of Operations (M11A.3.1)

E. **Application of Measurement including an estimate of the answer (M11.A.3.1.1)**

F. **Word problems (M11A.2.1.1)**

III. Probabilty and Statistics

A. **Odd (M11.E.3.1.2)**

B. **Simple Probability and use to predict (M11.E.4.1.2)**

November to January

C. **Determine, convert, and/or compare the probability and/or odds of a simple event. (M11.E.3.1.2)**

D. **Mean/Median/Mode and identify the correct measure for a given situation (M11.E.2.1.1)**

E. **Bar Graphs (create, interpret and make predictions) (M11.E.1.1.1 and M11/E.1.1.2 and M11.E.4.1.1)**

F. **Circle Graphs (M11.E.1.1.1, M11.E.1.1.2)**

G. **Line graph and Double line graph (create, interpret, and make predictions) (M11E.1.1.1 and M11.E.1.1.2 and M11.E.4.1.1)**

H. **Interpret Double Bar Graphs (m11.E.1.1.2)**

I. **Circle Graphs (create, interpret and make predictions)**

J. **Box and Whisker Graph (M11.E.a.a.a and M11.E.1.1.2 and M11.E.2.1.2)**
   a. Create
   b. Answer questions based on displayed data
   c. Describe how outliers affect measures of central tendencies (M11.E.2.1.3)

K. **Stem and Leaf Graph (create, interpret and make predictions) (M11.E.1.1.1 and M11.E.1.1.2)**

IV. Variables and Expressions (2.5.11B)

January

A. **Evaluating expressions (M11A.3.1.1)**

B. **Translate Expressions from words (M11A.2.1.1, M11A.3.2.2)**

C. **Simplifying expressions (M11A.3.2.2)**

V. Solving Equations (2.2.11A, 2.5.11A)

February to mid-April

** PSSA review before test

A. **Solving 1 step equations (using integers) (M11A.3.1.1)**

B. **Solving 2 step equations (using integers) (M11A.3.11, M11D.2.1.3)**

C. **Solving multi-step equations (using integers) (M11A.3.1.1, M11D.2.1.3)**

D. **Solving the variable on both sides (using integers) (M11A.3.1.1, M11D.2.1.3)**

E. **Translate a word statement to an equation (using integers) (M11A.2.1.1, M11A.3.2.2)**

VI. Solving Inequalities

A. **Solving 1 step Inequalities (using Integers) (M11A.3.1.1, M11D.2.1.3)**

B. **Solving multi-step inequalities (using integers) (M11A.3.1.1, M11D.2.1.3)**

C. **Solving with variable on both sides (using integers) (M11A.3.1.1, M11D.2.1.3)**

D. **Translate a word statement to an inequality (using integers) (M11A.3.1.1, M11D/2/1/3)**

Summative Assessments:

Required/Approved Textbooks and Materials:

For student use:	*For Classroom use:*
Book Title: Key Curriculum Workbook series	**Algebra One**
Publisher: Key Curriculum Press	**Glencoe/McGraw-Hill**
ISBN #: on file in purchasing	**0-07-822894-8**
Copyright: 2005	**2001**
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