

Wilson Area School District Planned Course Guide

Title of planned course: Developmental Math

Subject Area: Math

Grade Level: 9

Course Description: Designed to improve various academic skills including but not limited to test taking, studying, organization and homework. Students will work to increase math facts, signed numbers, fractions, and equation solving to bring them up to their current class level in mathematics.

Time/Credit for this Course: One Full Academic Year / 1 credit

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Curriculum Map

August: Creating a rapport with students

September: Study skills, test taking skills and organizational strategies for succeeding in school

- Operations with signed numbers (math facts)
- Reinforcement of Algebra 1 skills in concurrent course

October: Study skills, test taking skills and organizational strategies for succeeding in school

- Operations with signed numbers (math facts)
- Operations with signed numbers (no calculator)
- Reinforcement of Algebra 1 skills in concurrent course

November: Study skills, test taking skills and organizational strategies for succeeding in school

- Operations with signed numbers (no calculator)
- Operations with fractions (no calculator)
- Reinforcement of Algebra 1 skills in concurrent course

December: Study skills, test taking skills and organizational strategies for succeeding in school

- Operations with fractions
- Reinforcement of Algebra 1 skills in concurrent course

January: Review of study skills, test taking skills and organizational strategies for succeeding in school

- Equation solving
- Reinforcement of Algebra 1 skills in concurrent course

February: Review of study skills, test taking skills and organizational strategies for succeeding in school

- Equation solving
- Reinforcement of Algebra 1 skills in concurrent course

March: Review of study skills, test taking skills and organizational strategies for succeeding in school

- Tables & graphs
- Reinforcement of Algebra 1 skills in concurrent course

April: Review of study skills, test taking skills and organizational strategies for succeeding in school

- Tables & graphs
- Reinforcement of Algebra 1 skills in concurrent course

May: Review of study skills, test taking skills and organizational strategies for succeeding in school

- Keystone topics
- Reinforcement of Algebra 1 skills in concurrent course

June: Review of study skills, test taking skills and organizational strategies for succeeding in school

- Reinforcement of Algebra 1 skills in concurrent course

**Wilson Area School District
Planned Course Materials**

Course Title: Developmental Math

Supplemental Books: Algebra 1
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Teacher Resources: Infinite Pre-Algebra and Algebra 1 software

Curriculum Scope & Sequence

Planned Course: Developmental Math

Unit: Review of study skills, test taking skills and organizational strategies for succeeding in school

Time frame: Throughout the year.

Essential content/objectives: At the end of the unit, students will be able to:

- Identify and apply methods and strategies for better organizational and time management habits
- Obtain help both in and out of school
- Identify and apply methods and strategies for successful class participation
- Identify and apply methods and strategies for homework help, organization, and completion

Core Activities: Students will complete/participate in the following:

- Identification of the elements and purpose of a home study center
- Various organizational strategies for learning environment, time and daily assignments
- Strategies for handling homework and homework problems
- Communication methods for talking to teachers and for successful “help-seeking”
- Strategies for speaking up in class (self-advocacy)
- Oral and written exercises

Extensions:

- Students will bring and maintain their agenda books daily. Students will also present information from experiences regarding application of the tips and strategies

Remediation:

- Tutoring is available if needed

Instructional Methods:

- Whole and small group discussion
- Modeling
- Group activities
- Think-aloud procedures
- Direct instruction

Materials & Resources:

- Text
- Teacher-created worksheets
- Teacher created quiz

Assessments:

- In class exercises
- Observation
- Quiz
- Evaluation of agenda book.

Curriculum Scope & Sequence

Planned Course: Developmental Math

Unit: Operations with Signed Numbers

Time frame: 6-8 weeks

State Standards: CC.2.1.8.E.1 CC.2.1.8.E.4 CC.2.1.HS.F.1 CC.2.1.HS.F.2 CC.2.1.6.E.3
CC.2.1.HS.F.2 CC.2.1.HS.F.1 CC.2.1.HS.F.2 CC.2.2.8.B.1

Anchor(s) or adopted anchor: A1.1.1

Essential content/objectives: At end of the unit, students will be able to:

- Compare and/or order any real numbers. Note: Rational and irrational may be mixed.
- Add and subtract signed numbers
- Multiply and divide signed numbers
- Simplify and evaluate square roots
- Simplify and evaluate absolute value expressions

Core Activities: Students will complete/participate in the following:

- Presented lessons with notes
- Guided Practice/Examples
- Independent Practice/Examples
- Group work/activities
- Assessments

Extensions:

- Study Island Assignments
- Khan Academy Assignments

Remediation:

- Additional exercises
- Less complex numbers to work with to build prior knowledge
- Chapter review exercises which revisits concepts and vocabulary
- peer tutoring
- Online practice

Instructional Methods:

- Direct Instruction
- Whole Class Discussion
- Group Activities

Materials & Resources:

- Warm ups
- Algebra 1 Textbook
- Projector
- Notes/examples
- Handouts (worksheets)
- Activity supplies
- Calculators
- Individual white boards
- Infinite Pre-Algebra/Algebra

Assessments:

- Warm ups
- Student pair-share and group discussion
- Teacher observation of student work
- Test/quizzes
- Questioning techniques

Curriculum Scope & Sequence

Planned Course: Developmental Math

Unit: Fractions

Time frame: 4 - 6 Weeks

State Standards/Anchor(s) or adopted anchor: M07.A-N.1.1, M07.B-E.2.1, M07.BE.2.3

Essential content/objectives: At end of the unit, students will be able to:

- Graph rational numbers on the number line
- Convert between fractions and decimals
- Compare and order rational numbers
- Add and subtract fractions
- Add and subtract mixed numbers
- Multiply fractions and mixed numbers
- Divide fractions and mixed numbers

Core Activities: Students will complete/participate in the following:

- Presented lessons with notes
- Guided Practice/Examples
- Independent Practice/Examples
- Group work/activities
- Assessments

Extensions:

- Study Island Assignments
- Khan Academy Assignments

Remediation:

- Additional exercises
- Less complex numbers to work with to build prior knowledge
- Chapter review exercises which revisits concepts and vocabulary
- peer tutoring
- Online practice

Instructional Methods:

- Direct Instruction
- Whole Class Discussion
- Group Activities

Materials & Resources:

- Warm ups
- Textbook
- Projector
- Notes/examples
- Handouts (worksheets)
- Activity supplies
- Calculators
- Individual white boards
- Infinite Pre-Algebra/Algebra

Assessments:

- Warm ups
- Student pair-share and group discussion
- Teacher observation of student work
- Test/quizzes
- Questioning techniques

Curriculum Scope & Sequence

Planned Course: Developmental Math

Unit: Equation Solving

Time frame: 5-6 Weeks

State Standards: CC.2.1.HS.F.3 CC.2.1.HS.F.4 CC.2.1.HS.F.5

Anchor(s) or adopted anchor: M08.B-E.3.1.2

Essential content/objectives: At end of the unit, students will be able to:

- Use properties of addition and multiplication
- Use the distributive property with algebraic expressions
- Simplify variable expressions
- Solve one step equations with variables
- Solve equations involving decimals

Core Activities: Students will complete/participate in the following:

- Presented lessons with notes
- Guided Practice/Examples
- Independent Practice/Examples
- Group work/activities
- Assessments

Extensions:

- Study Island Assignments
- Khan Academy Assignments

Remediation:

- Additional exercises
- Less complex numbers to work with to build prior knowledge
- Chapter review exercises which revisits concepts and vocabulary
- peer tutoring
- Online practice

Instructional Methods:

- Direct Instruction
- Whole Class Discussion
- Group Activities

Materials & Resources:

- Warm ups
- Textbook
- Projector
- Notes/examples
- Handouts (worksheets)
- Activity supplies
- Calculators
- Individual white boards
- Infinite Pre-Algebra/Algebra

Assessments:

- Warm ups
- Student pair-share and group discussion
- Teacher observation of student work
- Test/quizzes
- Questioning techniques

Curriculum Scope & Sequence

Planned Course: Developmental Math

Unit: Tables & Graphs

Time frame: 6-8 weeks

State Standards: CC.2.2.HS.D.7, CC.2.2.HS.D.10, CC.2.2.HS.C.2, CC.2.2.HS.C.4, CC.2.2.HS.C.5

Anchor(s) or adopted anchor: M08.B-E.2, M08.B-E.3, M08.B-F.1.1

Essential content/objectives: At end of the unit, students will be able to:

- Apply quantitative reasoning to choose and interpret units and scales in formulas, graphs, and data displays.
- Graph and analyze functions and use their properties to make connections between the different representations.
- Define, evaluate, and compare functions displayed algebraically, graphically, or numerically in tables or by verbal descriptions.
- Write, solve, graph, and interpret linear equations in one or two variables, using various methods.

Core Activities: Students will complete/participate in the following:

- Presented lessons with notes
- Guided Practice/Examples
- Independent Practice/Examples
- Group work/activities
- Assessments

Extensions:

- Study Island Assignments
- Khan Academy Assignments

Remediation:

- Additional exercises
- Less complex numbers to work with to build prior knowledge
- Chapter review exercises which revisits concepts and vocabulary
- peer tutoring
- Online practice

Instructional Methods:

- Direct Instruction
- Whole Class Discussion
- Group Activities

Materials & Resources:

- Warm ups
- Textbook
- Projector
- Notes/examples
- Handouts (worksheets)
- Activity supplies
- Calculators
- Individual white boards
- Infinite Pre-Algebra/Algebra

Assessments:

- Warm ups
- Student pair-share and group discussion
- Teacher observation of student work
- Test/quizzes
- Questioning techniques

Curriculum Scope & Sequence

Planned Course: Developmental Math

Unit: Keystone Topics

Time frame: 4-6 weeks

Keystone Standards: A1.1.1.3.1, A1.1.2.1.1, A1.1.2.1.2, A1.1.3.1, A1.2.1.1.2, A1.2.1.1.3, A1.2.1.1, A1.2.1.2, A1.2.2.1, A1.2.2.2.1, A1.2.3.2.3, A1.1.2.2.1, A1.1.3.2, A1.1.1.1.2, A1.1.1.1.5.1, A1.1.1.2.1, A1.1.1.5.2, A1.1.1.1.5.3, A1.2.3.2.1, A1.2.3.1, A1.2.3.2.2, A1.2.3.3.1

Anchor(s) or adopted anchor: M11.A.1.3.1, M11.A.1.3.2, M11.A.3.1.1, M11.A.3.2.1, M11.D.1.1.1, M11.D.2.1.1, M11.D.1.1.2, M11.D.1.1.3, M11.D.2.1.2, M11.D.2.1.3, M11.D.3.1.1, M11.D.4.1.1, M11.E.4.2.2, M11.A.2.1.2, M11.C.3.1.2, M11.D.3.2, M11.D.2.1.4, M11.A.2.2.1, M11.A.2.2.2, M11.D.2.2.1, M11.A.1.2.1, M11.D.2.2.2, M11.D.2.2.3, M11.E.1.1.1, M11.E.1.1.2, M11.E.2.1.1, M11.E.2.1.2, M11.E.3.1.1, M11.E.3.1.2, M11.E.4.1.2

Essential content/objectives: At end of the unit, students will be able to:

- Use the algebraic knowledge learned during the school year to successfully solve problems similar to those found on the keystone exam

Core Activities: Students will complete/participate in the following:

- Guided Practice/Examples
- Independent Practice/Examples
- Group work/activities
- Practice Assessments

Extensions:

- Study Island Assignments
- Khan Academy Assignments

Remediation:

- Additional exercises
- Less complex numbers to work with to build prior knowledge
- Chapter review exercises which revisits concepts and vocabulary
- peer tutoring
- Online practice

Instructional Methods:

- Direct Instruction
- Whole Class Discussion
- Group Activities

Materials & Resources:

- Warm ups
- Released Keystone Questions
- Projector
- Handouts (worksheets)
- Activity supplies
- Calculators
- Individual white boards

Assessments:

- Warm ups
- Student pair-share and group discussion
- Teacher observation of student work
- Test/quizzes
- Questioning techniques