

WARREN COUNTY SCHOOL DISTRICT

PLANNED INSTRUCTION

COURSE DESCRIPTION

Course Title: Mathematics 3

Course Number: 08323

Course Description: In Grade 3, instructional time should focus on eleven critical areas: (1) represent and solve problems involving multiplication and division; (2) understand properties of multiplication and the relationship between multiplication and division; (3) multiply and divide within 100; (4) solve problems involving the four operations, and identify and explain patterns in arithmetic; (5) use place value and understanding and properties of operations to perform multi-digit arithmetic; (6) develop understanding of fractions as numbers; (7) solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects; (8) represent and interpret data; (9) geometric measurement: understand concepts of area and relate area to multiplication and to addition; (10) Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures; and (11) reason with shapes and their attributes.

Suggested Grade Level: Grade 3

Length of Course: Two Semesters

Units of Credit: None

PDE Certification and Staffing Policies and Guidelines (CSPG) Required Teacher Certifications:

CSPG 69 Grades PK-4

To find the CSPG information, go to [CSPG](#)

Certification verified by the WCSD Human Resources Department: Yes No

WCSD STUDENT DATA SYSTEM INFORMATION

Course Level: Academic

Mark Types: Check all that apply.

F – Final Average MP – Marking Period EXM – Final Exam

GPA Type: GPAEL-GPA Elementary GPAML-GPA for Middle Level NHS-National Honor Society

UGPA-Non-Weighted Grade Point Average GPA-Weighted Grade Point Average

State Course Code: 02033

To find the State Course Code, go to [State Course Code](#), download the Excel file for SCED, click on SCED 6.0 tab, and chose the correct code that corresponds with the course.

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TEXTBOOKS AND SUPPLEMENTAL MATERIALS

Board Approved Textbooks, Software, and Materials:

Title: envision Math Grade 3
Publisher: Pearson
ISBN #: 978-0-13-495368-7
Copyright Date: 2020
WCSD Board Approval Date: 3/8/2021

Supplemental Materials: Manipulatives, ST Math

Curriculum Document

WCSD Board Approval:

Date Finalized: 1/18/2021
Date Approved: 3/8/2021
Implementation Year: 2021-2022

SPECIAL EDUCATION, 504, and GIFTED REQUIREMENTS

The teacher shall make appropriate modifications to instruction and assessment based on a student's Individual Education Plan (IEP), Chapter 15 Section 504 Plan (504), and/or Gifted Individual Education Plan (GIEP).

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SCOPE AND SEQUENCE OF CONTENT, CONCEPTS, AND SKILLS

Performance Indicator	PA Core Standard and/or Eligible Content	Month Taught and Assessed for Mastery
Apply place value understanding and properties of operations to perform multi-digit arithmetic.	CC.2.1.3.B.1	January
Use place-value understanding and properties of operations to perform multi-digit arithmetic.	M03.A-T.1	January
Round two- and three-digit whole numbers to the nearest ten or hundred, respectively.	M03.A-T.1.1.1	December
Add two- and three-digit whole numbers (limit sums from 100 through 1,000) and/or subtract two- and three-digit numbers from three-digit whole numbers.	M03.A-T.1.1.2	January February
Multiply one-digit whole numbers by two-digit multiples of 10 (from 10 through 90).	M03.A-T.1.1.3	February
Order a set of whole numbers from least to greatest or greatest to least (up through 9,999, and limit sets to no more than four numbers).	M03.A-T.1.1.4	December
Explore and develop an understanding of fractions as numbers.	CC.2.1.3.C.1	March
Develop an understanding of fractions as numbers.	M03.A-F.1	March
Demonstrate that when a whole or set is partitioned into y equal parts, the fraction $1/y$ represents 1 part of the whole and/or the fraction x/y represents x equal parts of the whole (limit denominators to 2, 3, 4, 6, and 8; limit numerators to whole numbers less than the denominator; and no simplification necessary).	M03.A-F.1.1.1	March
Represent fractions on a number line (limit denominators to 2, 3, 4, 6, and 8; limit numerators to whole numbers less than the denominator; and no simplification necessary).	M03.A-F.1.1.2	March
Recognize and generate simple equivalent fractions (limit the denominators to 1, 2, 3, 4, 6, and 8 and limit numerators to whole numbers less than the denominator). Example 1: $1/2 = 2/4$ Example 2: $4/6 = 2/3$	M03.A-F.1.1.3	March
Express whole numbers as fractions, and/or generate fractions that are equivalent to whole numbers (limit denominators to 1, 2, 3, 4, 6, and 8). Example 1: Express 3 in the form $3 = 3/1$. Example 2: Recognize that $6/1 = 6$.	M03.A-F.1.1.4	March
Compare two fractions with the same denominator (limit denominators to 1, 2, 3, 4, 6, and 8), using the symbols $>$, $=$, or $<$, and/or justify the conclusions.	M03.A-F.1.1.5	March
Represent and solve problems involving multiplication and division.	CC.2.2.3.A.1	September

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Performance Indicator	PA Core Standard and/or Eligible Content	Month Taught and Assessed for Mastery
Interpret and/or describe products of whole numbers (up to and including 10×10). Example 1: Interpret 35 as the total number of objects in 5 groups, each containing 7 objects. Example 2: Describe a context in which a total number of objects can be expressed as 5×7 .	M03.B-O.1.1.1	September October
Interpret and/or describe whole-number quotients of whole numbers (limit dividends through 50 and limit divisors and quotients through 10). Example 1: Interpret $48 \div 8$ as the number of objects in each share when 48 objects are partitioned equally into 8 shares, or as a number of shares when 48 objects are partitioned into equal shares of 8 objects each. Example 2: Describe a context in which a number of shares or a number of groups can be expressed as $48 \div 8$.	M03.B-O.1.1.2	September November
Solve mathematical and real-world problems using multiplication and division, including determining the missing number in a multiplication and/or division equation.	M03.B-O.1.2	September October
Use multiplication (up to and including 10×10) and/or division (limit dividends through 50 and limit divisors and quotients through 10) to solve word problems in situations involving equal groups, arrays, and/or measurement quantities.	M03.B-O.1.2.1	September November
Determine the unknown whole number in a multiplication (up to and including 10×10) or division (limit dividends through 50 and limit divisors and quotients through 10) equation relating three whole numbers. Example: Determine the unknown number that makes an equation true.	M03.B-O.1.2.2	October
Understand properties of multiplication and the relationship between multiplication and division.	CC.2.2.3.A.2	September
Apply the commutative property of multiplication (not identification or definition of the property).	M03.B-O.2.1.1	September
Apply the associative property of multiplication (not identification or definition of the property).	M03.B-O.2.1.2	September
Relate division to a missing number multiplication equation.	M03.B-O.2.2	October
Interpret and/or model division as a multiplication equation with an unknown factor. Example: Find $32 \div 8$ by solving $8 \times ? = 32$.	M03.B-O.2.2.1	October
Demonstrate multiplication and division fluency.	CC.2.2.3.A.3	September
Solve problems involving the four operations, and identify and explain patterns in arithmetic.	CC.2.2.3.A.4	September
Solve two-step word problems using the four operations (expressions are not explicitly stated). Limit to problems with whole numbers and having whole-number answers.	M03.B-O.3.1.1	October February
Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit to problems with whole numbers and having whole-number answers.	M03.B-O.3.1.2	October December
Assess the reasonableness of answers. Limit problems posed with whole numbers and having whole-number answers.	M03.B-O.3.1.3	December January
Solve two-step equations using order of operations (equation is explicitly stated with no grouping symbols).	M03.B-O.3.1.4	February

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Identify arithmetic patterns (including patterns in the addition table or multiplication table) and/or explain them using properties of operations. Example 1: Observe that 4 times a number is always even. Example 2: Explain why 6 times a number can be decomposed into three equal addends.	M03.B-O.3.1.5	September December
Create or match a story to a given combination of symbols (+, −, ×, ÷, and =) and numbers.	M03.B-O.3.1.6	October
Identify the missing symbol (+, −, ×, ÷, and =) that makes a number sentence true.	M03.B-O.3.1.7	February
Identify, compare, and classify shapes and their attributes.	CC.2.3.3.A.1	April
Reason with shapes and their attributes.	M03.C-G.1	April
Analyze characteristics of polygons.	M03.C-G.1.1	March
Explain that shapes in different categories may share attributes and that the shared attributes can define a larger category. Example 1: A rhombus and a rectangle are both quadrilaterals since they both have exactly four sides. Example 2: A triangle and a pentagon are both polygons since they are both multi-sided plane figures.	M03.C-G.1.1.1	April
Recognize rhombi, rectangles, and squares as examples of quadrilaterals and/or draw examples of quadrilaterals that do not belong to any of these subcategories.	M03.C-G.1.1.2	April
Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. Example 1: Partition a shape into 4 parts with equal areas. Example 2: Describe the area of each of 8 equal parts as $\frac{1}{8}$ of the area of the shape.	M03.C-G.1.1.3	March
Use the understanding of fractions to partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.	CC.2.3.3.A.2	March
Explain that shapes in different categories may share attributes and that the shared attributes can define a larger category. Example 1: A rhombus and a rectangle are both quadrilaterals since they both have exactly four sides. Example 2: A triangle and a pentagon are both polygons since they are both multi-sided plane figures.	M03.C-G.1.1.1	April
Solve problems involving measurement and estimation of temperature, liquid volume, mass or length.	CC.2.4.3.A.1	November May
Solve problems involving measurement and estimation of intervals of time, money, liquid volumes, masses, and lengths of objects.	M03.D-M.1	April May
Determine or calculate time and elapsed time.	M03.D-M.1.1	May
Tell, show, and/or write time (analog) to the nearest minute.	M03.D-M.1.1.1	May
Calculate elapsed time to the minute in a given situation (total elapsed time limited to 60 minutes or less).	M03.D-M.1.1.2	May
Measure and estimate liquid volumes and masses of objects using standard units (cups [c], pints [pt], quarts [qt], gallons [gal], ounces [oz.], and pounds [lb]) and metric units (liters [l], grams [g], and kilograms [kg]).	M03.D-M.1.2.1	May

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Add, subtract, multiply, and divide to solve one-step word problems involving masses or liquid volumes that are given in the same units.	M03.D-M.1.2.2	May
Use a ruler to measure lengths to the nearest quarter inch or centimeter.	M03.D-M.1.2.3	April
Compare total values of combinations of coins (penny, nickel, dime, and quarter) and/or dollar bills less than \$5.00.	M03.D-M.1.3.1	May
Make change for an amount up to \$5.00 with no more than \$2.00 change given (penny, nickel, dime, quarter, and dollar).	M03.D-M.1.3.2	May
Round amounts of money to the nearest dollar.	M03.D-M.1.3.3	May
Tell and write time to the nearest minute and solve problems by calculating time intervals.	CC.2.4.3.A.2	May
Solve problems and make change involving money using a combination of coins and bills.	CC.2.4.3.A.3	May
Represent and interpret data using tally charts, tables, pictographs, line plots, and bar graphs.	CC.2.4.3.A.4	May
Represent and interpret data.	M03.D-M.2	November
Complete a scaled pictograph and a scaled bar graph to represent a data set with several categories (scales limited to 1, 2, 5, and 10).	M03.D-M.2.1.1	November
Solve one- and two-step problems using information to interpret data presented in scaled pictographs and scaled bar graphs (scales limited to 1, 2, 5, and 10). Example 1: (One-step) "Which category is the largest?" Example 2: (Two-step) "How many more are in category A than in category B?"	M03.D-M.2.1.2	November
Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Display the data by making a line plot, where the horizontal scale is marked in appropriate units—whole numbers, halves, or quarters.	M03.D-M.2.1.3	March
Translate information from one type of display to another. Limit to pictographs, tally charts, bar graphs, and tables. Example: Convert a tally chart to a bar graph.	M03.D-M.2.1.4	November
Determine the area of a rectangle and apply the concept to multiplication and to addition.	CC.2.4.3.A.5	October
Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	M03.D-M.3	October
Measure areas by counting unit squares (square cm, square m, square in., square ft, and non-standard square units).	M03.D-M.3.1.1	October
Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	M03.D-M.3.1.2	October
Solve problems involving perimeters of polygons and distinguish between linear and area measures.	CC.2.4.3.A.6	April
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	M03.D-M.4	April

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Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, exhibiting rectangles with the same perimeter and different areas, and exhibiting rectangles with the same area and different perimeters. Use the same units throughout the problem.	M03.D-M.4.1.1	April

ASSESSMENTS

PSSA Academic Standards, Assessment Anchors, and Eligible Content: The teacher must be knowledgeable of the PDE Academic Standards, Assessment Anchors, and Eligible Content and incorporate them regularly into planned instruction.

Formative Assessments: The teacher will utilize a variety of assessment methods to conduct in-process evaluations of student learning.

Effective formative assessments for this course include: center activities, cooperative learning activities, games, online activities, oral responses, teacher observations, and worksheets.

Summative Assessments: The teacher will utilize a variety of assessment methods to evaluate student learning at the end of an instructional task, lesson, and/or unit.

Effective summative assessments for this course include: performance assessments, projects, tests, and quizzes.