**Description:** The East Stroudsburg Area School District's Elementary Mathematics Planned Course reflects the Common Core Standards, Teachers of Mathematics *Principals and Standards for Mathematics Education,* the Pennsylvania State Standards for Mathematics Education and the Pennsylvania Department of Education Assessment Anchors and Eligible Content. It provides a research-based, sequential framework of content designed to maximize successful mastery of mathematics, use and application of the Standards for Mathematical Practices, as well as the Habits of Mind.

| **Standards for Mathematical Practices** | **Habits of Mind** |
|---|---|
| 1. Make sense of problems and persevere in solving them.<br>2. Reason abstractly and quantitatively.<br>3. Construct viable arguments and critique the reasoning of others.<br>4. Model with mathematics.<br>5. Use appropriate tools strategically.<br>6. Attend to precision.<br>7. Look for and make use of structure.<br>8. Look for and express regularity in repeated reasoning. | 1. Persisting<br>2. Managing Impulsivity<br>3. Listening to Others with Empathy and Understanding<br>4. Thinking Flexibly<br>5. Metacognition<br>6. Striving for Accuracy and Precision<br>7. Questioning and Posing Problems<br>8. Applying Past Knowledge to New Situations<br>9. Thinking and Communicating with Clarity and Precision<br>10. Gathering Data through all Senses<br>11. Creating, Imagining, and Innovating<br>12. Responding with Wonderment and Awe<br>13. Taking Responsible Risks<br>14. Finding Humor |

The Mathematics Curriculum is designed to address the needs of a diverse population of learners. The content builds upon student learning styles and provides for differentiated instruction. Each grade level includes opportunities for enrichment and remediation of concepts, as well as activities for English Language Learners.

Resources are provided to enhance mastery of mathematics vocabulary, basic skills, and problem solving strategies. Technology, communication arts, social studies, science, and children's literature are infused throughout the curriculum. As a result, learners will be offered opportunities to reason, communicate and connect mathematically in the real world.

## In Grade 3, Instructional Time should focus on four critical areas:

1. Developing understanding of multiplication and division and strategies for multiplication and division within 100.

2. Developing understanding of fractions, especially unit fractions (fractions with numerator 1).

3. Developing understanding of the structure of rectangular arrays and of area.

4. Describing and analyzing two-dimensional shapes.

## The Four Critical Areas:

1. Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is finding an unknown factor in these situations. For equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties of operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multiplication and division.

2.  Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. For example, 1/2 of the paint in a small bucket could be less paint than 1/3 of the paint in a larger bucket, but 1/3 of a ribbon is longer than 1/5 of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into 5 equal parts. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.

3.  Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same-size units of area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.

4.  Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

# Grade 3 Overview

- **Operations and Algebraic Thinking**
    - Represent and solve problems involving multiplication and division.
    - Understand properties of multiplication and the relationship between multiplication and division.
    - Multiply and divide within 100.
    - Solve problems involving the four operations, and identify and explain patterns in arithmetic.

- **Number and Operations in Base Ten**
    - Use place value understanding and properties of operations to perform multi-digit arithmetic.

- **Number and Operations—Fractions**
    - Develop understanding of fractions as numbers.

- **Measurement and Data**
    - Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.
    - Represent and interpret data.
        - Geometric measurement:  Understand concepts of area and relate area to multiplication and to addition.
        - Geometric measurement:  Recognize perimeter as an attribute of plane figures and distringuish between linear and area measures.

- **Geometry**
    - Reason with shapes and their attributes.

# Scope & Sequence

**Unit 1:  Number and Operations in Base Ten / Place Value**

**( 12 Days: August – September )**

Domain:  Number and Operations in Base Ten

*Cluster:  Apply place-value strategies to solve problems*

**Unit 2:  Operations and Algebraic Thinking *and* Numbers and Operations in Base Ten / Multiplication**
**(15 Days:  September – October)**

Domain:  Operations and Algebraic Thinking

*Cluster:  Represent and solve problems involving multiplication*

Domain:  Numbers and Operations in Base Ten

*Cluster:  Apply place – value strategies to solve problems*

**Unit 3:  Operations and Algebraic Thinking / Division**
**(15 Days:  October)**

Domain:  Operations and Algebraic Thinking

*Cluster:  Relate division to a missing – number multiplication equation*

*Cluster:  Understand various meanings of multiplication and division*

*Cluster:  Use operations, patterns, and estimation strategies to solve problems (may include word problems)*

**Unit 4:  Operations and Algebraic Thinking / Equations and Patterns**
**(9 Days:  October and November)**

Domain:  Operations and Algebraic Thinking

*Cluster:  Understand various meanings of multiplication and division*

*Cluster:  Use operations, patterns, and estimation strategies to solve problems (may include word problems)*

**Unit 5:  Operations and Algebraic Thinking / Word Problems**
**(10 Days:  November)**

Domain:  Operations and Algebraic Thinking

*Cluster:  Solve mathematical and real-world problems using multiplication and division, including determining the missing number in a multiplication and/ or division equation*

*Cluster:  Use operations, patterns, and estimation strategies to solve problems (may include word problems)*

## Unit 6:  Geometry

**(10 Days:  November – December)**

Domain:  Geometry

*Cluster:  Analyze characteristics of polygons*

## Unit 7:  Numbers and Operations – Fractions
**(11 Days:  December – January)**

Domain:  Numbers and Operations

*Cluster:  Develop and apply number theory concepts to compare quantities and magnitudes of fractions and whole numbers*

## Unit 8:  Measurement and Data – Area and Perimeter
**(10 Days:  January)**

Domain:  Measurement and Data

*Cluster:  Find the areas of plane figures*

*Cluster:  Find the and use the perimeter of plane figures*

**Unit 9:  Measurement and Data – Time**

**(10 Days:  January – February)**

Domain:  Measurement and Data

*Cluster:  Determine or calculate time and elapsed time*

**Unit 10:  Measurement and Data – Liquid Measurement**
**(12 Days:  February)**
Domain:  Measurement and Data

*Cluster:  Use the attributes of liquid volume, mass, and length of objects*

**Unit 11:  Measurement and Data – Money**
**(10 Days:  February – March)**

Domain:  Measurement and Data

*Cluster:  Count, compare, and make change using a collection of coins and one dollar bills*

**Unit 12:  Measurement and Data – Graphs**
**(10 Days:  March)**

Domain:  Measurement and Data

*Cluster: Organize, display, and answer questions based on data*

**Fourth Marking Period Curriculum**    **(after PSSA – end of the school year)**

Under Construction!  Ideas Include:

- Re-teaching or continued practice of third grade skills that need revisiting
- A look ahead at fourth grade concepts and skills that could be introduced
- More time spent with Investigation materials – especially those that support / extend / lead into 4th grade
- Projects that involve the review and application of skills in real-world problems

| **Unit Title/Skill Set**: Unit 1. Number and Operation in Base Ten | **Course Time Prior to Keystone/PSSA:** 12 days August/ September |
|---|---|
| **Overview:** This unit will use place value understanding and properties of operations to perform multi-digit arithmetic. Students will order a set of whole numbers, add two and three digit whole numbers, subtract two-and three-digit whole numbers from three digit whole numbers, and round two- and three- digit whole numbers to the nearest ten or hundred. | **ELL Differentiation:** Math and Language Arts specific found at:www.pdesas.org/module/sas/curriculumframework/ello verlay.aspx. Generic found at http://www.esasd.net/esl: www.wida.us/ |
| **Unit Essential Questions:** : How can place value be used to order whole numbers, to add and subtract two and three digit numbers, and to round two and three digit whole numbers? | **Enrichment:**<br>Compass Learning Odyssey: from ESASD Instructional Resources Link<br>Cool Math http://www.coolmath.com/<br>Kid's College http://www.kclogin.com/main/go.php<br>Khan Academy: http://www.khanacademy.org<br>Pearson SuccessNET: on-line Teachers Edition – Click on appropriate "topic" to open window to select "Enrichment" link |
| **PA & National Content Standard(s):** *State found at* *www.pdesas.org/standard/standardsdownloads*<br><br>**National Content Standard 3.NBT** ((Numbers and Operations in Base Ten) – See appendix #2<br><br>**PA Content Standard(s): CC.2.1.3.B.1** (place value) | **Remediation:**<br>Compass Learning Odyssey https://www.thelearningodyssey.com<br>Cool Math http://www.coolmath.com/<br>Kid's College http://www.kclogin.com/main/go.php<br>Khan Academy: http://www.khanacademy.org<br>envisions: Math Diagnostic and Intervention Systems |
| **Connecting to Common Core and Other Standards:**<br>*Common Core found at www.corestandards.org/:*<br>*ISTE found at www.iste.org/standards/nets-for-students.aspx*:(See appendix #3) 1a, 1b, 1c, 2c, 2d, 5a, 5b, 6a, 6b<br>*Career Education and Work found at www.pacareerstandards.com/*: (See appendix #4) 13-1, 13-2, 13-3, 13-4 | **IEP/GIEP:** Refer to individual student's educational plan under specially designed instruction. |

| Assessment Anchors & Eligible Content | Unit Concepts<br>What students need to know | Unit Competencies<br>What students need to be able to do (skills) | Content Vocabulary | Materials, Resources, & Instructional Activities | Assessments |
|---|---|---|---|---|---|
| M03.A-T.1.1<br>MO3.A-T.1.1.2<br>MO3.A-T.1.1.4 | • Apply place-value strategies to solve problems. | • Order a set of whole numbers from least to greatest or greatest to least. (Up through 9,999; limit sets to no more than four numbers)<br><br>• Add two and three digit whole numbers (limit sums from 100 through 1,000)<br><br>• Subtract two- and three-digit numbers from three digit whole numbers<br><br>• Round two- and three- digit whole numbers to the nearest ten or hundred, respectively | • Digit<br>• Multi-digit<br>• Base 10<br>• Whole Number<br>• Ones Place<br>• Tens Place<br>• Hundreds Place<br>• Thousands Place<br>• Ones Period<br>• Thousands Period<br>• Comma<br>• Greatest<br>• Least<br>• Order<br>• Rounding | Scott Foresman-Addison Wesley, enVisionMath, Grade 3(enV). (Pearson Education, Inc. ©2009) 1-5A, 1-5B, 1-5, 1-6, 1-9, 2-4, 2-8, 4-6, 2-1, 2-6, 2-7A, 2-7, 2-8, 2-9, 2-10, 3-5, 4-1A, 4-1, 4-2, 4-3A, 4-3, 4-4, 4-5, 16-4<br><br>Investigations (Pearson Education, Inc. ©2004/ Dale Seymore Publications ® Copyright 1998 | **Diagnostic**<br>• NWEA MAP data<br>• enV, Placement Test<br>• enV Basic Facts Timed Tests<br>• enV Topic Opener ("Review What You Know")<br>**Formative**<br>• enV, Quick Check Masters<br>• enV, Re-Teaching pages<br>• enV, Independent Practice<br>• enV, Enrichment Practice<br>• Math journals<br>• Teacher Observation<br>• Teacher-made quizzes/tests |

| | | | | **Summative**<br>• ESASD Unit Assessments and Quizzes<br>• enV, PSSA Mathematics Test Prep<br>• enV Student text, Topic Test<br>• enV, Free Response Test Masters<br>• enV, Multiple Choice Test Masters<br>• enV, Performance Assessment Masters<br>• enV Cumulative Test Masters<br>• enV, Online Test Generator |
| --- | --- | --- | --- | --- |

| **Unit Title/Skill Set:** Unit 2 Operations and Algebraic Thinking and Numbers and Operations in Base Ten | **Course Time Prior to Keystone/PSSA:** 15 days September/October |
|---|---|
| **Overview:** This unit will use place value understanding and properties of operations to perform multi-digit arithmetic. Students will interpret and / or describe products of whole numbers up to 10 x 10, as well as multiplying one –digit whole numbers by two-digit multiples. Students will also use the commutative and associative properties of multiplication to simplify and solve multiplication problems. | **ELL Differentiation:** Math and Language Arts specific found at www.pdesas.org/module/sas/curriculumframework/elloverlay.aspx. Generic found at http://www.esasd.net/esl: www.wida.us/ |
| **Unit Essential Questions: :** How can we use equal groups to find how many in all? How is multiplication like addition? How can basic facts help us when we multiply a single digit number by a multiple of ten? How can arithmetic patterns help us when using properties of multiplication? How can we use the properties of multiplication to find products? | **Enrichment:** Compass Learning Odyssey: from ESASD Instructional Resources Link Cool Math http://www.coolmath.com/ Kid's College http://www.kclogin.com/main/go.php Khan Academy: http://www.khanacademy.org Pearson SuccessNET: on-line Teachers Edition – Click on appropriate "topic" to open window to select "Enrichment" link |
| **PA & National Content Standard(s):** *State found at www.pdesas.org/standard/standardsdownloads:* **National Content Standard 30A.1**(Operations and Algebraic Thinking) and 3.NBT (Numbers and Operations in Base Ten) **PA Content Standard(s): CC.2.2.3.A.1** (multiplication) and **C.C.2.2.3.A.1** (represent and solve problems involving multiplication and division | **Remediation:** Compass Learning Odyssey: from ESASD Instructional Resources Link Cool Math http://www.coolmath.com/ Kid's College http://www.kclogin.com/main/go.php Khan Academy: http://www.khanacademy.org Pearson SuccessNET: on-line Teachers Edition – Click on appropriate "topic" to open window to select "Enrichment" link envisions: Math diagnostic and Intervention Systems |
| **Connecting to Common Core and Other Standards:** *Common Core found at www.corestandards.org/:* Click here to enter text. *ISTE found at www.iste.org/standards/nets-for-students.aspx*: (see appendix # 3) 1a, 1b, 1c, 2a, 2c, 2d, 4b, 5a, 5b, 5c, 5d, 6a, 6b *Career Education and Work found at www.pacareerstandards.com/*: (see appendix #4) 13-1, 13-2, 13-3, 13-4 | **IEP/GIEP:** Refer to individual student's educational plan under specially designed instruction. |

| Assessment Anchors & Eligible Content | Unit Concepts What students need to know | Unit Competencies What students need to be able to do (skills) | Content Vocabulary | Materials, Resources, & Instructional Activities | Assessments |
|---|---|---|---|---|---|
| M03.B-O.1.1 M03.B-O.1.1.1 M03.B-O.2.1.1 M03.B-O.2.1.2 MO3.A-T.1.1 MO3.A-T.1.1.3 | • Represent and solve problems involving multiplication. • Apply place-value strategies to solve problems | • Interpret and /or describe products of whole numbers (up to and including 10 x 10) • Apply the commutative property of multiplication (not the identification or definition of the property) • Apply the associative property of multiplication (not the identification or definition of the property) • Multiply one- digit whole numbers by two-digit multiples of 1 (from 10 through 90) | • Multiply • Multiplication • Multiple • Factor • Product • Array • Skip counting • Order • Related Facts • Patterns • Expression • Property • Commutative Property • Associative Property • Equation • Equal Groups • Symbol • Place Value • Mental Computations • Whole Numbers | Scott Foresman-Addison Wesley, enVisionMath, Grade 3(enV). (Pearson Education, Inc. ©2009) 5-1, 5-2, 5-3, 5-4, 5-5, 5-7, 5-8A, 6-2, 6-5,  6-6, 18-1, 18-2, 18-4, 18-5  Investigations (Pearson Education, Inc. ©2004/ Dale Seymore Publications ® Copyright 1998 | **Diagnostic** • NWEA MAP data • enV, Placement Test • enV Basic Facts Timed Tests • enV Topic Opener ("Review What You Know")  **Formative** • enV, Quick Check Masters • enV, Reteaching pages • enV, Independent Practice • enV, Enrichment Practice • Math journals • Teacher observation • Teacher-made quizzes/tests |

| | | | | | **Summative**<br>• ESASD Unit Assessments and Quizzes<br>• enV, PSSA Mathematics Test Prep<br>• enV Student text, Topic Test<br>• enV, Free Response Test Masters<br>• enV, Multiple Choice Test Masters<br>• enV, Performance Assessment Masters<br>• enV Cumulative Test Masters<br>• enV, Online Test Generator |
|---|---|---|---|---|---|

| Unit Title/Skill Set: Unit 3 Operations and Algebraic Thinking | Course Time Prior to Keystone/PSSA: 15 days October |
|---|---|
| **Overview: :** This unit will have students represent and solve problems involving multiplication and division. It will include interpreting and/ or modeling division as a multiplication equation with an unknown factor, interpreting and/or describing whole-number quotients, and solving two-step equations using order of operations. | **ELL Differentiation:** Math and Language Arts specific found at www.pdesas.org/module/sas/curriculumframework/elloverlay.aspx. Generic found at http://www.esasd.net/esl: www.wida.us/ |
| **Unit Essential Questions: :** How can we use multiplication to divide? How can we write a set of related multiplication and division facts? How can we use various strategies and the order of operations to solve two-step equations? | **Enrichment:**<br>Compass Learning Odyssey: from ESASD Instructional Resources Link<br>Cool Math http://www.coolmath.com/<br>Kid's College http://www.kclogin.com/main/go.php<br>Khan Academy: http://www.khanacademy.org<br>Pearson SuccessNET: on-line Teachers Edition – Click on appropriate "topic" to open window to select "Enrichment" link |
| **PA & National Content Standard(s):** *State found at www.pdesas.org/standard/standardsdownloads:*<br>**National Content Standard: 3.OA.1** (Operations and Algebraic Thinking)<br>**PA Content Standard(s): CC.2.2.3.A.2** (relating multiplication and division) **CC.2.2.3.A.1** (solving multiplication and division problems) and **CC2.2.3.A.4** (solve problems involving the four operations) | **Remediation:**<br>Compass Learning Odyssey: from ESASD Instructional Resources Link<br>Cool Math http://www.coolmath.com/<br>Kid's College http://www.kclogin.com/main/go.php<br>Khan Academy: http://www.khanacademy.org<br>envisions: Math diagnostic and Intervention Systems |
| **Connecting to Common Core and Other Standards:**<br>*Common Core found at www.corestandards.org/:* Click here to enter text.<br>*ISTE found at www.iste.org/standards/nets-for-students.aspx*: (see appendix # 3) 1a, 1b, 1c, 2a, 2c, 2d, 4b, 5a, 5b, 5c, 5d, 6a, 6b<br>*Career Education and Work found at www.pacareerstandards.com/*: (see appendix #4) 13-1, 13-2, 13-3, 13-4 | **IEP/GIEP:** Refer to individual student's educational plan under specially designed instruction. |

| Assessment Anchors & Eligible Content | Unit Concepts<br>What students need to know | Unit Competencies<br>What students need to be able to do (skills) | Content Vocabulary | Materials, Resources, & Instructional Activities | Assessments |
|---|---|---|---|---|---|
| M03.B-0.1.1.1<br>M03.B-0.1.1.2<br>MO3.B-O.2.2<br>M03.B-0.2.2.1<br>MO3.B-O.3.1<br>M03.B-0.3.1.4 | • Relate division to a missing-number multiplication equation<br><br>• Understand various meanings of multiplication and division<br><br>• Use operations, patterns, and estimation strategies to solve problem (may include word problems). | • Interpret and/ or model division as a multiplication equation with an unknown factor. Example:  Find 32 ÷ 8 by solving 8 x ? = 32<br><br>• Interpret and/or describe whole-number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10). <u>Example 1</u>: *Interpret 48 ÷ 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 <u>2</u>: Describe a context in which a number of shares or a number of groups can be expressed as 48 ÷ 8.*<br><br>• Solve two-step equations using order of operations (equation is explicitly states with no grouping symbols.) | • Product<br>• Factor<br>• Divide<br>• Division<br>• Decomposing<br>• Quotient<br>• Divisor<br>• Dividend<br>• Reasonable<br>• Inverse Operations<br>• Even /Odd<br>• Strategies<br>• Symbol<br>• Quantity<br>• Partitioned<br>• Array<br>• Property<br>• Algorithm | <u>Scott Foresman-Addison Wesley, envision Math, Grade 3</u>(enV). (Pearson Education, Inc. ©2009) 3-5, 7-1, 7-2, 7-3, 7-2A, 7-4A, 7-5, 8-2, 8-3, 8-4, 19-1, 19-3<br><br><u>Investigations</u> (Pearson Education, Inc. ©2004/ Dale Seymore Publications ® Copyright 1998 | <u>**Summative**</u><br>• ESASD Unit Assessments and Quizzes<br>• enV PSSA Mathematics Test Prep<br>• enV Student test, topic Test<br>• enV, Free Response Test Masters<br>• enV, Multiple Choice Test Masters<br>• enV, Performance Assessment Masters<br>• enV, Cumulative Test Masters<br>• enV, online Test Generator |

| **Unit Title/Skill Set:** Unit 4 Operations and Algebraic Thinking | **Course Time Prior to Keystone/PSSA:** 9 days October/ November |
|---|---|
| **Overview:** This unit will have students represent and solve problems involving multiplication and division. They will understand various meanings of multiplication and division, and use operations, patterns, and estimation strategies to solve problems. | **ELL Differentiation:** Math and Language Arts specific found at www.pdesas.org/module/sas/curriculumframework/elloverlay.aspx. Generic found at http://www.esasd.net/esl: www.wida.us/ |
| **Unit Essential Questions:** What strategies can be used to relate multiplication and division? What operations, patterns, and estimation strategies can be used to solve problems? | **Enrichment:** Compass Learning Odyssey https://www.thelearningodyssey.org Cool Math http://www.coolmath.com/ Kid's College http://www.kclogin.com/main/go.php Pearson SuccessNET https://www.pearsonsuccessnet.com |
| **PA & National Content Standard(s):** *State found at www.pdesas.org/standard/standardsdownloads:* **National Content Standard : 3.OA.1** (Operations and Algebraic Thinking) **PA Content Standard(s): CC.2.2.3.A.1** (Multiplication and division) CC.2.2.3.A.4 (Operations and Patterns) | **Remediation:** Compass Learning Odyssey https://www.thelearningodyssey.org Cool Math http://www.coolmath.com/ Kid's College http://www.kclogin.com/main/go.php Pearson SuccessNET https://www.pearsonsuccessnet.com |
| **Connecting to Common Core and Other Standards:** *Common Core found at www.corestandards.org/:* Click here to enter text. *ISTE found at www.iste.org/standards/nets-for-students.aspx:*(See appendix # 3) 1a, 1b, 1c, 2a, 2c, 2d,  4b, 5a, 5b, 5c, 5d, 6a, 6b *Career Education and Work found at www.pacareerstandards.com/:* See appendix #4) 13-1, 13-2, 13-3, 13-4 | **IEP/GIEP:** Refer to individual student's educational plan under specially designed instruction. |

| Assessment Anchors & Eligible Content | Unit Concepts What students need to know | Unit Competencies What students need to be able to do (skills) | Content Vocabulary | Materials, Resources, & Instructional Activities | Assessments |
|---|---|---|---|---|---|
| M03.B-0.1.1 M03.B-0.1.2.2 M03.B-0.3.1 M03-B-0.3.1.7 M03.B-0.3.1.5 | • Understand various meanings of multiplication and division. <br><br> • Use operations, patterns, and estimation strategies to solve problems (may include word problems). | • 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. <br><br> • Identify the missing symbol (+, −, ×, ÷, <, >, =) that makes a number sentence true. <br><br> • Identity 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. | • Product <br> • Factor <br> • Multiple <br> • Multiplication <br> • Divide <br> • Division <br> • Decomposing <br> • Quotient <br> • Divisor <br> • Dividend <br> • Patterns <br> • Reasonable <br> • Inverse Operations <br> • Even /Odd <br> • Strategies <br> • Symbol <br> • Quantity <br> • Array <br> • Property <br> • Algorithm <br> • Whole number <br> • Greater than <br> • Less than <br> • Equal to | Scott Foresman-Addison Wesley, enVisionMath, Grade 3(enV). (Pearson Education, Inc. ©2009) 5-2, 7-1, 7-2A, 7-3, 7-4A, 7-4, 7-5, 8-1, 8-2, 8-3, 8-4, 8-5A, 8-5, 19-1 Algebra Connection: Topic 6 pg. 147, Topic 8 pg. 189 <br><br> <u>Investigations</u> (Pearson Education, Inc. ©2004/ Dale Seymore Publications ® Copyright 1998: Mathematical Thinking at Grade 3 | **<u>Diagnostic</u>** <br> • NWEA MAP data <br> • enV, Placement Test <br> • enV Basic Facts Timed Tests <br> • enV Topic Opener ("Review What You Know") <br><br> **<u>Formative</u>** <br> • enV, Quick Check Masters <br> • enV, e-Teaching pages <br> • enV, Independent Practice <br> • enV, Enrichment Practice |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | • Math journals<br>• Teacher Observation<br>• Teacher-made quizzes/tests<br>**Summative**<br>• ESASD Unit Assessments and Quizzes<br>• enV, PSSA Mathematics Test Prep<br>• enV Student text, Topic Test<br>• enV, Free Response Test Masters<br>• enV, Multiple Choice Test Masters<br>• enV, Performance Assessment Masters<br>• enV Cumulative Test Masters<br>• enV, Online Test |

| Unit Title/Skill Set: Unit 5 Operations and Algebraic Thinking | Course Time Prior to Keystone/PSSA: 10 days November |
|---|---|
| **Overview:** This unit will have students represent and solve problems involving multiplication and division.  It will focus on applying this skill in word problems. | **ELL Differentiation:** Math and Language Arts specific found at www.pdesas.org/module/sas/curriculumframework/elloverlay.aspx. Generic found at http://www.esasd.net/esl: www.wida.us/ |
| **Unit Essential Questions: :**  How can we use multiplication and division to solve word problems?  What strategies can be used (ex. Act it Out, Draw a Diagram, Find a Pattern, Make a Table, etc.) to solve word problems? | **Enrichment:** Compass Learning Odyssey:  from ESASD Instructional Resources Link Cool Math http://www.coolmath.com/ Kid's College http://www.kclogin.com/main/go.php Khan Academy: http://www.khanacademy.org Pearson SuccessNET: on-line Teachers Edition – Click on appropriate "topic" to open window to select "Enrichment" link |
| **PA & National Content Standard(s):** *State found at* *www.pdesas.org/standard/standardsdownloads:* **National Content Standard:3.OA.1** (Operations and Algebraic Thinking) **PA Content Standard(s):CC.2.2.3.A.1** (Multiplication and Division) **CC.2.2.3.A.4**  (Solving problems using the four operations / patterns in Arithmetic) | **Remediation:** Compass Learning Odyssey:  from ESASD Instructional Resources Link Cool Math http://www.coolmath.com/ Kid's College http://www.kclogin.com/main/go.php Khan Academy: http://www.khanacademy.org envisions:  Math Diagnostic and Intervention Systems |
| **Connecting to Common Core and Other Standards:** *Common Core found at www.corestandards.org/:* *ISTE found at www.iste.org/standards/nets-for-students.aspx*:(See appendix #3) 1c, 2d, 4a, 4b, 4c, 4d,  5b, 5c, *Career Education and Work found at www.pacareerstandards.com/:*(See appendix #4) 13-1, 13-2, 13-3, 13-4 | **IEP/GIEP:** Refer to individual student's educational plan under specially designed instruction. |

| Assessment Anchors & Eligible Content | Unit Concepts What students need to know | Unit Competencies What students need to be able to do (skills) | Content Vocabulary | Materials, Resources, & Instructional Activities | Assessments |
|---|---|---|---|---|---|
| MO3.B-O.1.2￼ M03.B-O.1.2.1￼ MO3.B-O.3.1￼ M03.B-0.3.1.1￼ M03.B-03.1.2￼ M03.B-0.3.1.3￼ M03.B-03.1.6 | • Solve mathematical and real-world problems using multiplication and division, including determining the missing number in a multiplication and/ or division equation.￼ ￼• Use operations, patterns, and estimation strategies to solve problems (may include word problems). | • 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.￼ ￼• Create or match a story to a given combination of symbols (+, −, ×, ÷, <, >, =) and numbers.￼ ￼• 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.￼ ￼• 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.￼ ￼• Assess the reasonableness of answers. Limit problems posed with whole numbers and having whole-number answers. | • Product￼ • Factor￼ • Multiple￼ • Multiplication￼ • Divide￼ • Division￼ • Equations￼ • Decomposing￼ • Quotient￼ • Divisor￼ • Dividend￼ • Patterns￼ • Reasonable￼ • Inverse Operations￼ • Strategies￼ • Symbol￼ • Quantity￼ • Array￼ • Property￼ • Algorithm￼ • Whole number￼ • Greater than￼ • Less than￼ • Equal to | <u>Scott Foresman-Addison Wesley, enVisionMath, Grade 3</u>(enV). (Pearson Education, Inc. ©2009) 5-1, 5-2, 5-3, 5-4, 5-5, 5-6, 5-7, 5-8, 5-9, 5-10, 6-1A, 6-1, 6-2, 6-3, 6-4, 6-5, 6-6, 6-7A, 6-7, 7-1, 7-2, 7-3, 7-4, 7-5, 8-1, 8-2, 8-3, 8-4, 8-5A, 8-5, 8-6, 12-10, 18-6, 18-7,￼ ￼<u>Investigations</u> (Pearson Education, Inc. ©2004/ Dale Seymore Publications ® Copyright 1998 | **<u>Diagnostic</u>**￼ • NWEA MAP data￼ • enV, Placement Test￼ • enV Basic Facts Timed Tests￼ • enV Topic Opener ("Review What You Know")￼ **<u>Formative</u>**￼ • enV, Quick Check Masters￼ • enV, Re-teaching pages￼ • enV, Independent Practice￼ • enV, Enrichment Practice |

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|---|---|---|---|---|
| | | | | • Math journals |
| | | | | • Teacher Observation |
| | | | | • Teacher-made quizzes/tests |
| | | | | **Summative** |
| | | | | • ESASD Unit Assessments and Quizzes |
| | | | | • enV, PSSA Mathematics Test Prep |
| | | | | • enV Student text, Topic Test |
| | | | | • enV, Free Response Test Masters |
| | | | | • enV, Multiple Choice Test Masters |
| | | | | • enV, Performance Assessment Masters |
| | | | | • enV Cumulative Test Masters |
| | | | | • enV, Online Test Generator |

| Unit Title/Skill Set: Unit 6 Geometry | Course Time Prior to Keystone/PSSA: 10 days November/ December |
|---|---|
| **Overview:** This unit will have students reason with shapes and their attributes.  Students  will recognize shapes and analyze their characteristics.  This unit will also introduce the concept of fractions by having student partition shapes into parts with equal areas. | **ELL Differentiation:** Math and Language Arts specific found at:www.pdesas.org/module/sas/curriculumframework/ello verlay.aspx. Generic found at http://www.esasd.net/esl: WIDA Grades 3-5 Can Do |
| **Unit Essential Questions:**  How can we use characteristics of shapes to identify them?  How can we explain that shapes from different categories share attributes?   How can we use equal areas to partition shapes into unit fractions? | **Enrichment:** <br> Compass Learning Odyssey:  from ESASD Instructional Resources Link <br> Cool Math http://www.coolmath.com/ <br> Kid's College http://www.kclogin.com/main/go.php <br> Khan Academy: http://www.khanacademy.org <br> Pearson SuccessNET:  on-line Teachers Edition – Click on appropriate "topic" to open window to select "Enrichment" link |
| **PA & National Content Standard(s):** *State found at www.pdesas.org/standard/standardsdownloads:* <br> **National Content Standard:  3.G.1 (Geometry)** <br> **PA Content Standard(s):  CC.2.3.3.A.1** (Shapes and their Attributes) **CC.2.3.3.A.2** (Fractions) | **Remediation:** <br> Compass Learning Odyssey:  from ESASD Instructional Resources Link <br> Cool Math http://www.coolmath.com/ <br> Kid's College http://www.kclogin.com/main/go.php <br> Khan Academy: http://www.khanacademy.org <br> Pearson SuccessNET:  on-line Teachers Edition – Click on appropriate "topic" to open window to select "Enrichment" link <br> Envisions:  Math Diagnostic and Intervention systems |
| **Connecting to Common Core and Other Standards:** <br> *Common Core found at www.corestandards.org/:* <br> *ISTE found at www.iste.org/standards/nets-for-students.aspx:*(see appendix #3) 1a, 1b, 1c, 1d, 3b, 4b, 5b, 5c, 6b <br> *Career Education and Work found at www.pacareerstandards.com/:*  see appendix #4) 13-1, 13-2, 13-3, 13-4 | **IEP/GIEP:** Refer to individual student's educational plan under specially designed instruction. |

| Assessment Anchors & Eligible Content | Unit Concepts<br>What students need to know | Unit Competencies<br>What students need to be able to do (skills) | Content Vocabulary | Materials, Resources, & Instructional Activities | Assessments |
|---|---|---|---|---|---|
| M03.C-G.1.1<br>M03.C-G.1.1.1<br>M03.C-G.1.1.2<br>M03.C-G.1.1.3 | • Analyze characteristics of polygons | • 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.<br><br>• Recognize rhombi, rectangles, and squares as examples of quadrilaterals, and/or draw examples of quadrilaterals that do not belong to any of these subcategories.<br><br>• 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 1/8 of the area of the shape | • Shapes<br>• Triangle<br>• Square<br>• Rectangle<br>• Rhombus<br>• Quadrilateral<br>• Pentagon<br>• Polygon<br>• Sides<br>• Parallel<br>• Angles<br>• Partition<br>• Decomposing<br>• Area<br>• Plane Figure<br>• Tiling<br>• Gap / Overlap<br>• Attributes<br>• Equal Parts<br>• Square Units<br>• Unit Fractions<br>• Numerator<br>• Denominator | Scott Foresman-Addison Wesley, enVisionMath, Grade 3(enV). (Pearson Education, Inc. ©2009) 10-5, 10-6, 10-7, 10-8A, 10-8B, 10-8, 12-1, 12-2A, 12-2, 16-6A, 16-6B, 16-6, 16-7A, 16-7D<br><br>Investigations (Pearson Education, Inc. ©2004/ Dale Seymore Publications ® Copyright 1998 | **Diagnostic**<br>• NWEA MAP data<br>• enV, Placement Test<br>• enV Basic Facts Timed Tests<br>• enV Topic Opener ("Review What You Know")<br>**Formative**<br>• enV, Quick Check Masters<br>• enV, Re-Teaching pages<br>• enV, Independent Practice<br>• enV, Enrichment Practice<br>• Math journals<br>• Teacher Observation<br>• Teacher-made quizzes/tests |

| | | | | **Summative** |
|---|---|---|---|---|
| | | | | • ESASD Unit Assessments and Quizzes<br>• enV, PSSA Mathematics Test Prep<br>• enV Student text, Topic Test<br>• enV, Free Response Test Masters<br>• enV, Multiple Choice Test Masters<br>• enV, Performance Assessment Masters<br>• enV Cumulative Test Masters<br>• enV, Online TestGenerator |

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|---|---|
| **Unit Title/Skill Set:** Unit 7 Numbers and Operations - Fractions | **Course Time Prior to Keystone/PSSA:** 11 days December/ January |
| **Overview: :** In this unit, students will develop an understanding of fractions as numbers.  This will include writing fractions, representing fractions on a number line, recognizing and generating simple equivalent fractions, expressing whole numbers as fraction, and comparing two fractions with the same denominator. | **ELL Differentiation:** Math and Language Arts specific found at:www.pdesas.org/module/sas/curriculumframework/elloverlay.aspx. Generic found at http://www.esasd.net/esl: www.wida.us/ |
| **Unit Essential Questions:**  What are equal parts of a whole?  What do the top and bottom numbers of a fraction tell?  How does a fraction name part of a whole?  How can a fraction tell how many are in part of a group?  How can you represent and locate fractions on a number line?  How can you use the strategy *draw a line* to solve fraction problems?  How can we compare fractions with the same denominator?  What other strategies can we use to compare fractions? | **Enrichment:**  Compass Learning Odyssey:  from ESASD Instructional Resources Link<br>Cool Math http://www.coolmath.com/<br>Kid's College http://www.kclogin.com/main/go.php<br>Khan Academy: http://www.khanacademy.org<br>Pearson SuccessNET:  on-line Teachers Edition – Click on appropriate "Topic" to open window to select "Enrichment" link |
| **PA & National Content Standard(s):** *State found at www.pdesas.org/standard/standardsdownloads:*<br>**National Content Standard: 3.NF** (Numbers and Operations – Fractions)<br>**PA Content Standard(s):  CC.2.1.3.C.1** (Developing an understanding of fractions as numbers) | **Remediation:** Compass Learning Odyssey https://www.thelearningodyssey.com<br>Cool Math http://www.coolmath.com/ Kid's College http://www.kclogin.com/main/go.php<br>Khan Academy: http://www.khanacademy.org envisions: Math Diagnostic and Intervention Systems |
| **Connecting to Common Core and Other Standards:**<br>*Common Core found at www.corestandards.org/:*<br>*ISTE found at www.iste.org/standards/nets-for-students.aspx:*(See appendix #3)  1a, 1b, 1c, 1d, 2d, 3d, 5b,<br>*Career Education and Work found at* (See appendix #4) 13-1, 13-2, 13-3, 13-4 | **IEP/GIEP:** Refer to individual student's educational plan under specially designed instruction. |

| Assessment Anchors & Eligible Content | Unit Concepts<br>What students need to know | Unit Competencies<br>What students need to be able to do (skills) | Content Vocabulary | Materials, Resources, & Instructional Activities | Assessments |
|---|---|---|---|---|---|
| MO3.A-F.1.1<br>MO3.A-F.1.1.1<br>MO3.A-F.1.1.2 | • Develop and apply number theory concepts to compare quantities and magnitudes of fractions and whole numbers. | • 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 the denominators to 2, 3, 4, 6, and 8; limit numerators to whole numbers less than the denominator; no simplification necessary).<br><br>• Represent fractions on a number line (limit the denominators to 2, 3, 4, 6, and 8; limit numerators to whole numbers less than the denominator; no simplification necessary).<br><br>• Recognize and generate simple equivalent fractions (limit the denominators to 1, 2, 3, 4, 6, and 8; limit numerators to whole numbers less than the denominator). Example 1: 1/2 = 2/4  Example 2:  4/6 = 2/3<br><br>• Express whole numbers as fractions, and/or generate fractions that are equivalent to whole numbers (limit the 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. | • Fraction<br>• Unit fraction<br>• Whole Numbers<br>• Numerator<br>• Denominator<br>• Whole<br>• Part<br>• Equal / Equivalent<br>• Number line<br>• Interval<br>• Compare<br>• Order<br>• Partition<br>• Halves<br>• Thirds<br>• Fourths<br>• Sixths<br>• Eights<br>• Greater Than<br>• Less Than<br>• Equal to | Scott Foresman-Addison Wesley, enVisionMath, Grade 3(enV), (Pearson Education, Inc. ©2009)  12-1, 12-2A, 12-3, 12-4, 12-5, 12-5A, 12-6, 12-7, 12-7A, 12-7B, 12-8A<br><br><br>Investigations (Pearson Education, Inc. ©2004/ Dale Seymore Publications ® Copyright 1998 | **Diagnostic**<br>• NWEA MAP data<br>• enV, Placement Test<br>• enV Basic Facts Timed Tests<br>• enV Topic Opener ("Review What You Know")<br><br>**Formative**<br>• enV, Quick Check Masters<br>• enV, Reteaching pages<br>• enV, Independent Practice |

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| | | • Compare two fractions with the same denominator (limit the denominators to 1, 2, 3, 4, 6, and 8), using the symbols >, =, or <, and/or justify the conclusions. | | | • enV, Enrichment Practice<br>• Math journals<br>• Teacher Observation<br>• Teacher-made quizzes/tests<br>**Summative**<br>• ESASD Unit Assessments and Quizzes<br>• enV, PSSA Mathematics Test Prep<br>• enV Student text, Topic Test<br>• enV, Free Response Test Masters<br>• enV, Multiple Choice Test Masters<br>• enV, Performance Assessment Masters<br>• enV Cumulative Test Masters |

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| | | | | • enV, Online Test Generator Generator |

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|---|---|
| **Unit Title/Skill Set:** Unit 8 Measurement and Data (Area and Perimeter) | **Course Time Prior to Keystone/PSSA:** 10 days January |
| **Overview:** This unit will explore geometric measurement. Students will understand concepts of area and relate area to multiplication and to addition. Perimeter will also be recognized as an attribute of plane figures. | **ELL Differentiation:** Math & LA specific found at www.pdesas.org/module/sas/curriculumframework/elloverlay.aspx. Generic found at http://www.esasd.net/esl: www.wida.us/ |
| **Unit Essential Questions:** How can we measure the area of geometric shapes? How can we use multiplication and addition to find area? How can we measure perimeter of geometric shapes? How can we use perimeter and area as attributes of plane figures? | **Enrichment:** Compass Learning Odyssey: from ESASD Instructional Resources Link Cool Math http://www.coolmath.com/ Kid's College http://www.kclogin.com/main/go.php Khan Academy: http://www.khanacademy.org Pearson SuccessNET: on-line Teachers Edition – Click on appropriate "topic" to open window to select "Enrichment" link Pearson SuccessNET: on-line Teachers Edition – Click on appropriate "topic" to open window to select "Enrichment" link |
| **PA & National Content Standard(s):** *State found at www.pdesas.org/standard/standardsdownloads:* **National Content Standard: 3.MD** (Measurement and Data) **PA Content Standard(s): CC.2.4.3.A.5** (area) **CC.2.4.3.A.6** (perimeter) | **Remediation:** Compass Learning Odyssey https://www.thelearningodyssey.com Cool Math http://www.coolmath.com/ Kid's College http://www.kclogin.com/main/go.php Khan Academy: http://www.khanacademy.org envisions: Math Diagnostic and Intervention Systems |
| **Connecting to Common Core and Other Standards:** *Common Core found at www.corestandards.org/:* Click here to enter text. *ISTE found at www.iste.org/standards/nets-for-students.aspx:*(See appendix#3) 1a, 1b, 1c, 1d, 2d, 3d, 5b, *Career Education and Work found at www.pacareerstandards.com/:* See appendix #4) 13-1, 13-2, 13-3, 13-4 | **IEP/GIEP:** Refer to individual student's educational plan under specially designed instruction. |

| Assessment Anchors & Eligible Content | Unit Concepts What students need to know | Unit Competencies What students need to be able to do (skills) | Content Vocabulary | Materials, Resources, & Instructional Activities | Assessments |
|---|---|---|---|---|---|
| M03.D-M.3.1 M-3.D-M.3.1.1 M03.D-M.3.1.2 M03.D-M.4.1 M03.D-M.4.1.1 | • Find the areas of plane figures. • Find and use the perimeter of plane figures. | • Measure areas by counting unit squares (square cm, square m, square in., square feet, and non-standard square units). • 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. • 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. | • Area • Perimeter • Attributes • Sides • Unit Squares • Square unit • Length • Width • Array • Geometric Shapes • Plane Figure • Polygons | Scott Foresman-Addison Wesley, enVisionMath, Grade 3(enV). (Pearson Education, Inc. ©2009) 5-2, 6-1, 6-2, 6-3, 6-4, 6-7, 16-1, 16-2A, 16-2, 16-3, 16-6A, 16-6B, 16-6, 16-7A, 16-7B, 16-7C, 16-7D, 16-8 Investigations (Pearson Education, Inc. ©2004/ Dale Seymore Publications ® Copyright 1998 | **Diagnostic** • NWEA MAP data • enV, Placement Test • enV Basic Facts Timed Tests • enV Topic Opener ("Review What You Know") **Formative** • enV, Quick Check Masters • enV, Re-Teaching pages • enV, Independent practice • enV, Enrichment practice • Math journals |

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|---|---|---|---|---|
| | | | | • Teacher observation<br>• Teacher-made quizzes/tests<br><br>**Summative**<br>• ESASD Unit assessments and quizzes<br>• enV, PSSA Mathematics test prep<br>• enV Student text, topic test<br>• enV, Free response test masters<br>• enV, Performance assessment masters<br>• enV Cumulative test masters<br>• enV, Online test generator |