# East Stroudsburg Area School District
# Mathematics - Grade 1

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.

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 1, instructional time should focus on four critical areas: (1)developing understanding of addition, subtraction, and strategies for addition and subtraction within 20; (2) developing understanding of whole number relationships and place value, including grouping in tens and ones; (3) developing understanding of linear measurement and measuring lengths as iterating length units; and (4) reasoning about attributes of, and composing and decomposing geometric shapes.

(1) Students develop strategies for adding and subtracting whole numbers based on their prior work with small numbers. They use a variety of models, including discrete objects and length-based models (e.g., cubes connected to form lengths), to model add-to, take-from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.

(2) Students develop, discuss, and use efficient, accurate, and generalizable methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.

(3) Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (the mental activity of building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement.
(4) Students compose and decompose plane or solid figures (e.g., put two triangles together to make a quadrilateral) and build understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

**Standards for Mathematical Practices**

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

**Habits of Mind**

1. Persisting
2. Managing Impulsivity
3. Listening to Others with Empathy and Understanding
4. Thinking Flexibly
5. Metacognition
6. Striving for Accuracy and Precision
7. Questioning and Posing Problems
8. Applying Past Knowledge to New Situations
9. Thinking and Communicating with Clarity and Precision
10. Gathering Data through all Senses
11. Creating, Imagining, and Innovating

12. Responding with Wonderment and Awe
13. Taking Responsible Risks
14. Finding Humor
15. Thinking Interdependently
16. Learning Continuously

**Scope & Sequence**

- **Unit 1: Operations and Algebraic Thinking / Understanding and Applying Addition and Subtraction to 12**
  - Understanding Addition
  - Understanding Subtraction
  - Addition Strategies to 12
  - Subtraction Strategies to 12
- **Unit 2: Geometry**
  - Identifying shapes and their properties
  - Fractions of Shapes
- **Unit 3: Operations and Algebraic Thinking/ Addition and Subtraction to 20**
  - Addition Strategies to 20
  - Subtraction Strategies to 20
  - Addition Fluency to 10
  - Subtraction Fluency to 10
- **Unit 4: Number and Operations in Base Ten**
  - Counting and number patterns to 120
  - Tens and Ones
  - Comparing and Ordering to 100
  - Adding 10s and 1s
  - Subtracting 10s and 1s
- **Unit 5: Measurement and Data**
  - Length
  - Time
  - Data

# East Stroudsburg Area School District
# Mathematics – Grade One

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|---|---|
| **Unit Title/Skill Set:** Unit 1: Operations and Algebraic Thinking/ Addition and Subtraction to 12 | **Course Time Prior to Keystone/PSSA:** 46 Days |
| **Overview:**<br>Students will represent and solve problems involving addition and subtraction.<br>Students will understand and apply properties of operations and the relationship between addition and subtraction.<br>Students will add and subtract within 12.<br>Work with addition and subtraction equations. | **ELL Differentiation:** Math & LA specific found at www.pdesas.org/module/sas/curriculumframework/elloverlay.aspx. Generic found at http://www.esasd.net/esl: |
| **Unit Essential Questions:**<br>How are addition and subtraction related?<br>When solving a problem, how do we know how to solve it?<br>How, when, and why do we represent, compare, and order numbers?<br>How can visual data displays help us make connections to number relationships? | **Enrichment**:<br>Compass Learning Odyssey<br>https://www.thelearningodyssey.com/<br>Khan Academy http://www.khanacademy.org/<br>Kid's College http://www.kclogin.com/main/go.php<br>Pearson SuccessNET<br>https://www.pearsonsuccessnet.com/snpapp/login/login.jsp |
| **PA & National Content Standard(s):**<br>PA Common Core Standards: CC.2.2.1.A.1, CC.2.2.1.A.2<br>National Common Core Standards: Operations and Algebraic Thinking: 1.OA.1, 1.OA.2, 1.OA.3, 1.OA.4, 1.OA.5, 1.OA.6, 1.OA.7, 1.OA.8 | **Remediation:**<br>Compass Learning Odyssey<br>https://www.thelearningodyssey.com/<br>Khan Academy http://www.khanacademy.org/<br>Kid's College http://www.kclogin.com/main/go.php<br>Pearson SuccessNET<br>https://www.pearsonsuccessnet.com/snpapp/login/login.jsp |
| **Connecting to Common Core and Other Standards:**<br>Click here to enter text.*ISTE found at www.iste.org/standards/nets-for-students.aspx*: 1A, 1C, 1D, 2A, 2D, 3A, 3C, 3D, 4A, 4B, 4C, 4D, 5A, 5B, 5C, 5D, 6A, 6B, 6C, 6D<br>*Career Education and Work found at www.pacareerstandards.com/*: 13.1.3.F, 13.1.3.G, 13.1.3.H, 13.2.3.E, 13.3.3.A, 13.3.3.B, 13.3.3.C, 13.3.3.E, 13.3.3.G<br><br>(See Appendix for Standards) | **IEP/GIEP:** Refer to individual student's educational plan under specially designed instruction. |

# East Stroudsburg Area School District
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| 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 |
|---|---|---|---|---|---|
| CC.2.2.1.A.1<br>CC.2.2.1.A.2 | • Represent and solve problems involving addition and subtraction.<br><br>• Understand and apply properties of operations and the relationship between addition and subtraction.<br>• Work with addition and subtraction equations. | • Use addition and subtraction within 12 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.<br>o Identify vocabulary needed to solve word problems.<br>o Understand and use math symbols (+, -, =)<br>• Apply properties of operations as strategies to add and subtract. *Examples: If 8+3=11 is known, then 3+8=11 is also known (Commutative Property of Addition).*<br>• Understand subtraction as an unknown-addend problem. *For example, subtract 10-8 by finding the number that makes 10 when added to 8.*<br>o Use related facts to solve addition and subtraction problems.<br>o Write related addition and subtraction problems (e.g, fact families).<br>• Relate counting to addition and subtraction. (*For example, by counting on 2 to add 2.)* | • Sum/Total<br>• Missing Part<br>• Equivalent<br>• Whole numbers<br>• Equation<br>• Unknown Number<br>• Unknown Addend<br>• Associative property<br>• Commutative property<br>• Compose | enVisions Common Core Topics 1,2,3 and 4 including online digital resources<br><br>New & updated resources available on District First Grade Moodle page<br><br>Two-part pattern cards<br>2 colored counters<br>colored tiles<br>connecting cubes<br>number cards 0-20<br>Part-part whole mats<br>Ten frames<br>Double ten frame mats<br>Number lines<br>Flash cards | enVisions Topic Tests<br><br>Teacher-made, Currriculum-based Assessments<br><br>Teacher Observation<br><br>Projects |

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# East Stroudsburg Area School District
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| 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 |
|---|---|---|---|---|---|
| CC.2.2.1.A.1<br>CC.2.2.1.A.2 | • Students will add and subtract within 12.<br><br>• Work with addition and subtraction equations. | • Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making 10, decomposing a number leading to a ten (e.g., 8 + 6 = 8 + 2 + 4= 10 +4=14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 – 3 - 1 = 10- 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows that 12 -8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 +1 = 12 + 1 = 13).<br><br>• Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 -1, 5 + 2= 2 + 5, 4 + 1 = 5 + 2.*<br>• Determine the unknown whole number in an addition and subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = ? – 3, 6 + 6 =?* | • Sum/Total<br>• Missing Part<br>• Equivalent<br>• Whole numbers<br>• Equation<br>• Unknown Number<br>• Unknown Addend<br>• Associative property<br>• Commutative property<br>• Compose | enVisions Common Core Topics 1,2,3 and 4 including online digital resources<br><br>New & updated resources available on District First Grade Moodle page<br><br>Two-part pattern cards<br>2 colored counters<br>colored tiles<br>connecting cubes<br>number cards 0-20<br>Part-part whole mats<br>Ten frames<br>Double ten frame mats<br>Number lines<br>Flash cards | enVisions Topic Tests<br><br>Teacher-made, Currriculum-based Assessments<br><br>Teacher observation<br><br>Projects |

# East Stroudsburg Area School District
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## PA COMMON CORE STANDARDS

Math 001 **ALGEBRAIC THINKING**

CC.2.2.1.A.1 Represent and solve problems involving addition and subtraction within 12..

CC.2.2.1.A.2 Understand and apply properties of operations and the relationship between addition and subtraction.

## NATIONAL COMMON CORE STANDARDS

Math 001 **OPERATIONS AND ALGEBRAIC THINKING (1.0A**)

1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA.3 Apply properties of operations as strategies to add and subtract.[1] *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)*

1.OA.4 Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.*

1.OA.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13)

1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*

1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 +? = 11, 5 = □ – 3, 6 + 6 = □.*

# East Stroudsburg Area School District
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| **Unit Title/Skill Set:** Unit 2. Geometry | **Course Time Prior to Keystone/PSSA:** 20 days |
|---|---|
| **Overview:**<br>Students will reason with shapes and their attributes. | **ELL Differentiation:** Math & LA specific found at www.pdesas.org/module/sas/curriculumframework/elloverlay.aspx<br>Generic found at http://www.esasd.net/esl: |
| **Unit Essential Questions:**<br>How can shapes and solids be described, compared, and used to make other shapes?<br>How can fractions be used to name a part of a whole object? | **Enrichment:**<br>Compass Learning Odyssey<br>https://www.thelearningodyssey.com/<br>Khan Academy http://www.khanacademy.org/<br>Kid's College http://www.kclogin.com/main/go.php<br>Pearson SuccessNET<br>https://www.pearsonsuccessnet.com/snpapp/login/login.jsp |
| **PA & National Content Standard(s):**<br>PA Common Core Standards: CC.2.3.1.A.1, CC.2.3.1.A.2<br>National Common Core Standards: 1.G.1, 1.G.2, 1.G.3 | **Remediation:**<br>Compass Learning Odyssey<br>https://www.thelearningodyssey.com/<br>Khan Academy http://www.khanacademy.org/<br>Kid's College http://www.kclogin.com/main/go.php<br>Pearson SuccessNET<br>https://www.pearsonsuccessnet.com/snpapp/login/login.jsp |
| **Connecting to Common Core and Other Standards:**<br>*ISTE found at www.iste.org/standards/nets-for-students.aspx*: 1A, 1C, 1D, 2A, 2D, 3A, 3C, 3D, 4A, 4B, 4C, 4D, 5A, 5B, 5C, 5D, 6A, 6B, 6C, 6D<br>*Career Education and Work found at www.pacareerstandards.com/*: 13.1.3.F, 13.1.3.G, 13.1.3.H, 13.2.3.E, 13.3.3.A, 13.3.3.B, 13.3.3.C, 13.3.3.G<br>(See Appendix for Standards) | **IEP/GIEP:**<br>Refer to individual student's educational plan under specially designed instruction. |

# East Stroudsburg Area School District
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| 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 |
|---|---|---|---|---|---|
| CC.2.3.1.A.1<br>CC.2.3.1.A.2 | • Students will reason with shapes and their attributes | • Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size)<br>• Build and draw two and three dimensional shapes based on their attributes.<br>• Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones and right circular cylinders) to create a composite shape and compose new shapes from the composite shape. *Note: Students do not need to learn formal names such as "right rectangular prism".*<br>• Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares. | • Vertices<br>• Vertex<br>• Sides<br>• Shapes<br>• 2 dimensional shape<br>• 3 dimensional shape<br>• Attribute<br>• Halves<br>• Fourths/ quarters of a whole<br>• Halves/ half of a whole<br>• Whole<br>• Non-defining attributes<br>• Cone<br>• Equal shares<br>• Rectangle<br>• Square<br>• Triangle<br>• Circle<br>• Trapezoid<br>• Rectangular prism<br>• Cylinder<br>• Cube<br>• Decompose<br>• Defining attributes | enVisions Common Core Topic 15 and 16 Including online digital resources<br><br>Investigations, Geometry Unit<br><br>New & updated resources available on District First Grade Moodle Page<br><br>Pattern blocks Plane shape cards<br>Solid figures | enVisions Topic tests<br><br>Teacher made Curriculum-based Assessments<br><br>Teacher Observation<br><br>Projects |

# East Stroudsburg Area School District
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## PA COMMON CORE STANDARDS

Math 002 GEOMETRY

CC.2.3.1.A.1 Compose and distinguish between two- and three dimensional shapes based on their attributes.

CC.2.3.1.A.2 Use the understanding of fractions to partition shapes into halves and quarters.

## NATIONAL COMMON CORE STANDARDS

### Math 002 GEOMETRY (1.G)

1.G.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.

1.G.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. (Students do not need to learn formal names such as “right rectangular prism.”)

1.G.3 Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

# East Stroudsburg Area School District
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|---|---|
| **Unit Title/Skill Set:** Unit 3: Operations and Algebraic Thinking/ Addition and Subtraction to 20 | **Course Time Prior to Keystone/PSSA:** 22 days |
| **Overview:**<br>Students will represent and solve problems involving addition and subtraction.<br>Students will understand and apply properties of operations and the relationship between addition and subtraction.<br>Students will add and subtract within 20.<br>Work with addition and subtraction equations | **ELL Differentiation: :** Math & LA specific found at www.pdesas.org/module/sas/curriculumframework/ellloverlay.aspx. Generic found at http://www.esasd.net/esl: |
| **Unit Essential Questions:**<br>How are addition and subtraction related?<br>When solving a problem, how do we know how to solve it?<br>How, when, and why do we represent, compare, and order numbers?<br>How can visual data displays help us make connections to number relationships? | **Enrichment:**<br>Compass Learning Odyssey<br>https://www.thelearningodyssey.com/<br>Khan Academy http://www.khanacademy.org/<br>Kid's College http://www.kclogin.com/main/go.php<br>Pearson SuccessNET<br>https://www.pearsonsuccessnet.com/snpapp/login/login.jsp. |
| **PA & National Content Standard(s):**<br>PA Common Core Standards: CC.2.2.1.A.1 : CC.2.2.1.A.2<br>National Common Core Standards: Operations and Algebraic Thinking: 1.OA.1, 1.OA.2, 1.OA.3, 1.OA.4, 1.OA.5, 1.OA.6, 1.OA.7, 1.OA.8 | **Remediation:**<br>Compass Learning Odyssey<br>https://www.thelearningodyssey.com/<br>Khan Academy http://www.khanacademy.org/<br>Kid's College http://www.kclogin.com/main/go.php<br>Pearson SuccessNET<br>https://www.pearsonsuccessnet.com/snpapp/login/login.jsp |
| **Connecting to Common Core and Other Standards:**<br>*ISTE found at www.iste.org/standards/nets-for-students.aspx*: 1A, 1C, 1D, 2A, 2D, 3A, 3C, 3D, 4A, 4B, 4C, 4D, 5A, 5B, 5C, 5D, 6A, 6B, 6C, 6D<br>*Career Education and Work found at www.pacareerstandards.com/*: 13.1.3.F, 13.1.3.G, 13.1.3.H, 13.2.3.E, 13.3.3.A, 13.3.3.B, 13.3.3.C, 13.3.3.G<br>(See Appendix for Standards) | **IEP/GIEP:** Refer to individual student's educational plan under specially designed instruction. |

# East Stroudsburg Area School District
# Mathematics – Grade 1

| 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 |
|---|---|---|---|---|---|
| CC.2.2.1.A.1<br>CC.2.2.1.A.2 | • Represent and solve problems involving addition and subtraction.<br><br>• Understand and apply properties of operations and the relationship between addition and subtraction. | • Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.<br>o Identify vocabulary needed to solve word problems.<br>o Understand and use math symbols (+, -, =)<br>• Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.<br><br>• Apply properties of operations as strategies to add and subtract. *Examples: If 8+3=11 is known, then 3+8=11 is also known (Commutative Property of Addition).*<br>• Understand subtraction as an unknown-addend problem. *For example, subtract 10-8 by finding the number that makes 10 when added to 8.*<br>o Use related facts to solve addition and subtraction problems.<br>o Write related addition and subtraction problems (e.g, fact families).<br>• Relate counting to addition and subtraction. (*For example, by counting on 2 to add 2.)* | • Sum/Total<br>• Missing Part<br>• Equivalent<br>• Whole numbers<br>• Equation<br>• Unknown Number<br>• Unknown Addend<br>• Associative property<br>• Commutative property<br>• Compose | enVisions Common Core Topics 5 and 6 including online digital resources<br><br>New & updated resources available on District First Grade Moodle page<br><br>Two-part pattern cards<br>2 colored counters<br>colored tiles<br>connecting cubes<br>number cards 0-20<br>Part-part whole mats<br>Ten frames<br>Double ten frame mats<br>Number lines<br>Number cubes<br>Flash cards | enVision Topic Tests<br><br>Teacher-made Curriculum-based Assessments<br><br>Teacher Observation<br><br>Projects |

| | | | | | |
|---|---|---|---|---|---|
| | • Students will add and subtract within 20. | • Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making 10, decomposing a number leading to a ten (e.g., 8 + 6 = 8 + 2 + 4= 10 +4=14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 – 3 - 1 = 10- 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows that 12 -8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 +1 = 12 + 1 = 13). | | | |
| | • Work with addition and subtraction equations. | • Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are flase? 6 = 6, 7 = 8 -1, 5 + 2= 2 + 5, 4 + 1 = 5 + 2.*<br>• Determine the unknown whole number in an addition and subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the eqations 8 + ? = 11, 5 = ? – 3, 6 + 6 =?*<br>o Write related addition and subtraction problems (e.g, fact families). | | | |

# East Stroudsburg Area School District
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| 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 |
|---|---|---|---|---|---|
| CC.2.2.1.A.1<br>CC.2.2.1.A.2 | • Students will add and subtract within 20. | • Relate counting to addition and subtraction. (*For example, by counting on 2 to add 2.)*<br>• Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making 10, decomposing a number leading to a ten (e.g., 8 + 6 = 8 + 2 + 4= 10 +4=14); decomposing a number leading to a ten (e.g., 13 - 4 = 13 – 3 - 1 = 10- 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows that 12 -8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 +1 = 12 + 1 = 13). | • Sum/Total<br>• Missing Part<br>• Equivalent<br>• Whole numbers<br>• Equation<br>• Unknown Number<br>• Unknown Addend<br>• Associative property<br>• Commutative property<br>• Compose | enVisions Common Core Topics 5 and 6 including online digital resources<br><br>New & updated resources available on District First Grade Moodle page<br><br>Two-part pattern cards<br>2 colored counters<br>colored tiles<br>connecting cubes<br>number cards 0-20<br>Part-part whole mats<br>Ten frames<br>Double ten frame mats<br>Number lines<br>Number cubes<br>Flash cards | enVisions Topic Tests<br><br>Teacher-made Curriculum-based Assessments<br><br>Teacher Observation<br><br>Projects |

# East Stroudsburg Area School District
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| 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 |
|---|---|---|---|---|---|
| CC.2.2.1.A.1<br>CC.2.2.1.A.2 | • Work with addition and subtraction equations. | • Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 -1, 5 + 2= 2 + 5, 4 + 1 = 5 + 2.*<br>• Determine the unknown whole number in an addition and subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = ? – 3, 6 + 6 =?* | • Sum/Total<br>• Missing Part<br>• Equivalent<br>• Whole numbers<br>• Equation<br>• Unknown Number<br>• Unknown Addend<br>• Associative property<br>• Commutative property<br>• Compose | enVisions Common Core Topics 5 and 6 including online digital resources<br><br>New & updated resources available on District First Grade Moodle page<br><br>Two-part pattern cards<br>2 colored counters<br>colored tiles<br>connecting cubes<br>number cards 0-20<br>Part-part whole mats<br>Ten frames<br>Double ten frame mats<br>Number lines<br>Number cubes<br>Flash cards | enVisions Topic Tests<br><br>Teacher-made Curriculum-based Assessments<br><br>Teacher Observation<br><br>Projects |

# East Stroudsburg Area School District
# Mathematics – Grade 1

## PA COMMON CORE STANDARDS

Math 003 ALGEBRAIC CONCEPTS

CC.2.2.1.A.1 Represent and solve problems involving addition and subtraction within 20.

CC.2.2.1.A.2 Understand and apply properties of operations and the relationship between addition and subtraction.

## NATIONAL COMMON CORE STANDARDS

Math 003 OPERATIONS AND ALGEBRAIC THINKING (1.0A )/ ADDITION AND SUBTRACTION TO 20

1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA.3 Apply properties of operations as strategies to add and subtract.[1] *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)*

1.OA.4 Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.*

1.OA.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13)

1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*

1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 +? = 11, 5 = □ – 3, 6 + 6 = □*

# East Stroudsburg Area School District
# Mathematics – Grade 1

| **Unit Title/Skill Set:** Unit 4. Number and Operations in Base Ten | **Course Time Prior to Keystone/PSSA:** 44 days |
|---|---|
| **Overview:**<br>Students will extend the counting sequence.<br>Students will understand place value.<br>Students will use place value understanding and properties of operations to add and subtract. | **ELL Differentiation:** Math & LA specific found at www.pdesas.org/module/sas/curriculumframework/ellloverlay.aspx. Generic found at http://www.esasd.net/esl |
| **Unit Essential Questions:**<br>What number patterns are there when counting to 120?<br>How can numbers 10 and higher be shown, counted, read, and written?<br>How can numbers to 100 be compared and ordered?<br>What are ways to add and subtract with tens and ones? | **Enrichment:**<br>Compass Learning Odyssey<br>https://www.thelearningodyssey.com/<br>Khan Academy http://www.khanacademy.org/<br>Kid's College http://www.kclogin.com/main/go.php<br>Pearson SuccessNET<br>https://www.pearsonsuccessnet.com/snpapp/login/login.jsp |
| **PA & National Content Standard(s):**<br>PA Common Core Standards: CC.2.1.1.B.1, CC.2.1.1.B.2, CC.2.1.1.B.3<br>National Common Core Standards: Numbers and Operations in Base Ten: 1.NBT.1, 1.NBT.2, 1.NBT.3,<br>1.NBT.4, 1.NBT.5, 1.NBT.6 | **Remediation:**<br>Compass Learning Odyssey<br>https://www.thelearningodyssey.com/<br>Khan Academy http://www.khanacademy.org/<br>Kid's College http://www.kclogin.com/main/go.php<br>Pearson SuccessNET<br>https://www.pearsonsuccessnet.com/snpapp/login/login.jsp |
| **Connecting to Common Core and Other Standards:**<br>*ISTE found at www.iste.org/standards/nets-for-students.aspx*: 1A, 1C, 1D, 2A, 2D, 3A, 3C, 3D, 4A, 4B, 4C, 4D, 5A, 5B, 5C, 5D, 6A, 6B, 6C, 6D<br>*Career Education and Work found at www.pacareerstandards.com/*: 13.1.3.F, 13.1.3.G, 13.1.3.H, 13.2.3.E, 13.3.3.A, 13.3.3.B, 13.3.3.C, 13.3.3.G<br>(See Appendix for Standards) | **IEP/GIEP:** Refer to individual student's educational plan under specially designed instruction. |

# East Stroudsburg Area School District
# Mathematics – Grade 1

| 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 |
|---|---|---|---|---|---|
| CC.2.1.1.B.1<br>CC.2.1.1.B.2<br>CC.2.1.1.B.3 | • Extend the counting sequence.<br><br>• Understand place value. | • Count to 120, starting at any number less than 120. In this range, read and write numerals and represents number of objects with a written numeral.<br><br>• Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:<br>o 10 can be thought of a bundle of ten ones—called a "ten."<br>o The numbers 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.<br>o The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, teo, three, four, five, six, seven, eight, or nine tens (and 0 ones).<br>• Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. | • Ones<br>• Tens<br>• Digit/ 2 digits<br>• Compare<br>• Greater than<br>• Less than<br>• Number<br>• Numeral<br>• Place value<br>• Multiples of ten<br>• Symbol<br>• Add<br>• Sum<br>• Total<br>• Equals<br>• Addends<br>• Addition<br>• Missing addend<br>• Subtract<br>• Difference<br>• Subtraction | enVisions Common Core Topics 7,8,9,10 & 11 including online digital resources<br><br>New & updated resources available on District First Grade Moodle page<br><br>2 color counters<br># cards 0-20<br>Ten Frames<br>Student 100 Charts<br>Blank 100 Charts<br>Connecting Cubes<br>Place Value Mats<br>Number cubes<br>Place Value Blocks<br>Blank part-part whole model | enVisions Topic Tests<br><br>Teacher-made, Currriculum-based Assessments<br><br>Teacher Observation<br><br>Projects |

# East Stroudsburg Area School District
# Mathematics – Grade 1

| 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 |
|---|---|---|---|---|---|
| CC.2.1.1.B.1<br>CC.2.1.1.B.2<br>CC.2.1.1.B.3 | • Use place value understanding and properties of operations to add and subtract. | • Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.<br>• Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.<br>• Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count. Explain the reasoning used.<br>• Subtract multiples of 10 in the range 10-90 from multiples of 10 iin the range (positive or 0 differences), using concrete models or drawings and strategies based on place value, properties of operations. And/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. | • Ones<br>• Tens<br>• Digit/ 2 digits<br>• Compare<br>• Greater than<br>• Less than<br>• Number<br>• Numeral<br>• Place value<br>• Multiples of ten<br>• Symbol<br>• Add<br>• Sum<br>• Total<br>• Equals<br>• Addends<br>• Addition<br>• Missing addend<br>• Subtract<br>• Difference<br>• Subtraction | enVisions Common Core Topics 7,8,9,10 & 11 including online digital resource<br><br>New & updated resources available on District First Grade Moodle page<br><br>2 color counters<br># cards 0-20<br>Ten Frames<br>Student 100 Charts<br>Blank 100 Charts<br>Connecting Cubes<br>Place Value Mats<br>Number cubes<br>Place Value Blocks<br>Blank part-part whole model | envisions Topic Tests<br><br>Teacher-made, Currriculum-based Assessments<br><br>Teacher observation<br><br>Projects |

# East Stroudsburg Area School District
# Mathematics – Grade 1

## PA COMMON CORE STANDARDS

Math 004 NUMBERS AND OPERATIONS IN BASE TEN (1.NBT)

CC.2.1.1.B.1 Extend the counting sequence to read and write numerals to represent objects

CC.2.1.1.B.2 Use place value concepts to represent amounts of tens and ones and to compare two digit numbers.

CC.2.1.1.B.3 Use place value concepts and properties of operations to add and subtract within 100

## NATIONAL COMMON CORE STANDARDS

Math 004 NUMBERS AND OPERATIONS IN BASE TEN (1.NBT)

1.NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

1.NBT.2 a. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 10 can be thought of as a bundle of ten ones — called a “ten.”

b.Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

c. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

1.NBT.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.

1.NBT.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

# East Stroudsburg Area School District
# Mathematics – Grade 1

1.NBT.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

1.NBT.6 Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

# East Stroudsburg Area School District
# Mathematics – Grade 1

| **Unit Title/Skill Set:** Unit 5. Measurement and Data | **Course Time Prior to Keystone/PSSA:** 26 days |
|---|---|
| **Overview:** Students will measure lengths indirectly and by iterating length units. Students will tell and write time. Students will represent and interpret data. | **ELL Differentiation:** Math & LA specific found at www.pdesas.org/module/sas/curriculumframework/ellloverlay.aspx. Generic found at http://www.esasd.net/esl: WIDA Grades 3-5 Can Do |
| **Unit Essential Questions:** How can objects be measured, compared, and ordered by length?<br>How can clocks and schedules be read and used?<br>How can graphs by used to show data and answer questions? | **Enrichment:** Compass Learning Odyssey<br>https://www.thelearningodyssey.com/<br>Khan Academy http://www.khanacademy.org/<br>Kid's College http://www.kclogin.com/main/go.php<br>Pearson SuccessNET<br>https://www.pearsonsuccessnet.com/snpapp/login/login.jsp |
| **PA & National Content Standard(s):** *State found at www.pdesas.org/standard/standardsdownloads:* PA Common Core Standards: CC.2.4.1.A.1, CC.2.4.1.A.2, CC.2.4.1.A.4 | **Remediation:** Compass Learning Odyssey<br>https://www.thelearningodyssey.com/<br>Khan Academy http://www.khanacademy.org/<br>Kid's College http://www.kclogin.com/main/go.php<br>Pearson SuccessNET<br>https://www.pearsonsuccessnet.com/snpapp/login/login.jsp |
| **Connecting to Common Core and Other Standards:**<br>*Common Core found at www.corestandards.org/:* CC.2.4.1.A.1, CC.2.4.1.A.2, CC.2.4.1.A.4<br>*ISTE found at www.iste.org/standards/nets-for-students.aspx*: 1A, 1C, 1D, 2A, 2D, 3A, 3C, 3D, 4A, 4B, 4C, 4D, 5A, 5B, 5C, 5D, 6A, 6B, 6C, 6D<br><br>*Career Education and Work found at www.pacareerstandards.com/*: 13.1.3.F, 13.1.3.G, 13.1.3.H, 13.2.3.E, 13.3.3.A, 13.3.3.B, 13.3.3.C, 13.3.3.E, 13.3.3.G | **IEP/GIEP:** Refer to individual student's educational plan under specially designed instruction. |

# East Stroudsburg Area School District
# Mathematics – Grade 1

| 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 |
|---|---|---|---|---|---|
| CC..2.4.1.A.1<br>CC..2.4.1.A.2<br>CC..2.4.1.A.4 | • Measure lengths indirectly by iterating unit lengths.<br><br>• Tell and write time.<br><br>• Represent and interpret date | • Order three objects by length.<br>• Compare the lengths of two objects indirectly by using a third object.<br>• Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by whole number of length units with no gaps or overlaps.<br><br>• Tell and write time in hours and half-hours using analog and digital clocks.<br><br>• Organize, represent and interpret data with up to three categories.<br>• Ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. | • Length<br>• Shorter<br>• Longer<br>• Hour<br>• Half hour<br>• Analog clock<br>• Digital clock<br>• Measure<br>• Less than<br>• More than<br>• Data<br>• Category<br>• Time | enVisions Common Core Topics 12,13 and 14 Including online digital resources<br><br>New and updated resources available on District First Grade Moodle page<br><br>Connecting cubes<br><br>Geared demonstration Clock<br><br>Number cards 0-20<br><br>Analog Clock Face<br><br>Two colored counters<br>Calendar | enVision Topic Tests<br><br>Teacher-made, Currriculum-based Assessments<br><br>Teacher observation<br><br>Projects |

# East Stroudsburg Area School District
# Mathematics – Grade 1

## PA COMMON CORE STANDARDS

Math 005 MEASUREMENT, DATA AND PROBABILITY

CC.2.4.1.A.1 Order lengths and measure them both indirectly and by repeating length units.

CC.2.4.1.A.2 Tell and write time to the nearest half hour using both analog and digital clocks

CC.2.4.1.A.4 Represent and interpret data using tables/charts.

## NATIONAL COMMON CORE STANDARDS

Math 005 MEASUREMENT AND DATA (1.MD)

1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.

1.MD.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*

1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.

1.MD.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.