Math Pacing Guide 2020-2021
NOTE: See NJSLS Math

| Grade 5 / Math |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Time <br> Frame | Primary Math Skills | Instructional Strategy |  |  <br> Math Practice |
| 5 days | Preparing for technology <br> Students uploaded and able to login <br> to: <br> Savvasrealize.com <br> GoFormative.com <br> Google Classroom <br> Google Meet |  |  |  |
| Ixl.com <br> reflexmath.com <br> Show students how and when to use <br> the resources and provide time to <br> instill organizational skills. |  |  |  |  |


| Grade 5 / Math |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Time Frame | Primary Math Skills | Instructional Strategy | Academic Vocabulary | Standards \& Math Practice |
| 9 days <br> Topic 1 <br> Lessons <br> 1-7 | - Use patterns and properties of multiplication to calculate a product when multiplying by a power of 10; use whole-number | Problem-Based Learning: <br> Solve and Share with three reads <br> Look Back! <br> Visual Learning: <br> Visual Learning Bridge | Power <br> Exponent <br> Base <br> Value <br> Expanded form | 5.NBT A. 1-4 <br> Mathematical <br> Practice: 1-8 |


| Essential <br> Question: <br> How are <br> whole <br> numbers <br> and <br> decimals <br> written, <br> compared, <br> and <br> ordered? | exponents to write powers of 10. <br> - Represent decimals to thousandths as fractions and fractions with denominators of 1,000 as decimals. <br> - read and write decimals in standard, expanded, and number names <br> - Read and write numbers with decimals through thousandths using standard form, expanded form, and number names; identify equivalent decimals <br> - Use place value to compare decimals through thousandths <br> - Use place value to round decimals to different places <br> - Use the structure of the decimal place-value system to solve problems involving patterns | Convince Me! <br> Another Example <br> Guided Practice <br> Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving <br> Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; savvarealize.com; khanacademy.org; GoFormative.com achievethecore.org; illustrativemathematics.org | Thousandths Equivalent decimals |  |
| :---: | :---: | :---: | :---: | :---: |
| 8 days <br> Topic 2 <br> Lessons <br> 1-6 <br> Essential <br> Question: | - Use properties of addition and strategies to solve problems mentally. <br> - Use rounding or compatible numbers to estimate sums and differences. <br> - Model sums and differences of decimals. | Problem-Based Learning: <br> Solve and Share with three reads Look Back! <br> Visual Learning: <br> Visual Learning Bridge <br> Convince Me! <br> Another Example <br> Guided Practice | Compatible numbers Associative Property of Addition Commutative Property of Addition Compensation | 5.NBT.B. 7 <br> 5.NBT.A. 4 <br> Mathematical <br> Practice: 1-8 |


| How can sums and difference s of decimals be estimated ? What are some common procedure s for adding and subtractin g decimals? How can sums and difference s be found mentally? | - Add decimals to the hundredths using partial sums. <br> - Subtract decimals to the hundredths using partial differences. <br> - Use prior math knowledge and equations or bar diagrams to solve problems. | Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving <br> Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; savvarealize.com; <br> khanacademy.org; <br> GoFormative.com <br> achievethecore.org; <br> illustrativemathematics.org <br> parcconline.org; <br> illustrativemathematics.org |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 11 days <br> Topic 3 <br> Lessons 1-9 <br> Essential question: | - Use place-value understandings and patterns to mentally multiply whole numbers and powers of 10. <br> - Use rounding and compatible numbers to estimate products. <br> - Use place value and the standard algorithm to multiply | Problem-Based Learning: <br> Solve and Share with three reads <br> Look Back! <br> Visual Learning: <br> Visual Learning Bridge <br> Convince Me! <br> Another Example <br> Guided Practice | Underestimate Overestimate Partial products Variable | 5.NBT.A.1-2 <br> 5.NBT.B. 5 <br> Mathematical <br> Practice: 1-8 |



| Lessons 1-8 <br> Essential <br> Question: <br> What are <br> some <br> common <br> procedure <br> s for <br> estimating <br> and <br> finding <br> products <br> involving <br> decimals? | of a decimal and a whole number. <br> - Use models to represent multiplying a decimal and a whole number. <br> - Use place value understandings and an algorithm for multiplying whole numbers to multiply a decimal and a whole number. <br> - Use grids to model decimals and find the product of a decimal and a decimal. <br> - Multiply decimals using partial products and models. <br> - Use properties to multiply decimals. <br> - Use number sense and reasoning to place the decimal point in a product. <br> - Use previously learned concepts and skills to represent and solve problems. | Convince Me! <br> Another Example <br> Guided Practice <br> Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving <br> Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; <br> savvarealize.com; <br> khanacademy.org; <br> GoFormative.com <br> achievethecore.org; <br> illustrativemathematics.org |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Grade 5 / Math |  |  |  |  |
| Time Frame | - Primary Math Skills | Instructional Strategy | Academic Vocabulary | Standards \& Math Practice |
| 10 days <br> Topic 5 | - Use place-value patterns and mental math to find quotients. | Problem-Based Learning: <br> Solve and Share with three reads Look Back! Visual Learning: |  | 5.NBT.B. 6 <br> Mathematical <br> Practice: 1-8 |


| Lessons <br> 1-8 <br> Essential <br> Questions: <br> What are <br> some <br> common <br> procedure <br> s for <br> division <br> and why <br> do they <br> work? | - Use compatible numbers and place-value patterns to estimate quotients. <br> - Use models to find quotients. <br> - Solve division problems using partial quotients. <br> - Use place value and sharing to divide by 2-digit divisors. <br> - Use place value and sharing to divide greater dividends. <br> - Select from different strategies to divide 3- and 4-digit numbers by 2-digit numbers. <br> - Make sense of problems and keep working. | Visual Learning Bridge <br> Convince Me! <br> Another Example <br> Guided Practice <br> Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving <br> Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; <br> savvarealize.com; <br> khanacademy.org; <br> GoFormative.com <br> achievethecore.org; <br> illustrativemathematics.org |  |
| :---: | :---: | :---: | :---: |
| 8 days <br> Topic 6 <br> Lessons $1-6$ | - Use mental math and placevalue patterns to divide a decimal by a power of 10 . <br> - Use reasoning and strategies such as rounding and compatible numbers to estimate quotients in problems with decimals. | Problem-Based Learning: <br> Solve and Share with three reads Look Back! <br> Visual Learning: <br> Visual Learning Bridge <br> Convince Me! <br> Another Example | 5.NBT.A. 2 <br> 5.NBT.B. 7 <br> Mathematical <br> Practice: 1-8 |


| Essential <br> Question: <br> What are <br> some <br> common <br> procedure <br> s for <br> estimating <br> and <br> finding <br> quotients <br> involving <br> decimals? | - Use models to help find quotients in problems involving decimals. <br> - Use models to visualize the relationship between division and multiplication to divide decimals by a 2-digit whole number. <br> - Use models to divide a decimal by a decimal. <br> - Use reasoning to solve problems by making sense of quantities and relationships in the situation. | Guided Practice <br> Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving <br> Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; <br> savvarealize.com; <br> khanacademy.org; <br> GoFormative.com <br> achievethecore.org; <br> illustrativemathematics.org |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 15 days <br> Topic 7 <br> Lessons <br> 1-13 <br> Essential <br> Question: <br> How can <br> sums and <br> difference | - Estimate sums and differences of fractions by using the nearest half or whole number. <br> - Find common denominators for fractions with unlike denominators. <br> - Add fractions with unlike denominators using equivalent fractions with a common denominator. <br> - Subtract fractions with unlike denominators. | Problem-Based Learning: <br> Solve and Share with three reads <br> Look Back! <br> Visual Learning: <br> Visual Learning Bridge <br> Convince Me! <br> Another Example <br> Guided Practice <br> Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving | Benchmark fraction Equivalent fraction Common denominator Mixed number | 5.NF.A. 1 <br> 5.NF.A. 2 <br> Mathematical <br> Practice: 1-8 |


| s of fractions and mixed numbers be estimated ? What are common procedure s for adding and subtractin g fractions and mixed numbers? | - Write equivalent fractions to add and subtract fractions with unlike denominators. <br> - Estimate sums and differences of fractions and mixed numbers. <br> - Add mixed numbers using models. <br> - Add mixed numbers using equivalent fractions and a common denominator. <br> - Use models to subtract mixed numbers. <br> - Subtract mixed numbers using equivalent fractions and a common denominator. <br> - Add and subtract mixed numbers using equivalent fractions and a common denominator. <br> - Represent a problem situation with a mathematical model. | Activity Centers (enVisionSTEM, Pick a Project, Problem-Solving Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; savvarealize.com; khanacademy.org; GoFormative.com achievethecore.org; illustrativemathematics.org |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Grade 5 / Math |  |  |  |  |
| Time Frame | - Primary Math Skills | Instructional Strategy | Academic Vocabulary | Standards \& Math Practice |
| 11 days <br> Topic 8 Lessons 1-9 | - Multiply a fraction by a whole number. <br> - Multiply a whole number by a fraction. <br> - Multiply fractions and whole numbers. | Problem-Based Learning: <br> Solve and Share with three reads <br> Look Back! <br> Visual Learning: <br> Visual Learning Bridge <br> Convince Me! <br> Another Example |  | 5.NF.B.4a <br> 5.NF.B.4b <br> 5.NF.B.5a <br> 5.NF.B.5b <br> 5.NF.B. 6 <br> Mathematical <br> Practice: 1-8 |


| Essential Question: What does it mean to multiply whole numbers and fractions? How can multiplicati on with whole numbers and fractions be shown using models and symbols? | - Use models to multiply two fractions. <br> - Multiply two fractions. <br> - Find the area of a rectangle using fractions and diagrams. <br> - Use models, equations, and previously learned strategies to multiply mixed numbers. <br> - Compare the size of the product to the size of one factor without multiplying to consider multiplication as scaling. <br> - Use previously learned knowledge to make sense of problems and persevere in solving them. | Guided Practice <br> Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving <br> Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; <br> savvarealize.com; <br> khanacademy.org; <br> GoFormative.com <br> achievethecore.org; <br> illustrativemathematics.org |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 10 days <br> Topic 9 <br> Lessons <br> 1-8 <br> Essential <br> questions: <br> How are | - Understand how fractions are related to division. <br> - Implement division of fractions to show quotients as fractions and mixed numbers. <br> - Use multiplication to divide a whole number by a unit fraction. <br> - Use models such as pictorial models or a number line to show | Problem-Based Learning: <br> Solve and Share with three reads <br> Look Back! <br> Visual Learning: <br> Visual Learning Bridge <br> Convince Me! <br> Another Example <br> Guided Practice | Unit fraction | 5. NF.B. 3 <br> 5.NF.B.7a <br> 5.NF.B.7b <br> 5.NF.B.7c <br> Mathematical <br> Practice: 1-8 |


| fractions related to division? How can you divide with whole numbers and unit fractions? | dividing a whole number by a unit fraction. <br> - Use models to divide unit fractions by non-zero whole numbers. <br> - Use models to divide whole numbers and unit fractions. Check your answer using multiplication. <br> - Solve multi-step problems involving division with unit fractions. <br> - Notice repetition in calculations and generalize about how to divide whole numbers and unit fractions. | Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving <br> Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; <br> savvarealize.com; <br> khanacademy.org; <br> GoFormative.com <br> achievethecore.org; <br> illustrativemathematics.org |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
| Grade 5 / Math |  |  |  |  |
| Time Frame | - Primary Math Skills | Instructional Strategy | Academic Vocabulary | Standards \& Math Practice |
| 6 days <br> Topic 10 | - Read and analyze line plots. <br> - Organize and display data in a line plot. <br> - Solve problems using data in a line plot. | Problem-Based Learning: <br> Solve and Share with three reads <br> Look Back! <br> Visual Learning: <br> Visual Learning Bridge | Data <br> Line plot | 5.NF.A. 2 <br> 5.NF.B. 6 <br> 5.MD.B. 2 <br> Mathematical <br> Practice: 1-8 |


| Lesson 1- <br> 4 <br> Essential <br> Question: <br> How can <br> line plots <br> be used to <br> represent <br> data and <br> answer <br> questions ? | - Critique the reasoning of others using understanding of line plots and fractions. | Convince Me! <br> Another Example <br> Guided Practice <br> Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving <br> Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; savvarealize.com; khanacademy.org; GoFormative.com achievethecore.org; illustrativemathematics.org |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 7 Days <br> Topic 11 <br> Lesson 1- <br> 5 | - Review 4th grade concept area \& perimeter <br> - Find the volume of solid figures. <br> - Find the volume of rectangular prisms using a formula. <br> - Find the volume of a solid figure that is the combination of two or more rectangular prisms. <br> - Use models, prior knowledge of volumes, and previously learned strategies to solve word | Problem-Based Learning: <br> Solve and Share with three reads <br> Look Back! <br> Visual Learning: <br> Visual Learning Bridge <br> Convince Me! <br> Another Example <br> Guided Practice | Volume <br> Cubic unit <br> Cube <br> Rectangular prism <br> Unit cube <br> Formula | 4.MD. 3 <br> 5.MD.C.3a <br> 5.MD.C.3b <br> 5.MD.C. 4 <br> 5.MD.C.5a <br> 5.MD.C.5b <br> 5.MD.C.5c |


| Essential Question: What is the meaning of volume of a solid? How can the volume of a rectangula r prism be found? | problems involving volume. <br> - Use previously learned knowledge about volumes to choose the appropriate tools to solve volume problems. | Independent Practice/ Assessment Practice <br> Small Groups- Problem Solving <br> Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; savvarealize.com; <br> khanacademy.org; <br> GoFormative.com <br> achievethecore.org; <br> illustrativemathematics.org |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 11 days <br> Topic 12 <br> Lessons <br> 1-9 <br> Essential <br> Question: <br> What are <br> customary <br> measurem <br> ent units | - Convert customary units of length. <br> - Convert customary units of capacity. <br> - Convert customary units of weight. <br> - Convert metric units of length. <br> - Convert metric units of capacity. <br> - Convert metric units of mass. <br> - Convert units of time. <br> - Solve real-world problems with measurement conversions. | Problem-Based Learning: <br> Solve and Share with three reads Look Back! <br> Visual Learning: <br> Visual Learning Bridge <br> Convince Me! <br> Another Example <br> Guided Practice <br> Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving | Foot (ft) <br> Inch (in.) <br> Yard (yd) <br> Mile (mi) <br> Capacity <br> Gallon (gal) <br> Quart (qt) <br> Pint (pt) <br> Cup (c) <br> Fluid ounce (fl oz) <br> Weight <br> Ton (T) | 5.MD.A. 1 <br> 5.NBT.B. 5 <br> 5.NBT.B. 6 <br> 5.NBT.A. 2 <br> Mathematical <br> Practice: 1-8 |


| and how are they related? What are metric measurem ent units and how are they related? | - Be precise when solving measurement problems. | Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; <br> savvarealize.com; <br> khanacademy.org; <br> GoFormative.com <br> achievethecore.org; <br> illustrativemathematics.org | Pound (lb) <br> Ounce (oz) <br> Kilometer (km) <br> Meter (m) <br> Centimeter (cm) <br> Millimeter (mm) <br> Liter (L) <br> Milliliter (ml) <br> Mass <br> Milligram (mg) <br> Gram (g) <br> Kilogram (kg) |  |
| :---: | :---: | :---: | :---: | :---: |
| 6 days <br> Topic 13 <br> Lessons <br> 1-4 <br> Essential <br> question:H <br> ow is the <br> value of a <br> numerical <br> expressio <br> n found? | - Review 4 grade concepts order of operations <br> - Use the order of operations to evaluate expressions. <br> - Write simple expressions that show calculations with numbers. <br> - Interpret numerical expressions without evaluating them. <br> - Use reasoning to solve problems by making sense of quantities and relationships in the situation. | Problem-Based Learning: <br> Solve and Share with three reads <br> Look Back! <br> Visual Learning: <br> Visual Learning Bridge <br> Convince Me! <br> Another Example <br> Guided Practice <br> Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving <br> Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach | Numerical expression Evaluate Order of operations Parenthesis Brackets Braces | 4.OA. 3 \& 5 <br> 5.OA.A. 1 <br> 5.OA.A. 2 <br> Mathematical <br> Practice: 1-8 |


|  |  | Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; savvarealize.com; khanacademy.org; GoFormative.com achievethecore.org; illustrativemathematics.org |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 6 days <br> Topic 14 <br> Lessons <br> 1-4 <br> Essential question:H ow are points plotted? <br> How are relationshi ps shown on a graph? | - Locate points on a coordinate grid. <br> - Graph points on a coordinate grid. <br> - Solve real-world problems by graphing points. <br> - Use reasoning to solve problems by making sense of quantities and relationships in the situation. | Problem-Based Learning: <br> Solve and Share with three reads Look Back! <br> Visual Learning: <br> Visual Learning Bridge <br> Convince Me! <br> Another Example <br> Guided Practice <br> Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving <br> Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment | Coordinate plane <br> Ordered pair <br> $X$ - axis <br> $Y$ - axis <br> Origin <br> X - coordinate <br> Y - coordinate | 5.G.A. 1 <br> 5.G.A. 2 <br> Mathematical <br> Practice: 1-8 |


|  |  | Websites: ixl.com; reflexmath.com; savvarealize.com; <br> khanacademy.org; <br> GoFormative.com achievethecore.org; <br> illustrativemathematics.org |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 6 days <br> Topic 15 <br> Lessons <br> 1-4 <br> Essential <br> question: <br> How can <br> number <br> patterns <br> be <br> analyzed <br> and <br> graphed? <br> How can <br> number <br> patterns <br> be used to <br> solve <br> problems? | - Analyze numerical patterns. <br> - Use tables to identify relationships between patterns. <br> - Analyze patterns, and graph ordered pairs generated from number sequences. <br> - Make sense of problems, and persevere in solving them. | Problem-Based Learning: <br> Solve and Share with three reads Look Back! <br> Visual Learning: <br> Visual Learning Bridge <br> Convince Me! <br> Another Example <br> Guided Practice <br> Independent Practice/ Assessment <br> Practice <br> Small Groups- Problem Solving <br> Activity Centers (enVisionSTEM, <br> Pick a Project, Problem-Solving <br> Reading Mat) <br> Assess and Differentiate: <br> Reteach <br> Build Math Literacy <br> Enrichment <br> Websites: ixl.com; reflexmath.com; savvarealize.com; <br> khanacademy.org; | Corresponding terms Number sequence | 5.OA.B. 3 <br> 5.G.A. 2 <br> Mathematical <br> Practice: 1-8 |


|  |  | GoFormative.com <br> achievethecore.org; <br> illustrativemathematics.org |  |
| :--- | :--- | :--- | :--- | :--- |


$\square$

| Formative Assessment Plan | Summative Assessment Plan |
| :---: | :---: |
| - Practice Buddy <br> - Quick check <br> - IXL <br> - Slates/Whiteboards | - Common Assessments <br> - Performance Task <br> - Online Assessments |
| Main Resources | Supplementary Resources |
| - Envisions | - Khan Academy <br> - IXL <br> - Reflex Math |

## Unit 1 Appendix

