# Long Range Plans Based on NYS and NAD Standards <br> 2021-2022 



Math - Grade 5

By: Ms. Michelle Mbugua

## Math Curriculum

## NOTE:

$>$ Curriculum: Oakview Preparatory School Grade 5-8 Mathematics Curriculum is a union of both the North America Division Mathematics Curriculum, and the New York State Mathematics Curriculum.
$>$ Integration of Faith: There will be an integration of faith and learning as per SDA beliefs
$>$ Projects: There will be at least 1 project each marking period.
$>$ Summative final grades are based on select assignments (homework, class work, projects, essays, etc.)
$>$ Exams - There will be at least 2 tests each marking period.
$>$ Presentations: Students may be asked to prepare and present topics as well as be grouped virtually to facilitate each other's development and understanding of math concepts and skills.
$>$ Students will be required to produce an online portfolio of specific assignments each marking period.
$>$ Students will be required to use the internet and online resources, including Jupiter, to complete some assignments and quizzes.
$>$ Students will be required to produce work on time -

- Grade 5, 6, or 7 - late work will be penalized $10 \%$ for each day late and will not be accepted after day 3 , unless there is a valid written excuse by the parent or a doctor.
- Grade 8 - late work will be penalized $20 \%$ for each day late and will not be accepted after day 2 , unless there is a valid written excuse by the parent or a doctor.
$>$ Quality of work: Students will be required to produce work that is neat and of a high standard.
As much as possible the school's website (www.oakviewprep.com), and e-mail communication will be used to keep parents up-to-date on topics being covered and student's progress.
$>$ Topics: These will be covered in conjunction with modules on www.EngageNY.org
> Apps/Resources: www.Khanacademy.org, www.IXL.com, www.youtube.com, MobyMax math program, READY problem solving text book for grade 6,7 , and 8 ; and other online and print resources. Curriculum will be complemented with state test preparation material.
> Flipped Classroom: Students will be assigned pre-class assignments, videos, and reading to complete independently. Pop quizzes may be given on the content of the pre-class assignment given.
$>$ Quizzes: Weekly (Friday on Jupiter Ed).
$>$ Test Prep: Practice test assignments will be given at the end of each chapter.
$>$ Makeup: If makeups are given the maximum possible score will be 70\%
$>$ Grading: Test $-40 \%$; Class work $-20 \%$; Home work - $10 \%$; Projects $-20 \%$; Quizzes $-5 \%$; Miscellaneous - 5\%


## Mathematics Curriculum/Long Range Plans: 2021/2022 - Grade 5 Textbook Big Ideas Math 2022 edition (www.bigideasmath.com)

| Month | Chapter | Sections and Common Core Standards | Objective |
| :---: | :---: | :---: | :---: |
| September | Chapter 1: Place Value concepts | Chapter Opener | Review of previous content |
|  |  | 1.1 - Place Value Patterns | Understand the relationship between place value positions P. 3 |
|  |  | 1.2 - Place Value with Whole <br> Numbers | Write multi-digit numbers in different forms and compare the values of digits P. 9 |
|  |  | 1.3 -Patterns and Powers of 10 | Write numbers using exponents P. 15 |
|  |  | 1.4 - Decimals to Thousandths | Write thousandths as fractions and decimals P. 21 |
|  |  | 1.5 - Place Value with Decimals | Write decimals in different forms and compare the value of digits P. 27 |


|  |  | 1.6 - Compare Decimals | Compare decimals to the thousandths place P. 33 |
| :---: | :---: | :---: | :---: |
|  |  | 1.7 - Round Decimals | Use place value to round decimals P. 39 |
|  |  | Chapter 1 performance task Chapt. 1 Review/Textbook test | P. 45 <br> Completed in class |
|  |  | Chapter 1 Test | Completed in class/online |
| September | Chapter 2: Numerical Expressions | Chapter Opener | Review of previous content (Home) |
|  |  | 2.1 - Number Properties | Use number properties P. 53 |
|  |  | 2.2 - Order of Operations | Use order of operations to evaluate numerical expressions P. 59 |
|  |  | 2.3 - Write Numerical Expressions | Write numerical expressions P. 65 |
|  |  | 2.4 - Evaluate Expressions with Grouping Symbols | Use order of operations to evaluate numerical expressions with grouping symbols P. 71 |
|  |  | Chapter 2 Performance task | P. 77 |
|  |  | Chapt. 2 Review/Textbook test | Completed in class |
|  |  | Chapter 2 Test | Completed in class/online |
| October | Chapter 3: <br> Add and <br> Subtract <br> Decimals | Chapter Opener | Review of previous content |
|  |  | 3.1 - Estimate Sums and Differences | Using rounding or compatible numbers to estimate sums and differences of decimals P. 83 |
|  |  | 3.2 - Use Models to Add and Subtract Decimals | Use models to add and subtract decimals P. 89 |
|  |  | 3.3 - Add Decimals | Add decimals and check whether the sum is reasonable P. 95 |
|  |  | 3.4 - Subtract Decimals | Subtract decimals and check my answer P. 101 |
|  |  | 3.5 - Add and Subtract Decimals | Use addition and subtraction to evaluate expressions involving decimals P. 107 |
|  |  | 3.6 - Use Mental Math to Add and Subtract Decimals | Use mental math to add and subtract decimals P. 113 |
|  |  | 3.7 - Problem Solving: Money | Solve multi-step word problems involving money P. 119 |
|  |  | Performance Task/Activity | P. 125,126 |
|  |  | Chapter Practice/Review | P. 127 |
|  |  | Chapter Test | In Class/Online |
|  |  | STEAM Performance Task:1-3 | P. 135 |
| October | Chapter 4: <br> Multiply <br> Whole <br> Numbers | Chapter Opener | Review of previous content |
|  |  | 4.1 - Multiplication Patterns | Find products involving multiples of 10 and powers of 10 P. 139 |
|  |  | 4.2 - Estimate Products | Estimate products P. 145 |
|  |  | 4.3 - Multiply by One-Digit Numbers | How can I multiply one-digit numbers P. 151 |
|  |  | 4.4 - Multiply by Two-Digit Numbers | Multiply multi-digit numbers by twodigit numbers P. 157 |
|  |  | 4.5 - Multiply by Multi-Digit Whole Numbers | Multiply multi-digit numbers by whole numbers P. 163 |


|  |  | Performance Task/Activity | P.169,170 |
| :---: | :---: | :---: | :---: |
|  |  | Chapter 4 Review/textbook | Completed in class |
|  |  | Chapter 4 Test | In class/Online |
| November | Chapter 5: Multiply Decimals | Chapter Opener | Review of previous content |
|  |  | 5.1 - Multiplication Patterns with Decimals | Find products involving decimals and powers of 10 P. 175 |
|  |  | 5.2 - Estimate Products of Decimals and Whole Numbers | Use rounding and compatible numbers to estimate products of decimals and whole numbers P. 181 |
|  |  | 5.3 - Use Models to Multiply Decimals and Whole Numbers | Use models to multiply decimals and whole numbers P. 187 |
|  |  | 5.4 - Multiply Decimals and Whole Numbers | Multiply decimals and whole numbers P. 193 |
|  |  | 5.5 - Use Models to Multiply Decimals | Use models to multiply decimals P. 199 |
|  |  | 5.6 - Use Partial Products to Multiply Decimals | Use partial products to multiply decimals P. 205 |
|  |  | 5.7-Use Strategies to Multiply Decimals | Use estimation and properties to multiply decimals P. 211 |
|  |  | 5.8-Multiply Decimals | Multiply decimals P. 217 |
|  |  | 5.9 - Problem Solving: Multiply with Money | Solve multi-step problems involving money P. 223 |
|  |  | Performance Task/Activity | P. 229 |
|  |  | Chapter Review / textbook test | Completed in class/home |
|  |  | Chapter 5 Test | In class/Online |
| November | Chapter 6: <br> Divide Whole <br> Numbers | Chapter Opener | Review of previous content |
|  |  | 6.1 - Relate Multiplication and Division | Use multiplication to divide P. 237 |
|  |  | 6.2 - Division Patterns | Use place value and division facts to find quotients P. 243 |
|  |  | 6.3 - Estimate Quotients | Use division facts and compatible numbers to estimate quotients P. 249 |
|  |  | 6.4 - Divide by One-Digit Numbers | Divide multi-digit numbers by onedigit numbers P. 255 |
|  |  | 6.5 - Use Partial Quotients to Divide by Two-Digit Numbers | Use an area model and partial quotients to divide P. 261 |
|  |  | 6.6 - Use Partial Quotients with a Remainder | Use partial quotients to divide with a remainder P. 267 |
|  |  | 6.7 - Divide Three-Digit Numbers by Two-Digit Numbers | Divide three-digit numbers by twodigit numbers P. 273 |
|  |  | 6.8 - Divide Four-Digit Numbers by Two-Digit Numbers | Divide four-digit numbers by twodigit numbers P. 279 |
|  |  | 6.9 - Problem SolvingDivision | Solve word problems involving division of whole numbers P. 285 |
|  |  | Performance Task/Activity | P. 291 |
|  |  | Chapter Review / Quiz | In class |
|  |  | Chapter 6 Test | In class/Online |


| December | Chapter 7: <br> Divide <br> Decimals | Chapter Opener | Review of previous content |
| :---: | :---: | :---: | :---: |
|  |  | 7.1 - Division Patterns with | Find quotients involving decimals and powers of 10 P. 299 |
|  |  | 7.2 - Estimate Decimal Quotients | Use compatible numbers to estimate quotients involving decimals P. 305 |
|  |  | 7.3 - Use Models to Divide Decimals by Whole Numbers | Use models to divide decimals by whole numbers P. 311 |
|  |  | 7.4 - Divide Decimals by OneDigit Numbers | Divide decimals by one-digit whole numbers P. 317 |
|  |  | 7.5 - Divide Decimals by Two-Digit Numbers | Divide decimals by two-digit whole numbers P. 323 |
|  |  | 7.6 - Use Models to Divide Decimals | Use models to divide decimals by decimals P. 329 |
|  |  | 7.7 - Divide Decimals | Divide decimals by decimals P. 335 |
|  |  | 7.8 - Insert Zeros in the Dividend | Insert zeros in the dividend when dividing with decimals and whole numbers P. 341 |
|  |  | 7.9 - Problem Solving: Decimal Operations | Solve word problems involving decimals P. 347 |
|  |  | Performance Task/Activity | P. 353, 354 |
|  |  | Chapter Review / Quiz | In Class |
|  |  | Chapter 7 Test | In Class/Online |
|  |  | STEAM Performance Task:4-7 | P. 363 |
| January | Chapter 8: <br> Add and <br> Subtract <br> Fractions | Chapter Opener | Review of previous content |
|  |  | 8.1 - Simplest Form | Write fractions in Simplest form P. 367 |
|  |  | 8.2 - Estimate Sums and Differences of Fractions | Estimating sums and differences of fractions P. 373 |
|  |  | 8.3 - Find Common Denominators | Write fractions using a common denominator P. 379 |
|  |  | 8.4 - Add Fractions with Unlike Denominators | Add fractions with unlike denominators P. 385 |
|  |  | 8.5 - Subtract Fractions with Unlike Denominators | Subtract fractions with unlike denominators P. 391 |
|  |  | 8.6 - Add Mixed Numbers | Add mixed numbers with unlike denominators P. 397 |
|  |  | 8.7 - Subtract Mixed Numbers | Subtract mixed numbers with unlike denominators P. 403 |
|  |  | 8.8 - Problem Solving: <br> Fractions | Solve multi-step word problems involving fractions and mixed numbers P. 409 |
|  |  | Performance Task/Activity | P. 415,416 |
|  |  | Chapter Review / Quiz | Text book in Class |
|  |  | Chapter 8 Test | In class/online |
| February | Chapter 9: <br> Multiply <br> Fractions | Chapter Opener | Review of previous content |
|  |  | 9.1 - Multiply Whole Numbers by Fractions | Multiply whole numbers by fractions P. 423 |
|  |  | 9.2 - Use Models to Multiply Fractions by Whole Numbers | Multiply fractions by whole numbers P. 429 |
|  |  | 9.3 - Multiply Fractions by Whole Numbers | Multiply fractions and whole numbers P. 435 |


|  |  | 9.4 - Use Models to Multiply Fractions | Use models to multiply a fraction by a fraction P. 441 |
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|  |  | 9.5 - Multiply Fractions | Multiply a fraction by a fraction P. 447 |
|  |  | 9.6 - Find Areas of Rectangles | Find Areas of Rectangles P. 453 |
|  |  | 9.7 - Multiply Mixed Numbers | Multiply a mixed number by a mixed number P. 459 |
|  |  | 9.8 - Compare Factors and Products | Compare a product to each of it's factors P. 465 |
|  |  | Performance Task/Activity | P.471/472 |
|  |  | Chapter Review / Quiz | Text book in class |
|  |  | Chapter 9 Test | In class/online |
| February | Chapter 10: <br> Divide <br> Fractions | Chapter Opener | Review of previous content |
|  |  | 10.1 - Interpret Fractions as Division | Understand how fractions relate to division P. 479 |
|  |  | 10.2 - Mixed numbers as Quotients | Understand how mixed numbers relate to division P. 485 |
|  |  | 10.3 - Divide Whole Numbers by Unit Fractions | Divide whole numbers by unit fractions P. 491 |
|  |  | 10.4 - Divide Unit Fractions by Whole Numbers | Divide whole numbers by unit fractions P. 495 |
|  |  | 10.5 - Problem Solving: Fraction Division | Solve multi-step word problems involving division with fractions P. 503 |
|  |  | Performance Task/Activity | P. 509/510 |
|  |  | Chapter Review / Quiz | Text book in class |
|  |  | Chapter 10 Test | Online test/ Take home |
| March | Chapter 11: Convert and Display Units of Measure | Chapter Opener | Review of previous content |
|  |  | 11.1 - Length in Metric Units | Write lengths using equivalent metric measures P. 515 |
|  |  | 11.2 - Mass and Capacity in Metric Units | Write masses and capacities using equivalent metric measures P. 521 |
|  |  | 11.3 - Length in Customary Units | Write lengths using equivalent customary measures P. 527 |
|  |  | 11.4 - Weight in Customary Units | Write weights using equivalent customary measures P. 533 |
|  |  | 11.5 - Capacity in Customary Units | Write capacities using equivalent customary measures P. 539 |
|  |  | 11.6 - Make and Interpret Line Plots | Make line plots and use them to solve problems P. 545 |
|  |  | 11.7 - Problem Solving: <br> Measurement | Solve multi-step word problems involving units of measure P. 551 |
|  |  | Performance Task/Activity | P. 557/558 |
|  |  | Chapter 11 Review/textbook | Completed in class |
|  |  | Chapter 11 Test | In class/online |
|  |  | STEAM Performance Task:811 | P. 567 |
| March | Chapter 12: <br> Patterns in the <br> Coordinate <br> Plane | Chapter Opener | Review of previous content |
|  |  | 12.1 - Plot Points in the coordinate Plane | Identify and plot points in the coordinate plane P. 571 |
|  |  | 12.2 - Relate Points in a | Relate points and find distances in the |


|  |  | Coordinate Plane | coordinate plane P. 577 |
| :---: | :---: | :---: | :---: |
|  |  | 12.3 - Draw Polygons in a Coordinate Plane | Draw and identify polygons in a coordinate plane P. 583 |
|  |  | 12.4 - Graph Data | Graph and interpret data in a coordinate plane P. 589 |
|  |  | 12.5 - Make and Interpret Line Graphs | Make and interpret line graphs P. 595 |
|  |  | 12.6 - Numerical Patterns | Create and describe numerical patterns P. 601 |
|  |  | 12.7 - Graph and Analyze Relationships | Use a graph to describe the relationship between two numerical patterns P. 607 |
|  |  | Performance Task/Activity | P. 613/614 |
|  |  | Chapter 12 Review/textbook | Completed in class |
|  |  | Chapter 12 Test | In class/online |
| April | Chapter 13: Understand volume | Chapter Opener | Review of previous content |
|  |  | 13.1 - Understand the concept of volume | Count to find volume of solid figures P. 621 |
|  |  | 13.2 - Find the Volumes of Right rectangular Prisms | Find volume of right rectangular prisms P. 627 |
|  |  | 13.3 - Apply the Volume Formula | Use a formula to find the volumes of rectangular prisms P. 633 |
|  |  | 13.4 - Find Unknown Dimensions | Find the unknown dimensions of rectangular prisms P. 639 |
|  |  | 13.5 - Find Volume of Composite Figures | Find volumes of composite figures P. 645 |
|  |  | Performance Task/Activity | P. 651/652 |
|  |  | Chapter 13 Review/textbook | Completed in class |
|  |  | Chapter 13 Test | In class/online |
| April | Chapter 14: Classify twoDimensional Shapes | Chapter Opener | Review of previous content |
|  |  | 14.1 - Classify Triangles | Classify triangles by their angles and by their sides P. 659 |
|  |  | 14.2 - Classify Quadrilaterals | Classify quadrilaterals by their angles and by their sides P. 665 |
|  |  | 14.3 - Relate Quadrilaterals | Understand the hierarchy of quadrilaterals P. 671 |
|  |  | Performance Task/Activity | P. 677/678 |
|  |  | Chapter 14 Review/textbook | Completed in class |
|  |  | Chapter 14 Test | In class/online |
|  |  | STEAM Performance Task: $12-14$ | P. 685 |
| May | MAP | Union wide MAP testing |  |
|  | NYS Testing | Math state test based on Common Core curriculum |  |
| May | Fractions | Comparing and ordering fractions and decimals | Text - Standards practice book |
| May | Factor trees, modeling percents, relating decimals and | Find prime factorization using a factor tree. Convert between fractions, decimals and fractions. | Text - Standards practice book |


|  | percents, <br> fractions <br> decimals and <br> percents |  |  |
| :--- | :--- | :--- | :--- |
| May | Divide <br> fractions by a <br> whole number | Divide a fraction by a whole <br> number | Text - Standards practice book |
| May | Ratios, Rates <br> and <br> Understanding <br> Integers | Understand and use rates and <br> ratios. Understand the concept <br> of integers and represent them <br> on a number line. | Text - Standards practice book |
| May | Algebra - <br> Write and <br> evaluate <br> expressions <br> and <br> understand <br> inequalities | Write and evaluate expressions <br> and understand inequalities <br> and use them to solve <br> problems | Text - Standards practice book |
| May | Polygons on <br> Coordinate <br> Grid, area of <br> parallelogram, <br> median, <br> mode, and <br> average | Draw polygons on coordinate <br> grid; find area of <br> parallelogram; find median, <br> mode, and average. | Text - Standards practice book |
| May | Histograms | Histograms - use histograms <br> to organize data and analyze <br> them | Text - Standards practice book |
| June | Review for <br> Finals | June | Finals |

