2020-21 Pacing Guide-Envisions Math: Second Grade

*In event of switch to virtual learning/ less days- use 'Priority Instructional Content for Grade 2' to prioritize lessons *Dates are approximate

	Grade 2/ Math / Trimester One					
Time Frame	Primary Math Skills	Instructional Strategy	Academic Vocabulary	Standards & Math Practice		
First week of school	To login and explore Envision Online (Pearson), IXL, Xtra Math, Prodigy, etc. To login and navigate Google Classroom to view math videos, follow links, and open assignments On-line Readiness Assessment IXL Diagnostic (Cont to assign once per month also) Routines- Teach format of math workshop, teach games, social distancing when playing,	 Provide students with practice to navigate resources Familiarize students with interactive math materials and hands on manipulatives Demonstrate & model where to locate instructional links/assignments 	 Digital Math Icons Tools Thinking Habits Review Mental Math 			

Mid September- End of Sept 10 lessons (9/13-9/29)	 Topic 1: Fluently Add and Subtract Within 20 use counting on to add add numbers in any order use doubles & near doubles to add use the making ten strategy to add & subtract use number patterns count on & back on number line think addition to subtract use mental math to add & subtract solve word problems use words, pictures, numbers, & symbols 	 *Focus on fluency- see Teacher's Guide pgs 1K-1N Connecting cubes-teaching tool 5 Counters-teaching tool 6 Number line Double ten frame mat-teaching tool 8 Math games/tools Problem-solving reading activity STEM activity Pick a Project 3 Acts Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy 	 Equation Addend Sum Doubles Near doubles Difference Bar diagram 	2.OA.A1, 2.OA.B.2 MP 1-8
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Beginning to Mid- October 5 lessons (9/30-10/8)	 Topic 2: Work with Equal Groups identify groups of even & odds use different ways to identify groups find total number in rows & columns make arrays with equal rows & columns to solve addition use equations, drawings, and arrays to model problems 	 Connecting cubes-teaching tool 5 Counters-teaching tool 6 Model with Math Math games/tools Problem-solving reading activity STEM activity Pick a Project Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy 	 Even Odd Array Rows Columns 	2.OA.C.3, 2.OA.B.2, 2.OA.C.4, 2.OA.A.1 MP 1-8
Mid- End Oct 7 lessons (10/12- 10/25)	 Topic 3: Add Within 100 Using Strategies add within 100 using place value use open number line to add tens & ones break apart numbers into tens & ones break apart addends; combine in different ways to add mentally 	 IXL Diagnostic Open number lines-teaching tool 14 Hundred chart-teaching tool 17 Break apart strategies-teaching tool 21 Comparison bar diagrams-teaching tool 23 Counters-teaching tool 6 Model with Math Math games/tools Problem-solving reading activity STEM activity Pick a Project 	 Tens Ones Open Number Line Break Apart Compensatio n 	2.NBT.B5, 2.NBT.B.9, 2.OA.A.1 MP 1-8

	 use strategy to add two-digit numbers use drawings & equations to solve one & two step problems use words, pictures numbers, and symbols to construct viable math arguments 	 3 Acts Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy 		
Early-Mid Nov 9 Lessons (10/26- 11/12)	 Topic 4: Fluently Add Within 100 add 2-digit numbers using models add with partial sums add using mental math & partial sums break apart numbers & add using mental math add more than 2 digit numbers add using strategies solve one-step & two-step problems model with math 	 Place value blocks-teaching tool 19 Partial sums chart-teaching tool 25 Place value mat A-teaching tool 26 Math games/tools Problem-solving reading activity STEM activity Pick a Project Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy 	 Regroup Partial sm Mental math 	2.NBT.B.5, 2.NBT.B.9, 2.OA.A.1, 2.NBT.B.6 MP 1-8

Formative Assessment Plan	Summative Assessment Plan
 Quick Check IXL Realize Scout to analyze work Observation in whole group, small group, independent Slate work Math notebook/ problem solving Daily workbook practice Xtra Math.org 	 Topic Assessments Examview Test Generator End of trimester assessments Fact Fluency assessments Pick a Project
Main Resources	Supplementary Resources
• Envisions Mathematics-Volume 1: Topics 1-4	 Number sense skill builders- RekenReks; Using number grid; math fact cards Games for addition/ subtraction- Top It; Addition Top It; Ladybug Doubles Game; 3 Addends Game; Rolling to 100; Around the World ; Salute

	 Part, part, total wipe off mats; number bonds wipe off mat; Anchor charts- making 10; doubles facts Arrays- Array puzzles, <u>Ideas for teaching arrays</u> Technology games- xtramath.org; IXL; Arcedemics; Ipad and Google Tablet apps - Math Slicer, Mummy Math, Squeebles, Sushi Monster, Math Blaster, Math Zombies, Math Museum Stem- Making the longest chain of paper; building with cubes and popsicle sticks, Help Harry see the room(community); Halloween Stem- building with candy corns and candy pumpkins; CGI/ problem solving questions Math word wall
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	Grade 2 / Math / Trimester Two					
Time Frame	Primary Math Skills	Instructional Strategy	Academic Vocabulary	Standards & Math Practice		

Mid Nov- Early Dec 8 Lessons (11/17- 12/3)	 Topic 5: Subtract Within 100 Using Strategies subtract tens & ones on a hundred chart count back on an open number line add up to subtract using an open number line break apart numbers to subtract subtract using compensation practice subtracting using strategies solve one-step & two-step problems problem solving-critique reasoning 	 IXL Diagnostic Open number line-teaching tool 14 Hundred chart-teaching tool 17 Place-value blocks-teaching tool 19 Bar diagrams-teaching tool 16 Compensation strategies-teaching tool 22 Break-apart strategies-teaching tool 28 Math games/tools Problem-solving reading activity STEM activity Pick a Project 3 Acts Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Buddy 	• None	2.NBT.B.5, 2.NBT.B.9, 2.OA.A.1 MP 1-8
Dec 7 Lessons	 Topic 6: Fluently Subtract Within 100 subtract 1-digit numbers using models 	 Place-value blocks- teaching tool 19 Place-value mat-teaching tool 26 	• Partial differences	2.NBT.B.5, 2.NBT.B.9, 2.OA.A.1

(12/6-12/20)	 subtract 2-digit numbers using models subtract using partial differences practice subtracting solve one-step & two-step problems problem solving -reasoning 	 Bar diagrams-teaching tools 15, 16, & 23 Math games/tools Problem-solving reading activity STEM activity Pick a Project Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy 		MP 1-8
Early- Mid Jan 8 Lessons (1/3-1/14)	 Topic 7: More Solving Problems Involving Addition & Subtraction represent addition & subtraction problems mixed practice: solve addition & subtraction problems solve two-step problems make true equations 	 IXL Diagnostic Red & blue colored pencils Connecting cubes-teaching tool 5 Comparison bar diagrams-teaching tool 23 Bar diagrams-teaching tool 16 Math games/tools Problem-solving reading activity STEM activity Pick a Project 3 Acts Solve & Share 	• None	2.OA.A.1, 2.NBT.B.5, 2.NBT.B, 2.NBT.B.9, 2.OA.B.2 MP 1-8

		 Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy 		
Mid - End Jan 8 Lessons (1/18-2/1)	 Topic 8: Work with Time & Money solve problems with coins solve problems with dollar bills problem solving-reasoning tell & write time to five minutes tell time before & after the hour a.m. & p.m. 	 Coins for teaching- teaching tool 29 \$1 Bills-teaching tool 30 Bills-teaching tool 31 Demonstration clock Analog clock-teaching tool 32 Blank analog clock & digital clock-teaching tool 33 Math games/tools Problem-solving reading activity STEM activity Pick a Project Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy 	 Dime Nickel Penny Quarter Half-dollar Cents sign Dollar Dollar sign Dollar bill Tally marks Quarter past Half past Quarter to A.M. P.M. 	2.MD.C.8, 2.NBT.A.2, 2.OA.A.1, 2.MD.C.7 MP 1-8

Early Feb - 2/2-2/3 Feb	 Benchmark Assessment 1-8 Review/ flex/ catch up 		• Hundred	2.NBT.A.1a,
10 Lessons (2/4-2/24)	 Topic 9: Numbers to 1,000 understand hundreds models & 3-digit numbers name place values read & write 3-digit numbers different ways to name the same number place-value patterns with numbers skip count by 5s, 10s, & 100s to 1,000 compare numbers using place value compare numbers on the number line problem solving -look for & use structure 	 IXL Diagnostic Place-value blocks- teaching tool 19 & 20 Place-value mat B- teaching tool 34 Hundreds, tens, & ones charts-teaching tool 35 Blank hundred chart- teaching tool 18 Open number lines- teaching tool 14 Index cards Hundred chart-teaching tool 17 Math games/tools Problem-solving reading activity STEM activity Pick a Project 3 Acts Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy 	 Thousand Digit place-value chart Standard form Expanded form Word form Compare Greater than (>) Less than (<) Equal to (=) Decrease Increase 	2.NBT.A.1a, 2.NBT.A.1b, 2.NBT.A.1, 2.NBT.A.3, 2.NBT.A.2, 2.NBT.B.8, 2.NBT.A.4, MP 1-8

•	End of Trimester Assessment (try to do at beginning of math early March)		
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Formative Assessment Plan	Summative Assessment Plan
 Quick Check IXL Realize Scout to analyze work Observation in whole group, small group, independent Slate work Math notebook/ problem solving Daily workbook practice Xtra Math.org 	 Topic Assessments Examview Test Generator End of trimester assessments Fact Fluency assessments Pick a Project
Main Resources	Supplementary Resources
• Envisions Mathematics-Volumes 1 & 2: Topics 5-9	 PMI- Telling time resources as needed ; Units for adding and subtracting 2 digit numbers to introduce the concepts Games- Telling time games; Place Value- Base Ten Exchange; face practice games Online games- Sheppard Software; xtramath.org; IXL; Arcademics; Youtube- AM/ PM video; Ipad and Google Tablet apps - Thinking Blocks, Missing Numbers, Cookie Factory; Mr. Wolf, Telling Time, TT Clock MAke a class number scroll past 1,000 STEM- Make an igloo out of base ten blocks- estimate and count total value of blocks; Grinch Day stem ;

	 Manipulatives- Base Ten Blocks/ place value mat; individual or class number grids to 1000 100th day of school activities/ STEM- hopping, jumping, etc in 100 seconds, making a pyramid with 100 cups, flipping a coin and rolling a die 100 times, Valentine STEM- making a heart with cups, stacking Sweethearts; 'flying' Cupid ; construction paper weaving a heart; Dr. Seuss Stem- making butter; oobleck; CGI/ problem solving questions
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	Grade 2/ Math / Trimester Three			
Time Frame	Primary Math Skills	Instructional Strategy	Academic Vocabulary	Standards & Math Practice
Early- Mid Mar 7 Lessons (2/25-3/10)	 Topic 10: Add Within 1,000 using Models & Strategies add 10 & 100 add on an open number line add using models continue to add using models & place value add using place value & partial sums explain addition strategies problem solving-repeated reasoning 	 IXL Diagnostic Place-value blocks-teaching tool 19 & 20 Play dollar bills-teaching tool 30 & 31 Open number lines-teaching tool 14 Place-value mat B-teaching tool 34 Partial sums charts-teaching tool 37 Hundreds, tens, & ones charts- teaching tool 35 Math games/tools Problem-solving reading activity STEM activity Pick a Project Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy 	• None	2.NBT.B.8, 2.NBT.B.9, 2.MD.C.8, 2.NBT.B.7, 2.NBT.A.2 MP 1-8

Mid Mar 6 Lessons (3/11-3/23)	 Topic 11: Subtract Within 1,000 Using Models & Strategies subtract 10 & 100 subtract on an open number line subtract using models subtract using models & place value explain subtraction strategies problem solving-persevere 	 Place-value blocks-teaching tool 19 & 20 Play dollar bills-teaching tool 30 & 31 Open number lines-teaching tool 14 Hundreds, tens, & ones charts- teaching tool 35 Math games/tools Problem-solving reading activity STEM activity Pick a Project 3 Acts Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy 	• None	2.NBT.B.8, 2.NBT.B.9, 2.MD.C.8, 2.NBT.B.7, 2.NBT.A.2 MP 1-8
End Mar- Mid April 9 Lessons (3/24-4/8)	 Topic 12: Measuring Length estimating length measure with inches inches, feet & yards measure length using different customary units measure with centimeters centimeters & meters 	 IXL Diagnostic Inch rulers-teaching tool 38 1-inch squares-teaching tool 39 Measuring tapes Yardsticks Centimeter rulers-teaching tool 40 Ones cubes-teaching tool 19 Centimeter squares-teaching 	 Estimate Inch (in.) Foot (ft.) Yard (yd.) Height Nearest inch Centimeter (cm) Nearest centimeter Meter (m) 	2.MD.A.3, 2.MD.A.1, 2.MD.A.2, 2.MD.A.4, 2.MD.B.5,

	 measure length using different metric units compare lengths problem solving-precision 	 tool 50 String/yarn Buttons/counters-teaching tool 6 Math games/tools Problem-solving reading activity STEM activity SIEM activity Pick a Project Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy 		
Mid April (4/11-4/12)	 Benchmark Assessment 1-12 Review/ flex/ catch up 			
Mid April- Early May 8 Lessons (4/13-5/6)	 Topic 13: Shapes & Their Attributes 2-dimensional shapes polygons & angles draw 2-dimensional shapes cubes equal shares partition shapes equal shares, different shapes 	 Plane shapes-teaching tool 46 Tracing paper Toothpicks Crayons/markers Rulers-teaching tools 38 & 40 Centimeter grid paper-teaching tool 51 Straws Ones cubes/solid cubes ³/₄ inch squares-teaching tool 	 Vertices Quadrilateral Pentagon Hexagon Polygon Angle Right angle Cube Face Edge 	2.G.A.1, 2.OA.B.2, 2.MD.A.1, 2.G.A.2, 2.OA.C.4, 2.G.A.3, 2.MD.A.2 MP 1-8

	problem solving-repeated reasoning	 52 ³/₄ inch grid paper-teaching tool 49 Halves, thirds, & fourths-teaching tool 52 Graph paper-teaching tool 16 Math games/tools Problem-solving reading activity STEM activity Pick a Project 3 Acts Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy 	 Equal shares Halves Thirds Fourths 	
Mid May 5 Lessons (5/9-5/18)	 Topic 14: More Addition, Subtraction and Length add & subtract with measurements find unknown measurements continue to find unknown measurements add & subtract on a number line 	 IXL Diagnostic Centimeter rulers & meter sticks-teaching tool 40 Number lines-teaching tool 13 Counters-teaching tool 6 Inch rulers & yardsticks- teaching tool 38 Measuring tapes Ones cubes-teaching tool 19 String Math games/tools Problem-solving reading 	• None	2.MD.B.5, 2.OA.A.1, 2.MD.B.6 MP 1-8

	• problem solving-use appropriate tools	activity STEM activity Pick a Project Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice Independent practice Problem Solving Interactive Practice Buddy		
End May 6 Lessons 5/19-6/2)	 Topic 15: Graphs and Data line plots bar graphs picture graphs draw conclusion from graphs problem solving-reasoning 	 Inch ruler-teaching tool 38 Classroom objects Blank table & bar graphs- teaching tool 41 Index cards Rulers Connecting cubes-teaching tool 5 Counters-teaching tool 6 Ones cubes-teaching tool 19 Math games/tools Problem-solving reading activity STEM activity Pick a Project 3 Acts Solve & Share Visual Learning Bridge Convince Me Classroom Conversation Guided practice 	 Data Line plot Bar graph Symbol Picture graph 	2.MD.D.9, 2.MD.A.1, 2.MD.D.10, 2.OA.A.1, 2.MD.D.10 MP 1-8

		 Independent practice Problem Solving Interactive Practice Buddy 	
June (6/3- 6/10 or later)	 Benchmark Assessment EOY Last Trimester Assessment of Skills Review/ flex/ catch up/ End of trimester assessment 		

Formative Assessment Plan	Summative Assessment Plan
 Quick Check IXL Realize Scout to analyze work Observation in whole group, small group, independent Slate work Math notebook/ problem solving Daily workbook practice Xtra Math.org 	 Topic Assessments Examview Test Generator End of trimester assessments Fact Fluency assessments Pick a Project
Main Resources	Supplementary Resources
• Envisions Mathematics-Volume 2: Topics 10-15	 PMI- as needed; Measurement resources to supplement Games- Make My Design;

	 Online games- Sheppard Software; xtramath.org; IXL; Arcademics; Mathisfun.com- graph maker; Class graphs- bar graphs, line plots, Youtube- Ipad and Google Tablet apps STEM- Easter STEM- make a parachute to hold an egg, transport an egg down a zip line, ; Make a floating ramp; build a rollercoaster Manipulatives- Making shapes activities- using straws to build shapes, Foldable 3D shapes; folding shapes into fractions and finding area CGI/ problem solving questions
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