

 i-Ready[®] Classroom
Mathematics
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to the

2021 Oregon Mathematics Standards

Kindergarten

2021 Oregon Mathematics Standards Kindergarten		i-Ready Classroom Mathematics Lessons Oregon Edition—Kindergarten
Kindergarten		
K.OA	Algebraic Reasoning: Operations	
K.OA.A	Understand addition and subtraction.	
K.OA.A.1	Represent addition as putting together and adding to and subtraction as taking apart and taking from using objects, drawings, physical expressions, numbers or equations.	<p>Lesson 7: Add Within 5 Explore: pp. 145–146; Develop: pp. 147–154; Refine: pp. 155–162</p> <p>Lesson 9: Subtract Within 5 Explore: pp. 185–186; Develop: pp. 187–194; Refine: pp. 195–202</p> <p>Lesson 10: Add and Subtract Within 5 Explore: pp. 205–206; Develop: pp. 207–214; Refine: pp. 215–222</p> <p>Lesson 20: Add Within 10 Explore: pp. 435–436; Develop: pp. 437–444; Refine: pp. 445–452</p> <p>Lesson 21: Subtract Within 10 Explore: pp. 455–456; Develop: pp. 457–464; Refine: pp. 465–472</p> <p>Math in Action: Unit 3: Make a Mobile: pp. 223–226, Unit 6: Design a Dance: pp. 493–496</p>
K.OA.A.2	Add and subtract within 10. Model authentic contexts and solve problems that use addition and subtraction within 10.	<p>Lesson 7: Add Within 5 Explore: pp. 145–146; Develop: pp. 147–154; Refine: pp. 155–162</p> <p>Lesson 9: Subtract Within 5 Explore: pp. 185–186; Develop: pp. 187–194; Refine: pp. 195–202</p> <p>Lesson 10: Add and Subtract Within 5 Explore: pp. 205–206; Develop: pp. 207–214; Refine: pp. 215–222</p> <p>Lesson 22: Add and Subtract to Solve Word Problems Explore: pp. 475–476; Develop: pp. 477–484; Refine: pp. 485–492</p> <p>Math in Action: Unit 3: Make a Mobile: pp. 223–226, Unit 6: Design a Dance: pp. 493–496</p>

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K.OA.A.3	Using objects or drawings, and equations, decompose numbers less than or equal to 10 into pairs in more than one way.	<p>Lesson 14: Compose and Decompose 10 Explore: pp. 295–296; Develop: pp. 297–304; Refine: pp. 305–312</p> <p>Lesson 18: Compose and Decompose 6 and 7 Explore: pp. 385–386; Develop: pp. 387–394; Refine: pp. 395–402</p> <p>Lesson 19: Compose and Decompose 8 and 9 Explore: pp. 405–406; Develop: pp. 407–414; Refine: pp. 415–422</p> <p>Math in Action: Unit 4: Plan a Playground: pp. 333–336, Unit 5: Grow a Garden: pp. 423–426, Unit 6: Design a Dance: pp. 493–496</p>
K.OA.A.4	By using objects, drawings, or equations, find the unknown number that makes 10 when added to a given number from 1–9.	<p>Lesson 15: Find Number Partners for 10 Explore: pp. 315–316; Develop: pp. 317–324; Refine: pp. 325–332</p> <p>Math in Action: Unit 4: Plan a Playground: pp. 333–336</p>
K.OA.A.5	Fluently add and subtract within 5 with accurate, efficient, and flexible strategies.	<p>Lesson 20: Add Within 10 Explore: pp. 435–436; Develop: pp. 437–444; Refine: pp. 445–452</p> <p>Lesson 21: Subtract Within 10 Explore: pp. 455–456; Develop: pp. 457–464; Refine: pp. 465–472</p>
K.NCC	Numeric Reasoning: Counting and Cardinality	
K.NCC.A	Know number names and the count sequence.	
K.NCC.A.1	Orally count to 100 by ones and by tens in sequential order.	<p>Lesson 17: Count Within 100 Explore: pp. 365–366; Develop: pp. 367–374; Refine: pp. 375–382</p> <p>Educator Note: Unit 5: Counting Backward</p>
K.NCC.A.2	Count forward beginning from a given number within 100 of a known sequence.	<p>Lesson 17: Count Within 100 Explore: pp. 365–366; Develop: pp. 367–374; Refine: pp. 375–382</p> <p>Educator Note: Unit 5: Counting Backward</p>

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K.NCC.A.3	Identify number names, write numbers, and the count sequence from 0–20. Represent a number of objects with a written number 0–20.	<p>Lesson 4: Count, Show, and Write Numbers to 5 Explore: pp. 75–76; Develop: pp. 77–84; Refine: pp. 85–92</p> <p>Lesson 11: Count, Show, and Write Numbers 6 to 10 Explore: pp. 235–236; Develop: pp. 237–244; Refine: pp. 245–252</p> <p>Lesson 16: Count, Read, and Write Numbers 11 to 20 Explore: pp. 345–346; Develop: pp. 347–354; Refine: pp. 355–362</p> <p>Math in Action: Unit 2: Play with Puppets: pp. 133–136, Unit 4: Plan a Playground: pp. 333–336, Unit 5: Grow a Garden: pp. 423–426, Unit 7: Build for Birds: pp. 563–566</p>
K.NCC.B	Count to tell the number of objects.	
K.NCC.B.4	Understand the relationship between numbers and quantities; connect counting to cardinality.	<p>Lesson 4: Count, Show, and Write Numbers to 5 Explore: pp. 75–76; Develop: pp. 77–84; Refine: pp. 85–92</p> <p>Lesson 5: Compare Numbers to 5 Explore: pp. 95–96; Develop: pp. 97–104; Refine: pp. 105–112</p> <p>Lesson 11: Count, Show, and Write Numbers 6 to 10 Explore: pp. 235–236; Develop: pp. 237–244; Refine: pp. 245–252</p> <p>Lesson 12: Compare Numbers to 10 Explore: pp. 255–256; Develop: pp. 257–264; Refine: pp. 265–272</p> <p>Lesson 16: Count, Read, and Write Numbers 11 to 20 Explore: pp. 345–346; Develop: pp. 347–354; Refine: pp. 355–362</p> <p>Math in Action: Unit 2: Play with Puppets: pp. 133–136, Unit 5: Grow a Garden: pp. 423–426</p>

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K.NCC.B.5	Count to answer “how many?” questions using up to 20 objects arranged in a variety of configurations or as 10 objects in a scattered configuration. Given a number from 1–20, count out that many objects.	<p>Lesson 4: Count, Show, and Write Numbers to 5 Explore: pp. 75–76; Develop: pp. 77–84; Refine: pp. 85–92</p> <p>Lesson 11: Count, Show, and Write Numbers 6 to 10 Explore: pp. 235–236; Develop: pp. 237–244; Refine: pp. 245–252</p> <p>Lesson 16: Count, Read, and Write Numbers 11 to 20 Explore: pp. 345–346; Develop: pp. 347–354; Refine: pp. 355–362</p> <p>Math in Action: Unit 2: Play with Puppets: pp. 133–136, Unit 4: Plan a Playground: pp. 333–336, Unit 5: Grow a Garden: pp. 423–426, Unit 7: Build for Birds: pp. 563–566</p>
K.NCC.C	Compare numbers.	
K.NCC.C.6	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group.	<p>Lesson 5: Compare Numbers to 5 Explore: pp. 95–96; Develop: pp. 97–104; Refine: pp. 105–112</p> <p>Lesson 12: Compare Numbers to 10 Explore: pp. 255–256; Develop: pp. 257–264; Refine: pp. 265–272</p> <p>Math in Action: Unit 2: Play with Puppets: pp. 133–136</p>
K.NCC.C.7	Compare two numbers between 1 and 10 presented as written numerals.	<p>Lesson 5: Compare Numbers to 5 Explore: pp. 95–96; Develop: pp. 97–104; Refine: pp. 105–112</p> <p>Lesson 12: Compare Numbers to 10 Explore: pp. 255–256; Develop: pp. 257–264; Refine: pp. 265–272</p> <p>One-Day Activity: Unit 4: Name 1 More and 1 Less</p>

2021 Oregon Mathematics Standards Kindergarten		i-Ready Classroom Mathematics Lessons Oregon Edition—Kindergarten
K.NBT	Numeric Reasoning: Base Ten Arithmetic	
K.NBT.A	Work with numbers 11–19 to gain foundations for place value.	
K.NBT.A.1	Compose and decompose from 11 to 19 into groups of ten ones and some further ones using objects, drawings, or equations.	<p>Lesson 23: Compose and Decompose Teen Numbers with Tools and Drawings Explore: pp. 505–506; Develop: pp. 507–514; Refine: pp. 515–522</p> <p>Lesson 25: Compose and Decompose Teen Numbers with Symbols Explore: pp. 545–546; Develop: pp. 547–554; Refine: pp. 555–562</p> <p>Math in Action: Unit 7: Build for Birds: pp. 563–566</p>
K.GM	Geometric Reasoning and Measurement	
K.GM.A	Identify and describe shapes.	
K.GM.A.1	Describe objects in the environment using names of shapes and describe the relative positions of these objects in their environment.	<p>Lesson 1: Describe Position Explore: pp. 5–6; Develop: pp. 7–14; Refine: pp. 15–22</p> <p>Lesson 6: Three-Dimensional Shapes and Weight Explore: pp. 115–116; Develop: pp. 117–124; Refine: pp. 125–132</p> <p>Lesson 8: Two-Dimensional Shapes Explore: pp. 165–166; Develop: pp. 167–174; Refine: pp. 175–182</p> <p>Math in Action: Unit 1: Imagine a Rainforest: pp. 63–66</p>

2021 Oregon Mathematics Standards Kindergarten		i-Ready Classroom Mathematics Lessons Oregon Edition—Kindergarten
K.GM.A.2	Correctly name common two-dimensional and three-dimensional geometric shapes regardless of their orientations or overall size.	<p>Lesson 6: Three-Dimensional Shapes and Weight Explore: pp. 115–116; Develop: pp. 117–124; Refine: pp. 125–132</p> <p>Lesson 8: Two-Dimensional Shapes Explore: pp. 165–166; Develop: pp. 167–174; Refine: pp. 175–182</p> <p>Educator Note: Unit 3: Ovals, Rhombuses, and Octagons</p> <p>Math in Action: Unit 3: Make a Mobile: pp. 223–226, Unit 7: Build for Birds: pp. 563–566</p>
K.GM.A.3	Identify shapes as two-dimensional or three-dimensional.	<p>Lesson 24: Build with Shapes Explore: pp. 525–526; Develop: pp. 527–534; Refine: pp. 535–542</p>
K.GM.B	Analyze, compare, create, and compose shapes.	
K.GM.B.4	Analyze and compare two and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts and attributes.	<p>Lesson 6: Three-Dimensional Shapes and Weight Explore: pp. 115–116; Develop: pp. 117–124; Refine: pp. 125–132</p> <p>Lesson 8: Two-Dimensional Shapes Explore: pp. 165–166; Develop: pp. 167–174; Refine: pp. 175–182</p> <p>Educator Note: Unit 3: Ovals, Rhombuses, and Octagons</p> <p>Math in Action: Unit 3: Make a Mobile: pp. 223–226, Unit 7: Build for Birds: pp. 563–566</p>
K.GM.B.5	Represent shapes in the world by building shapes from components and drawing shapes.	<p>Lesson 24: Build with Shapes Explore: pp. 525–526; Develop: pp. 527–534; Refine: pp. 535–542</p> <p>Math in Action: Unit 7: Build for Birds: pp. 563–566</p>

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K.GM.B.6	Compose common shapes to form larger shapes.	Lesson 13: Compose Shapes Explore: pp. 275–276; Develop: pp. 277–284; Refine: pp. 285–292 Math in Action: Unit 4: Plan a Playground: pp. 333–336, Unit 7: Build for Birds: pp. 563–566
K.GM.C	Describe and compare measurable attributes.	
K.GM.C.7	Describe several measurable attributes of a single object using measurable terms, such as length or weight.	Lesson 2: Describe and Compare Length and Height Explore: pp. 25–26; Develop: pp. 27–34; Refine: pp. 35–42 Lesson 6: Three-Dimensional Shapes and Weight Explore: pp. 115–116; Develop: pp. 117–124; Refine: pp. 125–132
K.GM.C.8	Directly compare two objects with a measurable attribute in common, and describe which object has “more” or “less” of the attribute.	Lesson 2: Describe and Compare Length and Height Explore: pp. 25–26; Develop: pp. 27–34; Refine: pp. 35–42 Lesson 6: Three-Dimensional Shapes and Weight Explore: pp. 115–116; Develop: pp. 117–124; Refine: pp. 125–132 One-Day Activity: Unit 4: Name 1 More and 1 Less
K.DR	Data Reasoning	
K.DR.A	Pose investigative questions and collect/consider data.	
K.DR.A.1	Generate questions to investigate situations within the classroom. Collect or consider data that can naturally answer questions by sorting and counting.	One-Day Activity: Unit 1: Ask Questions to Collect Data

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K.DR.B	Analyze represent, and interpret data.	
K.DR.B.2	Analyze data sets by counting the number of objects in each category and interpret results by classifying and sorting objects by count.	<p>Lesson 3: Sort and Count Objects Explore: pp. 45–46; Develop: pp. 47–54; Refine: pp. 55–62</p> <p>Math in Action: Unit 1: Imagine a Rainforest: pp. 63–66, Unit 2: Play with Puppets: pp. 133–136, Unit 3: Make a Mobile: pp. 223–226, Unit 4: Plan a Playground: pp. 333–336, Unit 5: Grow a Garden: pp. 423–426, Unit 6: Design a Dance: pp. 493–496, Unit 7: Build for Birds: pp. 563–566</p>

Note: i-Ready Classroom Mathematics addresses number sense skills every day with dedicated number sense activities and fun counting and cardinality practice. Number Sense activities provide daily opportunities for children to talk about numbers and relationships, develop understanding of numbers, and use numbers and operations flexibly. Counting Routines provide children with engaging opportunities to practice rote counting daily.

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2021 Oregon Mathematics Standards

Grade 1

2021 Oregon Mathematics Standards Grade 1		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 1
Grade 1		
1.OA	Algebraic Reasoning: Operations	
1.OA.A	Represent and solve problems involving addition and subtraction.	
1.OA.A.1	Use addition and subtraction within 20 to solve and represent problems in authentic contexts involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.	<p>Lesson 2: Add and Subtract Within 10 Explore: pp. 29–30; Develop: pp. 31–42; Refine: pp. 43–50</p> <p>Lesson 5: Solve Word Problems to 10 Explore: pp. 101–102; Develop: pp. 103–114; Refine: pp. 115–122</p> <p>Lesson 9: Use a Ten to Subtract Explore: pp. 207–208; Develop: pp. 209–220; Refine: pp. 221–228</p> <p>Lesson 11: Solve Word Problems to 20 Explore: pp. 265–266; Develop: pp. 267–278; Refine: pp. 279–286</p> <p>Lesson 12: Solve Compare Problems Explore: pp. 289–290; Develop: pp. 291–302; Refine: pp. 303–310</p> <p>Math in Action: Unit 1: Make Fruit Snacks: pp. 123–126; Unit 2: Plan Camp Activities: pp. 253–256; Unit 3: Design a Park: pp. 359–362</p>
1.OA.A.2	Solve problems that call for addition of three whole numbers whose sum is less than or equal to 20 using objects, drawings or equations.	<p>Lesson 7: Add Three Numbers Explore: pp. 159–160; Develop: pp. 161–172; Refine: pp. 173–180</p> <p>Math in Action: Unit 2: Plan Camp Activities: pp. 253–256; Unit 3: Design a Park: pp. 359–362</p>
1.OA.B	Understand and apply properties of operations and the relationship between addition and subtraction.	
1.OA.B.3	Apply properties of operations as strategies to add and subtract.	<p>Lesson 1: Number Partners for 10 Explore: pp. 5–6; Develop: pp. 7–18; Refine: pp. 19–26</p> <p>Lesson 7: Add Three Numbers Explore: pp. 159–160; Develop: pp. 161–172; Refine: pp. 173–180</p> <p>Math in Action: Unit 2: Plan Camp Activities: pp. 253–256</p>

2021 Oregon Mathematics Standards Grade 1		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 1
1.OA.B.4	Understand subtraction as an unknown-addend problem.	<p>Lesson 4: Use Addition to Subtract Explore: pp. 77–78; Develop: pp. 79–90; Refine: pp. 91–98</p> <p>Lesson 5: Solve Word Problems to 10 Explore: pp. 101–102; Develop: pp. 103–114; Refine: pp. 115–122</p> <p>Lesson 11: Solve Word Problems to 20 Explore: pp. 265–266; Develop: pp. 267–278; Refine: pp. 279–286</p>
1.OA.C	Add and subtract within 20.	
1.OA.C.5	Relate counting to addition and subtraction.	<p>Lesson 3: Use Counting Strategies to Add and Subtract Explore: pp. 53–54; Develop: pp. 55–66; Refine: pp. 67–74</p> <p>Lesson 4: Use Addition to Subtract Explore: pp. 77–78; Develop: pp. 79–90; Refine: pp. 91–98</p> <p>Math in Action: Unit 1: Make Fruit Snacks: pp. 123–126</p>

2021 Oregon Mathematics Standards Grade 1		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 1
1.OA.C.6	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10 with accurate, efficient, and flexible strategies.	<p>Lesson 1: Number Partners for 10 Explore: pp. 5–6; Develop: pp. 7–18; Refine: pp. 19–26</p> <p>Lesson 3: Use Counting Strategies to Add and Subtract Explore: pp. 53–54; Develop: pp. 55–66; Refine: pp. 67–74</p> <p>Lesson 4: Use Addition to Subtract Explore: pp. 77–78; Develop: pp. 79–90; Refine: pp. 91–98</p> <p>Lesson 5: Solve Word Problems to 10 Explore: pp. 101–102; Develop: pp. 103–114; Refine: pp. 115–122</p> <p>Lesson 8: Make a Ten to Add Explore: pp. 183–184; Develop: pp. 185–196; Refine: pp. 197–204</p> <p>Lesson 9: Use a Ten to Subtract Explore: pp. 207–208; Develop: pp. 209–220; Refine: pp. 221–228</p> <p>Lesson 10: Doubles and Near Doubles Explore: pp. 231–232; Develop: pp. 233–244; Refine: pp. 245–252</p> <p>Lesson 11: Solve Word Problems to 20 Explore: pp. 265–266; Develop: pp. 267–278; Refine: pp. 279–286</p> <p>Math in Action: Unit 1: Make Fruit Snacks: pp. 123–126; Unit 2: Plan Camp Activities: pp. 253–256; Unit 3: Design a Park: pp. 359–362</p>
1.OA.D	Work with addition and subtraction equations.	
1.OA.D.7	Use the meaning of the equal sign to determine whether equations involving addition and subtraction are true or false.	<p>Lesson 14: True and False Equations Explore: pp. 337–338; Develop: pp. 339–350; Refine: pp. 351–358</p>
1.OA.D.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.	<p>Lesson 14: True and False Equations Explore: pp. 337–338; Develop: pp. 339–350; Refine: pp. 351–358</p>

2021 Oregon Mathematics Standards Grade 1		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 1
1.NBT	Numeric Reasoning: Base Ten Arithmetic	
1.NBT.A	Extend the counting sequence.	
1.NBT.A.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.	<p>Lesson 16: Numbers to 120 Explore: pp. 395–396; Develop: pp. 397–408; Refine: pp. 409–416</p> <p>Educator Note: Unit 4: Counting Backward Within 120 One-Day Activity: Unit 4: Count by 2s and 5s</p> <p>Math in Action: Unit 4: Plan a Pollinator Garden: pp. 441–444</p>
1.NBT.B	Understand place value.	
1.NBT.B.2	Understand 10 as a bundle of ten ones and that the two digits of a two-digit number represent amounts of tens and ones.	<p>Lesson 6: Teen Numbers Explore: pp. 135–136; Develop: pp. 137–148; Refine: pp. 149–156</p> <p>Lesson 15: Tens and Ones Explore: pp. 371–372; Develop: pp. 373–384; Refine: pp. 385–392</p> <p>Math in Action: Unit 2: Plan Camp Activities: pp. 253–256; Unit 4: Plan a Pollinator Garden: pp. 441–444</p>
1.NBT.B.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.	<p>Lesson 17: Compare Numbers Explore: pp. 419–420; Develop: pp. 421–432; Refine: pp. 433–440</p> <p>Math in Action: Unit 5: Donate Pet Toys: pp. 547–550</p>

2021 Oregon Mathematics Standards Grade 1		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 1
1.NBT.C	Use place value understanding and properties of operations to add and subtract.	
1.NBT.C.4	Add within 100 using concrete using concrete or visual representations 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 why sometimes it is necessary to compose a ten.	<p>Lesson 18: Add and Subtract Tens Explore: pp. 453–454; Develop: pp. 455–466; Refine: pp. 467–474</p> <p>Lesson 19: Addition with Two-Digit Numbers Explore: pp. 477–478; Develop: pp. 479–490; Refine: pp. 491–498</p> <p>Lesson 20: Add Two-Digit and One-Digit Numbers Explore: pp. 501–502; Develop: pp. 503–514; Refine: pp. 515–522</p> <p>Lesson 21: Add Two-Digit Numbers Explore: pp. 525–526; Develop: pp. 527–538; Refine: pp. 539–546</p> <p>One-Day Activity: Unit 5: Use Estimation to Add</p> <p>Math in Action: Unit 4: Plan a Pollinator Garden: pp. 441–444; Unit 5: Donate Pet Toys: pp. 547–550</p>
1.NBT.C.5	Without having to count, mentally find 10 more or 10 less than a given two-digit number and explain the reasoning used.	<p>Lesson 16: Numbers to 120 Explore: pp. 395–396; Develop: pp. 397–408; Refine: pp. 409–416</p>
1.NBT.C.6	Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 using concrete or visual representations and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. Relate the strategy and model used to a written method and explain the reasoning used.	<p>Lesson 18: Add and Subtract Tens Explore: pp. 453–454; Develop: pp. 455–466; Refine: pp. 467–474</p>

2021 Oregon Mathematics Standards Grade 1		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 1
1.GM	Geometric Reasoning and Measurement	
1.GM.A	Reason with shapes and their attributes.	
1.GM.A.1	Distinguish between defining attributes versus non-defining attributes for a wide variety of shapes. Build and draw shapes to possess defining attributes.	<p>Lesson 22: Shapes Explore: pp. 559–560; Develop: pp. 561–572; Refine: pp. 573–580</p> <p>Educator Note: Unit 6: Attributes and Composite Shapes</p> <p>Math in Action: Unit 6: Craft a Kite: pp. 701–704</p>
1.GM.A.2	Compose common two-dimensional shapes or three-dimensional shapes to create a composite shape, and create additional new shapes from composite shapes.	<p>Lesson 22: Shapes Explore: pp. 559–560; Develop: pp. 561–572; Refine: pp. 573–580</p> <p>Educator Note: Unit 6: Attributes and Composite Shapes</p> <p>Math in Action: Unit 6: Craft a Kite</p>
1.GM.A.3	Partition circles and rectangles into two and four equal shares. Describe the equal shares and understand that partitioning into more equal shares creates smaller shares.	<p>Lesson 23: Break Shapes into Equal Parts Explore: pp. 583–584; Develop: pp. 585–596; Refine: pp. 597–604</p> <p>Math in Action: Unit 6: Craft a Kite: pp. 701–704</p>
1.GM.B	Describe and compare measurable attributes.	
1.GM.B.4	Order three objects by length; compare the lengths of two objects indirectly by using a third object.	<p>Lesson 25: Compare and Order Lengths Explore: pp. 631–632; Develop: pp. 633–644; Refine: pp.645–652</p> <p>Math in Action: Unit 6: Craft a Kite: pp. 701–704</p>
1.GM.B.5	Express the length of an object as a whole number of non-standard length units, by laying multiple copies of a shorter object (the length unit) end to end.	<p>Lesson 26: Measure Length Explore: pp. 655–656; Develop: pp. 657–668; Refine: pp. 669–676</p>

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1.GM.C	Tell and write time.	
1.GM.C.6	Tell and write time in hours and half-hours using analog and digital clocks.	Lesson 24: Tell Time Explore: pp. 607–608; Develop: pp. 609–620; Refine: pp. 621–628 One-Day Activity: Unit 6: Solve Elapsed Time Problems
1.DR	Data Reasoning	
1.DR.A	Pose investigative questions and collect/consider data.	
1.DR.A.1	Generate questions to investigate situations within the classroom. Collect or consider data that can naturally answer questions by representing data visually.	Lesson 13: Collect and Compare Data Explore: pp. 313–314; Develop: pp. 315–326; Refine: pp. 327–334
1.DR.B	Analyze, represent, and interpret data.	
1.DR.B.2	Analyze data sets with up to three categories by representing data visually, such as with graphs and charts, and interpret information presented to answer investigative questions.	Lesson 13: Collect and Compare Data Explore: pp. 313–314; Develop: pp. 315–326; Refine: pp. 327–334 Math in Action: Unit 2: Plan Camp Activities: pp. 253–256; Unit 3: Design a Park: pp. 359–362; Unit 4: Plan a Pollinator Garden: pp. 441–444; Unit 5: Donate Pet Toys: pp. 547–550; Unit 6: Craft a Kite: pp. 701–704
<p><i>Note: i-Ready Classroom Mathematics addresses number sense skills every day with dedicated number sense activities and fun counting and cardinality practice. Number Sense activities provide daily opportunities for children to talk about numbers and relationships, develop understanding of numbers, and use numbers and operations flexibly. Counting Routines provide children with engaging opportunities to practice rote counting daily.</i></p>		

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Grade 2

2021 Oregon Mathematics Standards Grade 2		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 2
Grade 2		
2.OA	Algebraic Reasoning: Operations	
2.OA.A	Represent and solve problems involving addition and subtraction.	
2.OA.A.1	Use addition and subtraction within 100 to solve one- and two-step problems in authentic contexts by using drawings and equations with a symbol for the unknown.	<p>Lesson 3: Solve One-Step Word Problems Explore: pp. 53–54, 56; Develop: pp. 57–62, 63–68; Refine: pp. 69–74</p> <p>Lesson 5: Solve Two-Step Word Problems Explore: pp. 101–104; Develop: pp. 105–110, 111–116; Refine: pp. 117–122</p> <p>Lesson 9: Solve Word Problems with Two-Digit Numbers Explore: pp. 225–228; Develop: pp. 229–234, 235–240, 241–246; Refine: pp. 247–252</p> <p>Lesson 10: Solve Word Problems Involving Money Develop: pp. 271–276; Refine: pp. 277–282</p> <p>Math in Action: Unit 1: Solve Addition and Subtraction Problems: pp. 124–127, 130–131; Unit 2: Work with Two-Digit Numbers, Time, and Money: pp. 301–305</p>
2.OA.B	Add and subtract within 20.	
2.OA.B.2	Fluently add and subtract within 20 using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations.	<p>Lesson 1: Mental Math Strategies for Addition Explore: pp. 5–6, 8; Develop: pp. 9–14, 15–20; Refine: pp. 21–26</p> <p>Lesson 2: Mental Math Strategies for Subtraction Explore: pp. 29–30, 32; Develop: pp. 33–38, 39–44; Refine: pp. 45–50</p> <p>Math in Action: Unit 1: Solve Addition and Subtraction Problems: pp. 124–127, 130–131</p>
2.OA.C	Work with equal groups of objects to gain foundations for multiplication.	
2.OA.C.3	Determine whether a group up to 20 objects has an odd or even number by pairing objects or counting them by 2s; record using drawings and equations including expressing an even number as a sum of two equal addends.	<p>Lesson 32: Even and Odd Numbers Explore: pp. 767–770; Develop: pp. 771–776; Refine: pp. 777–782</p> <p>Math in Action: Unit 5: Use Shapes and Even and Odd Numbers: pp. 791</p>

2021 Oregon Mathematics Standards Grade 2		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 2
2.OA.C.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	Lesson 31: Add Using Arrays Explore: pp. 749–752; Develop: pp. 753–758; Refine: pp. 759–764
2.NBT	Numeric Reasonings: Base Ten Arithmetic	
2.NBT.A	Understand place value.	
2.NBT.A.1	Understand 100 as a bundle of ten tens and that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.	Lesson 12: <i>Understand</i> Three-Digit Numbers Explore: pp. 319–322; Develop: pp. 323–326; Refine: pp. 327–328 Math in Action: Unit 3: Add, Subtract, and Compare Numbers: pp. 493
2.NBT.A.2	Count within 1000; skip-count by 5's, 10's, and 100's.	Lesson 10: Solve Word Problems Involving Money Explore: pp. 255, 258; Develop: pp. 259–264; Refine: p. 278 Lesson 15: Mental Addition and Subtraction Explore: pp. 379–382; Develop: pp. 383–388; Refine: pp. 395, 397–399 One-Day Activity: Unit 5: Investigate Number Patterns
2.NBT.A.3	Read and write numbers up to 1000 using base-ten numerals, number names, and expanded form.	Lesson 13: Read and Write Three-Digit Numbers Explore: pp. 331–334; Develop: pp. 335–340, 341–346; Refine: pp. 347–352 Math in Action: Unit 3: Add, Subtract, and Compare Numbers: pp. 493
2.NBT.A.4	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.	Lesson 14: Compare Three-Digit Numbers Develop: pp. 359–364, 365–370; Refine: pp. 371–376

2021 Oregon Mathematics Standards Grade 2		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 2
2.NBT.B	Use place value understanding and properties of operations to add and subtract.	
2.NBT.B.5	Fluently add & subtract within 100 using accurate, efficient, & flexible strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	<p>Lesson 6: Add Two-Digit Numbers Explore: pp. 141–144; Develop: pp. 145–150, 151–156; Refine: pp. 163–168</p> <p>Lesson 7: Subtract Two-Digit Numbers Explore: pp. 171–174; Develop: pp. 175–180, 181–187; Refine: pp. 193–198</p> <p>Lesson 8: Use Addition and Subtraction Strategies with Two-Digit Numbers Explore: pp. 201–202, 204; Develop: pp. 205–210, 211–216; Refine: pp. 217–222</p> <p>Math in Action: Unit 2: Work with Two-Digit Numbers, Time, and Money: pp. 302–305</p>
2.NBT.B.6	Add up to four two-digit numbers using strategies based on place value and properties of operations and describe how two different strategies result in the same sum.	<p>Lesson 19: Add Several Two-Digit Numbers Explore: pp. 475–478; Develop: pp. 479–484; Refine: pp. 485–490</p> <p>One-Day Activity: Unit 5: Investigate Number Patterns</p> <p>Math in Action: Unit 3: Add, Subtract, and Compare Numbers: pp. 496–497</p>
2.NBT.B.7	Add and subtract within 1000 using concrete or visual representations 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 why sometimes it is necessary to compose or decompose tens or hundreds.	<p>Lesson 16: Add Three-Digit Numbers Explore: pp. 403–406; Develop: pp. 407–412, 413–418; Refine: pp. 419–424</p> <p>Lesson 17: Subtract Three-Digit Numbers Explore: pp. 427–430; Develop: pp. 431–436, 437–442; Refine: pp. 443–448</p> <p>Lesson 18: Use Addition and Subtraction Strategies with Three-Digit Numbers Explore: pp. 451–454; Develop: pp. 455–460, 461–466; Refine: pp. 467–472</p> <p>Math in Action: Unit 3: Add, Subtract, and Compare Numbers: pp. 493, 495, 499</p>
2.NBT.B.8	Without having to count, mentally find 10 more or 10 less and 100 more or 100 less than a given three-digit number.	<p>Lesson 15: Mental Addition and Subtraction Develop: pp. 389–394; Refine: pp. 396–398, 400</p>

2021 Oregon Mathematics Standards Grade 2		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 2
2.NBT.B.9	Explain why strategies to add and subtract work using properties of operations and the relationship between addition and subtraction.	<p>Lesson 6: Add Two-Digit Numbers Explore: pp. 142–143; Develop: pp. 147, 153–154; Refine: p. 166</p> <p>Lesson 7: Subtract Two-Digit Numbers Explore: p. 172; Develop: pp. 177–178</p> <p>Lesson 8: Use Addition and Subtraction Strategies with Two-Digit Numbers Develop: pp. 207, 213–214, 216; Refine: p. 220</p> <p>Lesson 16: Add Three-Digit Numbers Develop: pp. 409, 415–416</p> <p>Lesson 17: Subtract Three-Digit Numbers Develop: pp. 433–434, 442; Refine: pp. 446</p> <p>Lesson 18: Use Addition and Subtraction Strategies with Three-Digit Numbers Explore: pp. 452; Develop: pp. 463–464; Refine: pp. 469–470</p> <p>Lesson 19: Add Several Two-Digit Numbers Explore: pp. 476–477; Develop: pp. 481</p> <p>Math in Action: Unit 2: Work with Two-Digit Numbers, Time, and Money: pp. 306–307</p>
2.GM	Geometric Reasoning and Measurement	
2.GM.A	Reason with shapes and their attributes.	
2.GM.A.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.	<p>Lesson 28: Recognize and Draw Shapes Explore: pp. 696–697; Develop: pp. 699–704, 705–710; Refine: pp. 711–716</p> <p>Math in Action: Unit 5: Use Shapes and Even and Odd Numbers: pp. 790</p>
2.GM.A.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	<p>Lesson 30: Partition Rectangles Explore: pp. 731–734; Develop: pp. 735–740; Refine: pp. 741–746</p> <p>Educator Note: Unit 5: Partitioning Rectangles</p>
2.GM.A.3	Partition circles and rectangles into two, three, or four equal parts. Recognize that equal parts of identical wholes need not have the same shape.	<p>Lesson 29: <i>Understand</i> Partitioning Shapes into Halves, Thirds, and Fourths Explore: pp. 719–722; Develop: pp. 723–726; Refine: pp. 727–728</p> <p>Math in Action: Unit 5: Use Shapes and Even and Odd Numbers: pp. 784–787, 788–789</p>

2021 Oregon Mathematics Standards Grade 2		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 2
2.GM.B	Measure and estimate lengths in standard units.	
2.GM.B.4	Measure the length of an object by selecting and using appropriate measurement tools.	<p>Lesson 20: Measure in Inches and Centimeters Explore: pp. 509–510, 512; Develop: pp. 513–518; Refine: pp. 519–524</p> <p>Lesson 21: Measure in Feet and Meters Explore: pp. 527–530; Develop: pp. 531–536, 537–542; Refine: pp. 543–548</p> <p>Math in Action: Unit 4: Use Measurement: pp. 676–679</p>
2.GM.B.5	Measure the length of an object using two different length units and describe how the measurements relate to the size of the unit chosen.	<p>Lesson 22: <i>Understand</i> Measurement with Different Units Explore: pp. 551–552, 554; Develop: pp. 555–558; Refine: pp. 559–560</p> <p>Educator Note: Unit 4: Constructed and Standard Rulers</p>
2.GM.B.6	Estimate lengths using units of inches, feet, yards, centimeters, and meters.	<p>Lesson 23: Estimate and Measure Length Explore: pp. 563–566; Develop: pp. 567–572; Refine: pp. 573–578</p> <p>Educator Note: Unit 4: Estimating Length in Yards</p>
2.GM.B.7	Measure two objects and determine the difference in their lengths in terms of a standard length unit.	<p>Lesson 24: Compare Lengths Explore: pp. 581–584; Develop: pp. 585–590, 591–596; Refine: pp. 597–602</p> <p>Math in Action: Unit 4: Use Measurement: pp. 680–681</p>
2.MD.C	Relate addition and subtraction to length.	
2.GM.C.8	Use addition and subtraction within 100 to solve problems in authentic contexts involving lengths that are given in the same units.	<p>Lesson 25: Add and Subtract Lengths Explore: pp. 605–608; Develop: pp. 609–614, 615–620; Refine: pp. 621–626</p> <p>Math in Action: Unit 4: Use Measurement: pp. 676–679, 680–681, 683</p>
2.GM.C.9	Represent whole number lengths on a number line diagram; use number lines to find sums and differences within 100.	<p>Lesson 26: Add and Subtract on the Number Line Explore: pp. 629–632; Develop: pp. 633–638, 639–644; Refine: pp. 645–650</p>

2021 Oregon Mathematics Standards Grade 2		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 2
2.MD.D	Work with time and money.	
2.GM.D.10	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	<p>Lesson 11: Tell and Write Time Explore: pp. 284–288; Develop: pp. 289–294; Refine: pp. 295–300</p> <p>One-Day Activity: Unit 2: Solve Elapsed Time Problems to the Nearest 5 Minutes</p> <p>Math in Action: Unit 2: Work with Two-Digit Numbers, Time, and Money: pp. 309</p>
2.GM.D.11	Solve problems in authentic contexts involving dollar bills, quarters, dimes, nickels, and pennies, using \$ (dollars) and c (cents) symbols appropriately.	<p>Lesson 10: Solve Word Problems Involving Money Explore: pp. 254–258; Develop: pp. 259–264, 265–270, 271–276; Refine: pp. 277–282</p> <p>Math in Action: Unit 2: Work with Two-Digit Numbers, Time, and Money: pp. 308; Unit 4: Use Measurement: pp. 682</p>
2.DR	Data Reasoning	
2.DR.A	Pose investigative questions and collect/consider data.	
2.DR.A.1	Generate questions to investigate situations within the classroom. Collect or consider data that can naturally answer questions by using measurements with whole-number units.	<p>Lesson 27: Read and Make Line Plots Explore: pp. 654–655; Develop: pp. 657–662, 663–668; Refine: pp. 669–671, 673–674</p> <p>Educator Note: Unit 4: Asking Statistical Investigative Questions</p>
2.DR.B	Analyze, represent, and interpret data.	
2.DR.B.2	Analyze data with a single-unit scale and interpret information presented to answer investigative questions.	<p>Lesson 4: Draw and Use Bar Graphs and Picture Graphs Explore: pp. 77–80; Develop: pp. 81–86; Refine: pp. 93–95, 97–98</p> <p>Math in Action: Unit 1: Solve Addition and Subtraction Problems: pp. 128–129</p>

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2021 Oregon Mathematics Standards

Grade 3

2021 Oregon Mathematics Standards Grade 3		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 3
Grade 3		
3.OA	Algebraic Reasoning: Operations	
3.OA.A	Represent and solve problems involving multiplication and division.	
3.OA.A.1	Represent and interpret multiplication of two factors as repeated addition of equal groups.	Lesson 4: <i>Understand</i> the Meaning of Multiplication Explore: pp. 93–96; Develop: pp. 97–100; Refine: pp. 101–102
3.OA.A.2	Represent and interpret whole–number quotients as dividing an amount into equal sized groups.	Lesson 10: <i>Understand</i> the Meaning of Division Explore: pp. 227–230; Develop: pp. 231–234; Refine: pp. 235–269 Math in Action: Unit 2: Solve Multiplication and Division Problems: pp. 284–291
3.OA.A.3	Use multiplication and division within 100 to solve problems in authentic contexts involving equal groups, arrays, and/or measurement quantities.	Lesson 5: Multiply with 0, 1, 2, 5, and 10 Explore: pp. 106–108; Develop: pp. 109–120; Refine: pp. 121–124 Lesson 6: Multiply with 3, 4, and 6 Explore: pp. 127–130; Develop: pp. 131–148; Refine: pp. 149–152 Lesson 7: Multiply with 7, 8, and 9 Explore: pp. 155–158; Develop: pp. 159–176; Refine: pp. 177–180 Lesson 17: Solve One–Step Word Problems Using Multiplication and Division Explore: pp. 359–362; Develop: pp. 363–380; Refine: pp. 381–384 Lesson 19: Scaled Graphs Explore: pp. 415–418; Develop: pp. 419–436; Refine: pp. 437–440 Lesson 28: Liquid Volume Develop: pp. 627–632; Refine: pp. 633–636 Lesson 29: Mass Develop: pp. 652–654; Refine: pp. 655–658 One-Day Activity: Unit 5: Ask Questions and Collect Measurement Data Math in Action: Unit 2: Solve Multiplication and Division Problems: pp. 284–291; Unit 3: Use the Four Operations: pp. 442–449; Unit 5: Solve Measurement Problems: 660–667

2021 Oregon Mathematics Standards Grade 3		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 3
3.OA.A.4	Determine the unknown number in a multiplication or division equation relating three whole numbers by applying the understanding of the inverse relationship of multiplication and division.	Lesson 12: Multiplication and Division Facts Explore: pp. 251–254; Develop: pp. 255–266; Refine: pp. 267–270
3.OA.B	Understand properties of multiplication and the relationship between multiplication and division.	
3.OA.B.5	Apply properties of operations as strategies to multiply and divide.	Lesson 5: Multiply with 0, 1, 2, 5, and 10 Explore: pp. 106–108; Develop: pp. 109–120; Refine: pp. 121–124 Lesson 6: Multiply with 3, 4, and 6 Explore: pp. 127–130; Develop: pp. 131–148; Refine: pp. 149–152 Lesson 7: Multiply with 7, 8, and 9 Explore: pp. 155–158; Develop: pp. 159–176; Refine: pp. 177–180 Lesson 8: Use Order and Grouping to Multiply Explore: pp. 183–186; Develop: pp. 187–204; Refine: pp. 205–208
3.OA.B.6	Understand division as an unknown-factor in a multiplication problem.	Lesson 11: <i>Understand</i> How Multiplication and Division Are Connected Explore: pp. 239–242; Develop: pp. 243–246; Refine: pp. 247–248 Math in Action: Unit 2: Solve Multiplication and Division Problems: pp. 284–291

2021 Oregon Mathematics Standards Grade 3		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 3
3.OA.C	Multiply and divide within 100.	
3.OA.C.7	Fluently multiply and divide within 100 using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations.	<p>Lesson 5: Multiply with 0, 1, 2, 5, and 10 Explore: pp. 106–108; Develop: pp. 109–120; Refine: pp. 121–124</p> <p>Lesson 6: Multiply with 3, 4, and 6 Explore: pp. 127–130; Develop: pp. 131–148; Refine: pp. 149–152</p> <p>Lesson 7: Multiply with 7, 8, and 9 Explore: pp. 155–158; Develop: pp. 159–176; Refine: pp. 177–180</p> <p>Lesson 12: Multiplication and Division Facts Explore: pp. 251–254; Develop: pp. 255–266; Refine: pp. 267–270</p> <p>Lesson 19: Scaled Graphs Explore: pp. 415–418; Develop: pp. 419–436; Refine: pp. 437–440</p> <p>Lesson 28: Liquid Volume Develop: pp. 627–632; Refine: pp. 633–636</p> <p>Lesson 29: Mass Develop: pp. 652–654; Refine: pp. 655–658</p> <p>One-Day Activity: Unit 5: Ask Questions and Collect Measurement Data</p> <p>Math in Action: Unit 2: Solve Multiplication and Division Problems: pp. 284–291; Unit 5: Solve Measurement Problems: pp. 660–667</p>

2021 Oregon Mathematics Standards Grade 3		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 3
3.OA.D	Solve problems involving the four operations, and identify and explain patterns in arithmetic.	
3.OA.D.8	Solve two-step problems in authentic contexts that use addition, subtraction, multiplication, and division in equations with a letter standing for the unknown quantity.	<p>Lesson 18: Solve Two-Step Word Problems Using the Four Operations Explore: pp. 387–390; Develop: pp. 391–408; Refine: pp. 409–412</p> <p>Lesson 19: Scaled Graphs Explore: pp. 415–418; Develop: pp. 419–436; Refine: pp. 437–440</p> <p>Lesson 28: Liquid Volume Develop: pp. 629–632</p> <p>Lesson 29: Mass Develop: pp. 649–654; Refine: pp. 655–656</p> <p>Educator Note: Unit 5: Liquid Volume and Mass One-Day Activity: Unit 5: Ask Questions and Collect Measurement Data</p> <p>Math in Action: Unit 2: Solve Multiplication and Division Problems: pp. 284–291; Unit 3: Use the Four Operations: pp. 442–449</p>
3.OA.D.9	Identify and explain arithmetic patterns using properties of operations, including patterns in the addition table or multiplication table.	<p>Lesson 13: <i>Understand</i> Patterns Explore: pp. 273–276; Develop: pp. 277–280; Refine: pp. 281–282</p>
3.NBT	Numeric Reasoning: Base Ten Arithmetic	
3.NBT.A	Use place value understanding and properties of operations to perform multi-digit arithmetic.	
3.NBT.A.1	Use place value understanding to round whole numbers within 1000 to the nearest 10 or 100.	<p>Lesson 1: Use Place Value to Round Numbers Explore: pp. 5–8; Develop: pp. 9–20; Refine: pp. 21–24</p> <p>Math in Action: Unit 1: Use Rounding and Operations: pp. 76–83</p>

2021 Oregon Mathematics Standards Grade 3		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 3
3.NBT.A.2	Fluently add and subtract within 1000 using accurate, efficient, and flexible strategies and algorithms based on place value properties of operations.	<p>Lesson 2: Add Three-Digit Numbers Explore: pp. 27–30; Develop: pp. 31–42; Refine: pp. 43–46</p> <p>Lesson 3: Subtract Three-Digit Numbers Explore: pp. 49–52; Develop: pp. 53–70; Refine: pp. 71–74</p> <p>Math in Action: Unit 1: Use Rounding and Operations: pp. 76–83</p>
3.NBT.A.3	Find the product of one-digit whole numbers by multiples of 10 in the range 10–90, such as 9×80 . Students use a range of strategies and algorithms based on place value and properties of operations.	<p>Lesson 9: Use Place Value to Multiply Develop: pp. 215–220; Refine: pp. 221–224</p>
3.NF	Numeric Reasoning: Fractions	
3.NF.A	Develop understanding of fractions as numbers.	
3.NF.A.1	Understand the concept of a unit fraction and explain how multiple copies of a unit fraction form a non-unit fraction.	<p>Lesson 20: <i>Understand</i> What a Fraction Is Explore: pp. 459–460, 462; Develop: pp. 463–466; Refine: pp. 467–468</p> <p>Lesson 21: <i>Understand</i> Fractions on a Number Line Explore: pp. 471–474; Develop: pp. 475–478; Refine: pp. 479–480</p> <p>Lesson 22: <i>Understand</i> Equivalent Fractions Explore: pp. 483–484</p> <p>Lesson 23: Find Equivalent Fractions Explore: pp. 495–498</p> <p>Math in Action: Unit 4: Use Fractions: pp. 572–579</p>
3.NF.A.2	Understand a fraction as a number on the number line; Represent fractions on a number line diagram.	<p>Lesson 21: <i>Understand</i> Fractions on a Number Line Explore: pp. 471–474; Develop: pp. 475–478; Refine: pp. 479–480</p>

2021 Oregon Mathematics Standards Grade 3		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 3
3.NF.A.3	Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.	<p>Lesson 22: <i>Understand</i> Equivalent Fractions Explore: pp. 483–486; Develop: pp. 487–490; Refine: pp. 491–492</p> <p>Lesson 23: Find Equivalent Fractions Explore: pp. 495–498; Develop: pp. 499–516; Refine: pp. 517–520</p> <p>Lesson 24: <i>Understand</i> Comparing Fractions Explore: pp. 523–526; Develop: pp. 527–530; Refine: pp. 531–532</p> <p>Lesson 25: Use Symbols to Compare Fractions Explore: pp. 535–538; Develop: pp. 539–544; Refine: pp. 545–548</p> <p>Math in Action: Unit 4: Use Fractions: pp. 572–579</p>
3.GM	Geometric Reasoning and Measurement	
3.GM.A	Reason with shapes and their attributes.	
3.GM.A.1	Understand that shapes in different categories may share attributes and that shared attributes can define a larger category.	<p>Lesson 30: <i>Understand</i> Categories of Shapes Explore: pp. 677–680; Develop: pp. 681–684; Refine: pp. 685–686</p> <p>Lesson 31: Classify Quadrilaterals Explore: pp. 689–692; Develop: pp. 693–704; Refine: pp. 705–708</p> <p>Math in Action: Unit 6: Work with Shapes: pp. 759–761</p>
3.GM.A.2	Partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole.	<p>Lesson 33: Partition Shapes into Parts with Equal Areas Explore: pp. 739–742; Develop: pp. 743–748; Refine: pp. 749–752</p> <p>Math in Action: Unit 6: Work with Shapes: pp. 759–761</p>

2021 Oregon Mathematics Standards Grade 3		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 3
3.GM.B	Solve problems involving measurement and estimation.	
3.GM.B.3	Tell, write, and measure time to the nearest minute. Solve problems in authentic contexts that involve addition and subtraction of time intervals in minutes.	<p>Lesson 27: Time Explore: pp. 589–592; Develop: pp.593–610; Refine: pp. 611–614</p> <p>Educator Note: Unit 5: Elapsed Time Problems with Change Unknown</p> <p>Math in Action: Unit 5: Solve Measurement Problems: pp. 660–667</p>
3.GM.B.4	Measure, estimate and solve problems in authentic contexts that involve liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).	<p>Lesson 28: Liquid Volume Explore: pp. 617–620; Develop: pp. 621–632; Refine: pp. 633–636</p> <p>Lesson 29: Mass Explore: pp. 639–642; Develop: pp. 643–654; Refine: pp. 655–658</p> <p>Educator Note: Unit 5: Liquid Volume and Mass</p> <p>Math in Action: Unit 5: Solve Measurement Problems: pp. 660–667</p>
3.GM.C	Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	
3.GM.C.5	Recognize area as an attribute of plane figures and understand concepts of area measurement presented in authentic contexts by tiling and counting unit squares.	<p>Lesson 14: Understand Area Explore: pp. 303–306; Develop: pp. 307–310; Refine: pp. 311–312</p>
3.GM.C.6	Measure areas by counting standard and non-standard unit squares.	<p>Lesson 14: Understand Area Explore: pp. 303–306; Develop: pp. 307–310; Refine: pp. 311–312</p>
3.GM.C.7	Relate area to multiplication and addition. Use relevant representations to solve problems in authentic contexts.	<p>Lesson 15: Multiply to Find Area Explore: pp. 315–318; Develop: pp. 319–330; Refine: pp. 331–334</p> <p>Lesson 16: Add Areas Explore: pp. 337–340; Develop: pp. 341–352; Refine: pp. 353–356</p>

2021 Oregon Mathematics Standards Grade 3		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 3
3.GM.D	Geometric measurement: recognize perimeter.	
3.GM.D.8	Solve problems involving authentic context for perimeters of polygons.	Lesson 32: Area and Perimeter of Shapes Explore: pp. 711–714; Develop: pp. 715–720; Refine: pp.733–736 Math in Action: Unit 6: Work with Shapes: pp. 759–761
3.DR	Data Reasoning	
3.DR.A	Pose investigative questions and collect/consider data.	
3.DR.A.1	Generate questions to investigate situations within the classroom, school or community. Collect or consider measurement data that can naturally answer questions by using information presented in a scaled picture and/or bar graph.	Lesson 26: Measure Length and Plot Data on Line Plots Explore: pp. 551–552; Develop: pp. 555–560, 565–566; Refine: pp. 567–570 One-Day Activity: Unit 5: Ask Questions and Collect Measurement Data
2.DR.B	Analyze, represent, and interpret data.	
3.DR.B.2	Analyze measurement data with a scaled picture graph or a scaled bar graph to represent a data set with several categories. Interpret information presented to answer investigative questions.	Lesson 19: Scaled Graphs Explore: pp. 415–418; Develop: pp. 419–436; Refine: pp. 437–440

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Grade 4

2021 Oregon Mathematics Standards Grade 4		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 4
Grade 4		
4.OA	Algebraic Reasoning: Operations	
4.OA.A	Use the four operations with whole numbers to solve problems.	
4.OA.A.1	Interpret a multiplication equation as comparing quantities. Represent verbal statements of multiplicative comparisons as equations.	<p>Lesson 6: <i>Understand</i> Multiplication as a Comparison Explore: pp. 109–112; Develop: pp. 113–116; Refine: pp. 117–118</p> <p>Math in Action: Unit 2: Solve Multiplication Problems: pp. 214–221</p>
4.OA.A.2	Multiply or divide to solve problems in authentic contexts involving multiplicative comparison, distinguishing multiplicative comparison from additive comparison.	<p>Lesson 6: <i>Understand</i> Multiplication as a Comparison Explore: pp. 109–112; Develop: pp. 113–116; Refine: pp. 117–118</p> <p>Lesson 7: Multiplication and Division in Word Problems Explore: pp. 121–124; Develop: pp. 125–136; Refine: pp. 137–140</p> <p>Math in Action: Unit 2: Solve Multiplication Problems: pp. 214–221</p>
4.OA.A.3	Solve multistep problems in authentic contexts using whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted.	<p>Lesson 10: Model and Solve Multi-Step Problems Explore: pp. 193–194, 196; Develop: pp. 197–208; Refine: pp. 209–212</p> <p>Math in Action: Unit 2: Solve Multiplication Problems: pp. 214–221</p>
4.OA.B	Gain familiarity with factors and multiples.	
4.OA.B.4	Find all factor pairs for a whole number in the range 1–100. Determine whether a given whole number in the range of 1–100 is a multiple of a given one-digit number, and whether it is prime or composite.	<p>Lesson 8: Multiples and Factors Explore: pp. 144–146; Develop: pp. 150–164; Refine: pp. 165–168</p> <p>Math in Action: Unit 2: Solve Multiplication Problems: pp. 214–221</p>

2021 Oregon Mathematics Standards Grade 4		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 4
4.OA.C	Generate and analyze patterns.	
4.OA.C.5	Analyze a number, visual, or contextual pattern that follows a given rule.	Lesson 9: Number and Shape Patterns Explore: pp. 171–174; Develop: pp. 175–186; Refine: pp. 187–190 Educator Note: Unit 2: Patterns
4.NBT	Numeric Reasoning: Base Ten Arithmetic	
4.NBT.A	Generalize place value understanding for multi-digit whole numbers.	
4.NBT.A.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.	Lesson 1: <i>Understand</i> Place Value Explore: pp. 5; Develop: pp. 9, 11–12; Refine: p. 14
4.NBT.A.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Use understandings of place value within these forms to compare two multi-digit numbers, using $>$, $=$, and $<$ symbols.	Lesson 1: <i>Understand</i> Place Value Explore: pp. 5–8; Develop: pp. 9–12; Refine: pp. 13–14 Lesson 2: Compare Whole Numbers Explore: pp. 17–20; Develop: pp. 21–26; Refine: pp. 27–30 Educator Note: Unit 1: Numbers in Word Form Math in Action: Unit 1: Work with Whole Numbers: pp. 92–99
4.NBT.A.3	Use place value understanding to round multi-digit whole numbers to any place.	Lesson 3: Round Whole Numbers Explore: pp. 33–36; Develop: pp. 37–42; Refine: pp. 43–46 Math in Action: Unit 1: Work with Whole Numbers: pp. 92–99
4.NBT.B	Use place value understanding and properties of operations to perform multi-digit arithmetic.	
4.NBT.B.4	Fluently add and subtract multi-digit whole numbers using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations.	Lesson 4: Add Whole Numbers Explore: pp. 49–52; Develop: pp. 53–64; Refine: pp. 65–68 Lesson 5: Subtract Whole Numbers Explore: pp. 71–74; Develop: pp. 75–86; Refine: pp. 87–90 Math in Action: Unit 1: Work with Whole Numbers: pp. 92–99

2021 Oregon Mathematics Standards Grade 4		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 4
4.NBT.B.5	Use representations and strategies to multiply a whole number of up to four digits by a one-digit number, and a two-digit number by a two-digit number using strategies based on place value and the properties of operations.	<p>Lesson 11: Multiply by One-Digit Numbers Explore: pp. 232–234; Develop: pp. 235–246; Refine: pp. 247–250</p> <p>Lesson 12: Multiply by Two-Digit Numbers Explore: pp. 253–256; Develop: pp. 257–262; Refine: pp. 263–266</p> <p>Math in Action: Unit 3: Multiply and Divide Multi-Digit Numbers: pp. 350–357</p>
4.NBT.B.6	Use representations and strategies to find whole–number quotients and remainders with up to four-digit dividends and one-digit divisors using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division.	<p>Lesson 14: Divide Three-Digit Numbers Explore: pp. 291–294; Develop: pp. 295–306; Refine: pp. 307–310</p> <p>Lesson 15: Divide Four-Digit Numbers Explore: pp. 313–316; Develop: pp. 317–322; Refine: pp. 323–326</p> <p>Math in Action: Unit 3: Multiply and Divide Multi-Digit Numbers: pp. 350–357</p>
4.NF	Numeric Reasoning: Fractions	
4.NF.A	Extend understanding of fraction equivalence and ordering.	
4.NF.A.1	Use visual fraction representations to recognize, generate, and explain relationships between equivalent fractions.	<p>Lesson 17: <i>Understand</i> Equivalent Fractions Explore: pp. 367–370; Develop: pp. 371–374; Refine: pp. 375–376</p> <p>Educator Note: Unit 4: Equivalent Fractions Greater than 1</p>
4.NF.A.2	Compare two fractions with different numerators and/or different denominators, record the results with the symbols $>$, $=$, or $<$, and justify the conclusions.	<p>Lesson 18: Compare Fractions Explore: pp. 380–381; Develop: pp. 383–394; Refine: pp. 395–398</p>
4.NF.B	Build fractions from unit fractions.	
4.NF.B.3	Understand a fraction (a/b) as the sum (a) of fractions of the same denominator ($1/b$). Solve problems in authentic contexts involving addition and subtraction of fractions referring to the same whole and having like denominators.	<p>Lesson 19: Understand Fraction Addition and Subtraction Refine: pp. 409–410</p> <p>Lesson 20: Add and Subtract Fractions Develop: pp. 417–434; Refine: pp. 435–438</p> <p>Lesson 21: Add and Subtract Mixed Numbers Explore: pp. 441–444; Develop: pp. 445–450, 451–456; Refine: pp. 457–460</p>

2021 Oregon Mathematics Standards Grade 4		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 4
4.NF.B.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Represent and solve problems in authentic contexts involving multiplication of a fraction by a whole number.	<p>Lesson 23: <i>Understand</i> Fraction Multiplication Explore: pp. 491–494; Develop: pp. 495–498; Refine: pp. 499–500</p> <p>Lesson 24: Multiply Fractions by Whole Numbers Explore: pp. 503–506; Develop: pp. 507–512; Refine: pp. 513–516</p>
4.NF.C	Understand decimal notation for fractions, and compare decimal fractions.	
4.NF.C.5	Demonstrate and explain the concept of equivalent fractions with denominators of 10 and 100, using concrete materials and visual models. Add two fractions with denominators of 10 and 100.	<p>Lesson 25: Fractions as Tenths and Hundredths Explore: pp. 519–522; Develop: pp. 523–528; Refine: pp. 529–532</p> <p>Educator Note: Unit 4: Fractions with Denominators of 10 and 100</p> <p>Math in Action: Unit 4: Use Fractions and Decimals: pp. 628–635</p>
4.NF.C.6	Use and interpret decimal notation for fractions with denominators 10 or 100.	<p>Lesson 26: Relate Decimals and Fractions Explore: pp. 536–537; Develop: pp. 539–550; Refine: pp. 551–554</p> <p>Educator Note: Unit 4: Decimal Numbers</p> <p>Math in Action: Unit 4: Use Fractions and Decimals: pp. 628–635</p>
4.NF.C.7	Use decimal notation for fractions with denominators 10 or 100. Compare two decimals to hundredths place by reasoning about their size, and record the comparison using the symbols $>$, $=$, or $<$.	<p>Lesson 27: Compare Decimals Explore: pp. 557–560; Develop: pp. 561–572; Refine: pp. 573–576</p> <p>Math in Action: Unit 4: Use Fractions and Decimals: pp. 628–635</p>

2021 Oregon Mathematics Standards Grade 4		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 4
4.GM	Geometric Reasoning and Measurement	
4.GM.A	Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	
4.GM.A.1	Explore, investigate, and draw points, lines, line segments, rays, angles, and perpendicular and parallel lines. Identify these in two-dimensional figures.	<p>Lesson 30: Points, Lines, Rays, and Angles Explore: pp. 645–648; Develop: pp. 649–666; Refine: pp. 667–670</p> <p>Lesson 34: Symmetry Explore: pp. 745–748; Develop: pp. 749–754; Refine: pp. 755–758</p> <p>Math in Action: Unit 5: Classify Shapes and Angles: pp. 760–767</p>
4.GM.A.2	Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size.	<p>Lesson 33: Classify Two-Dimensional Figures Explore: pp. 717–720; Develop: pp. 721–738; Refine: pp. 739–742</p> <p>Lesson 34: Symmetry Explore: pp. 745–748; Develop: pp. 749–754; Refine: pp. 755–758</p> <p>Educator Note: Unit 5: Regular and Irregular Polygons</p> <p>Math in Action: Unit 5: Classify Shapes and Angles: pp. 760–767</p>
4.GM.A.3	Recognize and draw a line of symmetry for a two dimensional figure.	<p>Lesson 34: Symmetry Explore: pp. 745–748; Develop: pp. 749–754; Refine: pp. 755–758</p> <p>Educator Note: Unit 5: Symmetry Concepts</p> <p>Math in Action: Unit 5: Classify Shapes and Angles: pp. 760–767</p>
4.GM.B	Solve problems involving measurement and conversion of measurements.	
4.GM.B.4	Know relative sizes of measurement units and express measurements in a larger unit in terms of a smaller unit.	<p>Lesson 13: Use Multiplication to Convert Measurements Explore: pp. 269–272; Develop: pp. 273–284; Refine: pp. 285–288</p>

2021 Oregon Mathematics Standards Grade 4		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 4
4.GM.B.5	Apply knowledge of the four operations and relative size of measurement units to solve problems in authentic contexts that include familiar fractions or decimals.	<p>Lesson 28: Problems About Time and Money Explore: pp. 579–580, 582; Develop: pp. 583–588; Refine: pp. 596–598</p> <p>Lesson 29: Problems About Length, Liquid Volume, Mass, and Weight Develop: pp. 605–622; Refine: pp. 623–626</p> <p>One-Day Activity: Unit 4: Reason About Relative Metric Units of Measurement</p> <p>Educator Note: Unit 4: Measurement Word Problems</p> <p>One-Day Activity: Unit 4: Convert Smaller Units to Larger Units</p>
4.GM.B.6	Apply the area and perimeter formulas for rectangles in authentic contexts and mathematical problems.	<p>Lesson 16: Find Perimeter and Area Explore: pp. 329–332; Develop: pp. 333–344; Refine: pp. 345–348</p> <p>Educator Note: Unit 3: Perimeter and Area of Composite Figures</p> <p>Math in Action: Unit 3: Multiply and Divide Multi-Digit Numbers: pp. 350–357</p>
4.GM.C	Geometric measurement: understand concepts of angle and measure angles.	
4.GM.C.7	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint. Understand and apply concepts of angle measurement.	<p>Lesson 30: Points, Lines, Rays, and Angles Explore: pp. 645–648; Develop: pp. 649–666; Refine: pp. 667–670</p> <p>Lesson 31: Angles Explore: pp. 673–676; Develop: pp. 677–688; Refine: pp. 689–692</p> <p>One-Day Activity: Unit 5: Investigate Angle Measurement</p>
4.GM.C.8	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	<p>Lesson 31: Angles Develop: pp. 677–688; Refine: pp. 689–692</p> <p>One-Day Activity: Unit 5: Investigate Angle Measurement</p> <p>Math in Action: Unit 5: Classify Shapes and Angles: pp. 760–767</p>

2021 Oregon Mathematics Standards Grade 4		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 4
4.GM.C.9	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts.	Lesson 32: Add and Subtract with Angles Explore: pp. 695–698; Develop: pp. 699–710; Refine: pp. 711–714 Math in Action: Unit 5: Classify Shapes and Angles: pp. 760–767
4.DR	Data Reasoning	
4.DR.A	Pose investigative questions and collect/consider data.	
4.DR.A.1	Generate questions to investigate situations within the classroom, school or community. Determine strategies for collecting or considering data involving addition and subtraction of fractions that can naturally answer questions by using information presented in line plots.	Lesson 22: Add and Subtract Fractions in Line Plots Explore: pp. 463–466; Develop: pp. 467–484; Refine: pp. 485–488 One-Day Activity: Unit 4: Ask Questions to Collect and Analyze Data Math in Action: Unit 4: Use Fractions and Decimals: pp. 628–635
4.DR.B	Analyze, represent, and interpret data.	
4.DR.B.2	Analyze line plots to display a distribution of numerical measurement data, which include displays of data sets of fractional measurements with the same denominator. Interpret information presented to answer investigative questions.	Lesson 22: Add and Subtract Fractions in Line Plots Explore: pp. 463–466; Develop: pp. 467–484; Refine: pp. 485–488 One-Day Activity: Unit 4: Ask Questions to Collect and Analyze Data Math in Action: Unit 4: Use Fractions and Decimals: pp. 628–635

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to the

2021 Oregon Mathematics Standards

Grade 5

2021 Oregon Mathematics Standards Grade 5		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 5
Grade 5		
5.OA	Algebraic Reasoning: Operations	
5.OA.A	Write and interpret numerical expressions.	
5.OA.A.1	Write and evaluate numerical expressions that include parentheses.	<p>Lesson 30: Evaluate, Write, and Interpret Expressions Explore: pp. 625–628; Develop: pp. 629–640; Refine: pp. 641–644</p> <p>Educator Note: Unit 5: Numerical Expressions</p> <p>Math in Action: Unit 5: Work with Coordinates and Patterns: pp. 702–709</p>
5.OA.A.2	Write expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.	<p>Lesson 30: Evaluate, Write, and Interpret Expressions Explore: pp. 625, 627–628; Develop: pp. 635–640; Refine: pp. 642–644</p> <p>Educator Note: Unit 5: Numerical Expressions</p> <p>Math in Action: Unit 5: Work with Coordinates and Patterns: pp. 702–709</p>
5.OA.B	Analyze patterns and relationships.	
5.OA.B.3	Generate two numerical patterns using two given rules. Identify and analyze relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns and graph them on a coordinate plane.	<p>Lesson 33: Analyze Patterns and Relationships Explore: pp. 681–684; Develop: pp. 685–694; Refine: pp. 697–700</p>
5.NBT	Numeric Reasoning: Base Ten Arithmetic	
5.NBT.A	Understand the place value system.	
5.NBT.A.1	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	<p>Lesson 6: <i>Understand</i> Decimal Place Value Explore: pp. 121–124; Develop: pp. 125, 127–128; Refine: pp. 129–130</p> <p>Lesson 9: Compare and Round Decimals Develop: pp. 173–176; Refine: pp. 183–184</p> <p>Math in Action: Unit 2: Use Decimals and Fractions: pp. 292–299</p>

2021 Oregon Mathematics Standards Grade 5		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 5
5.NBT.A.2	Use whole number exponents to denote powers of 10 and explain the patterns in placement of digits that occur when multiplying and/or dividing whole numbers and decimals by powers of 10.	<p>Lesson 7: <i>Understand Powers of 10</i> Explore pp. 133–136; Develop: pp. 137–140</p> <p>Educator Note: Unit 2: Powers of 10</p> <p>Math in Action: Unit 2: Use Decimals and Fractions: pp. 292–299</p>
5.NBT.A.3	Read, write, and compare decimals to thousandths.	<p>Lesson 8: Read and Write Decimals Explore: pp. 145–148; Develop: pp. 149–160; Refine: pp. 161–164</p> <p>Lesson 9: Compare and Round Decimals Explore: pp. 167, 169–170; Develop: pp. 171–176; Refine: pp. 184</p> <p>Educator Note: Unit 2: Decimal Numbers in Expanded and Word Form</p> <p>One-Day Activity: Unit 2: Compare Decimals and Fractions</p> <p>Math in Action: Unit 2: Use Decimals and Fractions: pp. 292–299</p>
5.NBT.A.4	Use place value understanding to round decimals to any place.	<p>Lesson 9: Compare and Round Decimals Develop: pp. 177–182; Refine: pp. 183, 185–186</p> <p>Math in Action: Unit 2: Use Decimals and Fractions: pp. 292–299</p>
5.NBT.B	Perform operations with multi-digit whole numbers and with decimals to hundredths.	
5.NBT.B.5	Fluently multiply multi-digit whole numbers using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations.	<p>Lesson 4: Multiply Multi-Digit Numbers Explore: pp. 56–57; Develop: pp. 60–63, 65–67, 69–70; Refine: pp. 71, 74</p> <p>Math in Action: Unit 1: Solve Multiplication and Division Problems: pp. 104–111</p>

2021 Oregon Mathematics Standards Grade 5		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 5
5.NBT.B.6	Use a variety of representations and strategies to find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors.	<p>Lesson 5: Divide Multi-Digit Numbers Explore: pp. 78–80; Develop: pp. 82–86, 91–96; Refine: pp. 99–102</p> <p>Educator Note: Unit 1: Two-Digit Divisors</p> <p>Math in Action: Unit 1: Solve Multiplication and Division Problems: pp. 104–111</p>
5.NBT.B.7	Use a variety of representations and strategies to add, subtract, multiply, and divide decimals to hundredths. Relate the strategy to a written method and explain the reasoning used.	<p>Lesson 10: Add Decimals Explore: pp. 189–192; Develop: pp. 193–198; Refine: pp. 199–202</p> <p>Lesson 11: Subtract Decimals Explore: pp. 206–208; Develop: pp. 209–214, 219–220; Refine: pp. 221–224</p> <p>Lesson 14: Add and Subtract in Word Problems Develop: pp. 281–286; Refine: pp. 288–290</p> <p>Lesson 15: Multiply a Decimal by a Whole Number Explore: pp. 309–312; Develop: pp. 313–318; Refine: pp. 319–322</p> <p>Lesson 16: Multiply Decimals Explore: pp. 325–328; Develop: pp. 329–340; Refine: pp. 341–344</p> <p>Lesson 17: Divide Decimals Explore: pp. 347–356; Develop: pp. 357–368; Refine: pp. 369–372</p> <p>Math in Action: Unit 2: Use Decimals and Fractions: pp. 292–299</p>

2021 Oregon Mathematics Standards Grade 5		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 5
5.NF	Numeric Reasoning: Fractions	
5.NF.A	Use equivalent fractions as a strategy to add and subtract fractions.	
5.NF.A.1	Add and subtract fractions with unlike denominators, including common fractions larger than one and mixed numbers.	<p>Lesson 12: Add Fractions Explore: pp. 227–230; Develop: pp. 231–242; Refine: pp. 243–246</p> <p>Lesson 13: Subtract Fractions Explore: pp. 249–252; Develop: pp. 253–264; Refine: pp. 265–268</p> <p>Educator Note: Unit 2: Denominators</p> <p>Math in Action: Unit 2: Use Decimals and Fractions: pp. 292–299</p>
5.NF.A.2	Solve problems in authentic contexts involving addition and subtraction of fractions with unlike denominators, including common fractions larger than one and mixed numbers.	<p>Lesson 12: Add Fractions Explore: pp. 227–228, 230; Develop: pp. 231–234, 237–240; Refine: pp. 244–246</p> <p>Lesson 13: Subtract Fractions Explore: pp. 249, 252; Develop: pp. 253–256, 258–262, 264; Refine: pp. 266–268</p> <p>Lesson 14: Add and Subtract in Word Problems Explore: pp. 271–72, 274–280; Refine: pp. 287–290</p> <p>Educator Note: Unit 2: Denominators</p> <p>Math in Action: Unit 2: Use Decimals and Fractions: pp. 292–299</p>
5.NF.B	Apply and extend previous understandings of multiplication and division.	
5.NF.B.3	Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems in authentic contexts involving division of whole numbers that result in answers that are common fractions or mixed numbers.	<p>Lesson 18: Fractions as Division Explore: pp. 375–378; Develop: pp. 379–384; Refine: pp. 385–388</p> <p>Math in Action: Unit 3: Use Fractions and Decimals: pp. 492–499</p>

2021 Oregon Mathematics Standards Grade 5		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 5
5.NF.B.4	Apply and extend previous understanding and strategies of multiplication to multiply a fraction or whole number by a fraction. Multiply fractional side lengths to find areas of rectangles, and represent fractional products as rectangular areas.	<p>Lesson 19: <i>Understand</i> Multiplication by a Fraction Explore: pp. 391–392, 394; Develop: pp. 395–398; Refine: pp. 399–400</p> <p>Lesson 20: Multiply Fractions to Find Area Explore: pp. 403–412; Develop: pp. 413–418; Refine: pp. 419–422</p> <p>Math in Action: Unit 3: Use Fractions and Decimals: pp. 492–499</p>
5.NF.B.5	Apply and extend previous understandings of multiplication and division to represent and calculate multiplication and division of fractions. Interpret multiplication as scaling (resizing) by comparing the size of products of two factors.	<p>Lesson 21: <i>Understand</i> Multiplication as Scaling Explore: pp. 425–428 ; Develop: pp. 429–432; Refine: pp. 433–434</p>
5.NF.B.6	Solve problems in authentic contexts involving multiplication of common fractions and mixed numbers.	<p>Lesson 22: Multiply Fractions in Word Problems Explore: pp. 437–446; Develop: pp. 447–452; Refine: pp. 453–456</p> <p>Math in Action: Unit 3: Use Fractions and Decimals: pp. 492–499</p>
5.NF.B.7	Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions, including solving problems in authentic contexts.	<p>Lesson 23: <i>Understand</i> Division with Unit Fractions Explore: pp. 459–462; Develop: pp. 463–466; Refine: pp. 467–468</p> <p>Lesson 24: Divide Unit Fractions in Word Problems Explore: pp. 471–474; Develop: pp. 475–486; Refine: pp. 487–490</p> <p>Math in Action: Unit 3: Use Fractions and Decimals: pp. 492–499</p>

2021 Oregon Mathematics Standards Grade 5		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 5
5.GM	Geometric Reasoning and Measurement	
5.GM.A	Graph points on the coordinate plane to solve real-world and mathematical problems.	
5.GM.A.1	Graph and name coordinate points in the first quadrant using the standard (x, y) notation. Understand the coordinate points values represent the distance traveled along the horizontal x-axis and vertical y-axis.	<p>Lesson 31: <i>Understand</i> the Coordinate Plane Explore: pp. 647–650; Develop: pp. 651–654; Refine: pp. 655–656</p> <p>Lesson 32: Represent Problems in the Coordinate Plane Explore: pp. 659–662; Develop: pp. 663–674; Refine: pp. 675–678</p> <p>Educator Note: Unit 5: Ordered Pairs with Decimal and Fractional Values</p> <p>Math in Action: Unit 5: Work with Coordinates and Patterns: pp. 702–709</p>
5.GM.A.2	Represent authentic contexts and mathematical problems by graphing points in the first quadrant of the coordinate plane. Interpret the meaning of the coordinate values based on the context of a given situation.	<p>Lesson 32: Represent Problems in the Coordinate Plane Explore: pp. 659–662; Develop: pp. 663–674; Refine: pp. 675–678</p> <p>Math in Action: Unit 5: Work with Coordinates and Patterns: pp. 702–709</p>
5.GM.B	Classify two-dimensional figures into categories based on their properties.	
5.GM.B.3	Classify two-dimensional figures within a hierarchy based on their geometrical properties, and explain the relationship across and within different categories of these figures.	<p>Lesson 28: <i>Understand</i> Categories of Two-Dimensional Figures Explore: pp. 575–578; Develop: pp. 579–582; Refine: pp. 583–584</p> <p>Lesson 29: Classify Two-Dimensional Figures Explore: pp. 587–590; Develop: pp. 591–602; Refine: pp. 603–606</p> <p>Educator Note: Unit 4: Hierarchy</p> <p>Math in Action: Unit 4: Work with Measurement and Data: pp. 608–615</p>

2021 Oregon Mathematics Standards Grade 5		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 5
5.GM.C	Convert like measurement units within a given measurement system.	
5.GM.C.4	Convert between different-sized standard measurement units within a given measurement system. Use these conversions in solving multi-step problems in authentic contexts.	<p>Lesson 25: Convert Measurement Units Explore: pp. 509–512; Develop: pp. 513–524; Refine: pp. 525–528</p> <p>Lesson 26: Solve Word Problems Involving Conversions Explore: pp. 531–534; Develop: pp. 535–546; Refine: pp. 547–550</p> <p>Math in Action: Unit 4: Work with Measurement and Data: pp. 608–615</p>
5.GM.D	Geometric measurement: understand concepts of volume.	
5.GM.D.5	Recognize that volume is a measurable attribute of solid figures.	<p>Lesson 1: <i>Understand</i> Volume Explore: pp. 5–8; Refine: pp. 13–14</p> <p>Math in Action: Unit 1: Solve Multiplication and Division Problems: pp. 104–111</p>
5.GM.D.6	Measure the volume of a rectangular prism by counting unit cubes using standard and nonstandard units.	<p>Lesson 2: Find Volume Using Unit Cubes Explore: pp. 17–20; Develop: pp. 21–26; Refine: pp. 27–30</p> <p>Educator Note: Unit 1: Volume of Rectangular Prisms</p> <p>Math in Action: Unit 1: Solve Multiplication and Division Problems: pp. 104–111</p>
5.GM.D.7	Relate volume of rectangular prisms to the operations of multiplication and addition. Solve problems in authentic contexts involving volume using a variety of strategies.	<p>Lesson 2: Find Volume Using Unit Cubes Explore: pp. 17–20; Develop: pp. 21–26; Refine: pp. 27–30</p> <p>Lesson 3: Find Volume Using Formulas Explore: pp. 33–36; Develop: pp. 37–42; Refine: pp. 49–52</p> <p>Educator Note: Unit 1: Volume of Rectangular Prisms</p> <p>Math in Action: Unit 1: Solve Multiplication and Division Problems: pp. 104–111</p>

2021 Oregon Mathematics Standards Grade 5		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 5
5.DR	Data Reasoning	
5.DR.A	Pose investigative questions and collect/consider data.	
5.DR.A.1	Generate questions to investigate situations within the classroom, school or community. Determine strategies for collecting or considering data involving operations with fractions for this grade that can naturally answer questions by using information presented in line plots.	One-Day Activity: Unit 4: Ask Questions and Analyze Data
5.DR.B	Analyze, represent, and interpret data.	
5.DR.B.2	Analyze graphical representations and describe the distribution of the numerical data through line plots or categorical data through bar graphs. Interpret information presented to answer investigative questions.	Lesson 27: Make Line Plots and Interpret Data Explore: pp. 533–556; Develop: pp. 557–568; Refine: pp. 569–572 One-Day Activity: Unit 4: Ask Questions and Analyze Data

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2021 Oregon Mathematics Standards

Grade 6

2021 Oregon Mathematics Standards Grade 6		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 6
Grade 6		
6.AEE	Algebraic Reasoning: Expressions and Equations	
6.AEE.A	Apply and extend previous understandings of arithmetic to algebraic expressions.	
6.AEE.A.1	Write and evaluate numerical expressions involving whole-number bases and exponents.	<p>Lesson 5: Write and Evaluate Expressions with Exponents Explore: pp. 88–89; Develop: pp. 92–102; Refine: pp. 104–106</p> <p>Educator Note: Unit 1: Whole-Number Bases and Exponents</p>
6.AEE.A.2	Write, read, and evaluate expressions in which letters stand for numbers. Apply knowledge of common mathematical terms to move between the verbal and mathematical forms of an expression including expressions that arise from authentic contexts.	<p>Lesson 4: Work with Algebraic Expressions Explore: pp. 66–67; Develop: pp. 69–80; Refine: pp. 81–84</p> <p>Lesson 5: Write and Evaluate Expressions with Exponents Explore: pp. 88; Develop: pp. 99–100, 102; Refine: pp. 104–105</p> <p>Math in Action: Unit 1: Area, Surface Area, and Algebraic Expressions: pp. 129–137</p>
6.AEE.A.3	Apply the properties of operations to generate equivalent expressions and to determine when two expressions are equivalent.	<p>Lesson 19: Write and Identify Equivalent Expressions Explore: pp. 438–440; Develop: pp. 441–458; Refine: pp. 459–462</p> <p>Math in Action: Unit 4: Expressions and Equations: pp. 525–533</p>

2021 Oregon Mathematics Standards Grade 6		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 6
6.AEE.B	Reason about and solve one-variable equations and inequalities.	
6.AEE.B.4	Understand solving an equation or inequality as a process of answering which values from a specified set, if any, make the equation or inequality true. Use substitution to determine which number(s) in a given set make an equation or inequality true.	<p>Lesson 20: Understand Solutions of Equations Explore: pp. 467–468; Develop: pp. 469–472; Refine: pp. 473–474</p> <p>Lesson 26: Write and Graph One-Variable Inequalities Explore: pp. 583–586; Develop: pp. 589–590, 593–596; Refine: pp. 599–608</p> <p>Math in Action: Unit 4: Expressions and Equations: pp. 525–533; Unit 6: Negative Numbers, Inequalities, and the Coordinate Plane: pp. 643–651</p>
6.AEE.B.5	Use variables to represent numbers and write expressions when solving problems in authentic contexts.	<p>Lesson 4: Work with Algebraic Expressions Explore: pp. 66–67; Develop: pp. 69–80; Refine: pp. 81–84</p>
6.AEE.B.6	Write and solve equations of the form $x + p = q$ and $px = q$ in problems that arise from authentic contexts for cases in which p , q and x are all nonnegative rational numbers.	<p>Lesson 21: Write and Solve One-Variable Equations Explore: pp. 479–480; Develop: pp. 481–498; Refine: pp. 500–502</p>
6.AEE.B.7	Write inequalities of the form $x > c$ or $x < c$ to represent a constraints or conditions to solve problems in authentic contexts. Describe and graph on a number line solutions of inequalities of the form $x > c$ or $x < c$.	<p>Lesson 26: Write and Graph One-Variable Inequalities Explore: pp. 583–586; Develop: pp. 589–590, 593–596; Refine: pp. 599–608</p>
6.AEE.C	Represent and analyze quantitative relationships between dependent and independent variables.	
6.AEE.C.8	Use variables to represent and analyze two quantities to solve problems in authentic contexts. Including those that change in relationship to one another; write an equation to express one quantity in terms of the other quantity.	<p>Lesson 22: Analyze Two-Variable Relationships Explore: pp. 506; Develop: pp. 509–520; Refine: pp. 521–524</p> <p>Math in Action: Unit 4: Expressions and Equations: pp. 525–533</p>

2021 Oregon Mathematics Standards Grade 6		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 6
6.RP	Proportional Reasoning: Ratios and Proportions	
6.RP.A	Understand ratio concepts and use ratio reasoning to solve problems.	
6.RP.A.1	Understand the concept of a ratio in authentic contexts, and use ratio language to describe a ratio relationship between two quantities.	<p>Lesson 12: <i>Understand</i> Ratio Concepts Explore: pp. 269–272; Develop: pp. 273–276; Refine: pp. 277–278</p> <p>Educator Note: Unit 3: Ratio Notation</p> <p>Math in Action: Unit 3: Ratios: pp. 329–337</p>
6.RP.A.2	Understand the concept of a unit rate in authentic contexts and use rate language in the context of a ratio relationship.	<p>Lesson 15: <i>Understand</i> Rate Concepts Explore: pp. 347–350; Develop: pp. 351–354; Refine: pp. 354–355</p> <p>Lesson 16: Use Unit Rates to Solve Problems Explore: pp. 359–362; Develop: pp. 363–380; Refine: pp. 381–384</p> <p>Math in Action: Unit 4: Rates, Unit Rates, and Percents: pp. 419–427</p>
6.RP.A.3	Use ratio and rate reasoning to solve problems in authentic contexts that use equivalent ratios, unit rates, percents, and/or measurement units.	<p>Lesson 13: Find Equivalent Ratios Explore: pp. 282–284; Develop: pp. 285–302; Refine: pp. 303–306</p> <p>Lesson 14: Use Part-to-Part and Part-to-Whole Ratios Explore: pp. 309–312; Develop: pp. 313–324; Refine: pp. 325–328</p> <p>Lesson 16: Use Unit Rates to Solve Problems Explore: pp. 359–362; Develop: pp. 363–380; Refine: pp. 381–384</p> <p>Lesson 17: Understand Percents Explore: pp. 389; Develop: pp. 391–394; Refine: pp. 395–396</p> <p>Lesson 18: Use Percents to Solve Problems Explore: pp. 399–402; Develop: pp. 403–412; Refine: pp. 415–418</p> <p>Educator Note: Unit 4: Percents, Fractions, and Decimals</p> <p>Math in Action: Unit 3: Ratios: pp. 329–337; Unit 4: Rates, Unit Rates, and Percents: pp. 419–427</p>

2021 Oregon Mathematics Standards Grade 6		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 6
6.NS	Numeric Reasoning: Number Systems	
6.NS.A	Apply and extend previous understanding of multiplication and division to divide fractions by fractions.	
6.NS.A.1	Represent, interpret, and compute quotients of fractions to solve problems in authentic contexts involving division of fractions by fractions.	<p>Lesson 9: Understand Division with Fractions Explore: pp. 197–200; Develop: pp. 201–204; Refine: pp. 205–206</p> <p>Lesson 10: Divide Fractions Explore: pp. 209–212; Develop: pp. 213–224; Refine: pp. 225–228</p> <p>Math in Action: Unit 2: Volume and Operations with Decimals and Fractions: pp. 251–259</p>
6.NS.B	Compute fluently with multi-digit numbers and find common factors and multiples.	
6.NS.B.2	Fluently divide multi-digit numbers using accurate, efficient, and flexible strategies and algorithms based on place value and properties of operations.	<p>Lesson 8: Divide Whole Numbers and Multi-Digit Decimals Explore: pp. 169–172; Develop: pp. 173–190; Refine: pp. 191–194</p> <p>Math in Action: Unit 2: Volume and Operations with Decimals and Fractions: pp. 251–259</p>
6.NS.B.3	Fluently add, subtract, multiply, and divide positive rational numbers using accurate, efficient, and flexible strategies and algorithms.	<p>Lesson 7: Add, Subtract, and Multiply Multi-Digit Decimals Explore: pp. 147–148, 150; Develop: pp. 151–162; Refine: pp. 163–166</p> <p>Lesson 8: Divide Whole Numbers and Multi-Digit Decimals Explore: pp. 169–172; Develop: pp. 173–190; Refine: pp. 191–194</p> <p>Lesson 9: Understand Division with Fractions Explore: pp. 197–200; Develop: pp. 201–204; Refine: pp. 205–206</p> <p>Lesson 10: Divide Fractions Explore: pp. 209–212; Develop: pp. 213–224; Refine: pp. 225–228</p> <p>Math in Action: Unit 2: Volume and Operations with Decimals and Fractions: pp. 251–259</p>

2021 Oregon Mathematics Standards Grade 6		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 6
6.NS.B.4	Determine greatest common factors and least common multiples using a variety of strategies. Apply the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.	<p>Lesson 6: Find Greatest Common Factor and Least Common Multiple Explore: pp. 109–112; Develop: pp. 113–124; Refine: pp. 125–128</p> <p>Lesson 19: Write and Identify Equivalent Expressions Develop: pp. 441–446</p> <p>Math in Action: Unit 1: Area, Surface Area, and Algebraic Expressions: pp. 129–135</p>
6.NS.C	Apply and extend previous understandings of numbers to the system of rational numbers.	
6.NS.C.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values. Use positive and negative numbers to represent quantities in authentic contexts, explaining the meaning of zero in each situation.	<p>Lesson 23: Understand Positive and Negative Numbers Explore: pp. 543–546; Develop: pp. 547–550; Refine: pp. 551–552</p> <p>Math in Action: Unit 6: Negative Numbers, Inequalities, and the Coordinate Plane: pp. 643–651</p>
6.NS.C.6	Represent a rational number as a point on the number line. Extend number line diagrams and coordinate axes to represent points on the line and in the coordinate plane with negative number coordinates.	<p>Lesson 23: Understand Positive and Negative Numbers Explore: pp. 543–546; Develop: pp. 547–550; Refine: pp. 551–552</p> <p>Lesson 27: Understand the Four-Quadrant Coordinate Plane Explore: pp. 611–614; Develop: pp. 615–618</p> <p>Math in Action: Unit 6: Negative Numbers, Inequalities, and the Coordinate Plane: pp. 643–651</p>

2021 Oregon Mathematics Standards Grade 6		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 6
6.NS.C.7	Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. Write, interpret, and explain statements of order for rational numbers and absolute value in authentic applications.	<p>Lesson 24: Order Positive and Negative Numbers Explore: pp. 557–558; Develop: pp. 559–564; Refine: pp. 566–568</p> <p>Lesson 25: Understand Absolute Value Develop: pp. 575–578; Refine: pp. 579–580</p> <p>Math in Action: Unit 6: Negative Numbers, Inequalities, and the Coordinate Plane: pp. 643–651</p>
6.NS.C.8	Graph points in all four quadrants of the coordinate plane to solve problems in authentic contexts. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	<p>Lesson 28: Solve Problems in the Coordinate Plane Explore: pp. 623–624, 626; Develop: pp. 627–638; Refine: pp. 639–642</p>
6.GM.A	Geometric Reasoning and Measurement	
6.GM.A	Solve real-world and mathematical problems involving area, surface area, and volume.	
6.GM.A.1	Find the area of triangles, quadrilaterals, and other polygons by composing into rectangles or decomposing into triangles and other shapes. Apply these techniques to solve problems in authentic contexts.	<p>Lesson 1: Find the Area of a Parallelogram Explore: pp. 5–8; Develop: pp. 9–14; Refine: pp. 15–18</p> <p>Lesson 2: Find the Area of Triangles and Other Polygons Explore: pp. 21–22, 24; Develop: pp. 25–36; Refine: pp. 37–40</p> <p>Math in Action: Unit 1: Area, Surface Area, and Algebraic Expressions: pp. 129–137</p>
6.GM.A.2	Find the volume of a right rectangular prism with fractional edge lengths by filling it with unit cubes of appropriate unit fraction edge lengths. Connect and apply to the formulas $V = l w h$ and $V = b h$ to find volumes of right rectangular prisms with fractional edge lengths to solve problems in authentic contexts.	<p>Lesson 11: Solve Volume Problems with Fractions Explore: pp. 231–234; Develop: pp. 235–240, 245–246; Refine: pp. 247–250</p> <p>Math in Action: Unit 2: Volume and Operations with Decimals and Fractions: pp. 251–259</p>

2021 Oregon Mathematics Standards Grade 6		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 6
6.GM.A.3	Draw polygons in the four quadrant coordinate plane given coordinates for the vertices and find the length of a side. Apply these techniques to solve problems in authentic contexts.	Lesson 28: Solve Problems in the Coordinate Plane Develop: pp. 633–638; Refine: p. 642 Math in Action: Unit 6: Negative Numbers, Inequalities, and the Coordinate Plane: pp. 643–651
6.G.A.4	Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures, including those from authentic contexts.	Lesson 3: Use Nets to Find Surface Area Explore: pp. 44–46; Develop: pp. 47–58; Refine: pp. 59–62 Math in Action: Unit 1: Area, Surface Area, and Algebraic Expressions: pp. 129–137
6.DR	Data Reasoning	
6.DR.A	Formulate Statistical Investigative Questions.	
6.DR.A.1	Formulate and recognize statistical investigative questions as those that anticipate changes in descriptive data related to the question and account for it in the answers.	Lesson 29: Understand Statistical Questions and Data Distributions Explore: pp. 661–664; Develop: pp. 667–668; Refine: pp. 669–670 Math in Action: Unit 7: Statistical Questions and Measures of Center and Variability: pp. 753–761
6.DR.B	Collect and Consider Data.	
6.DR.B.2	Collect and record data with technology to identify and describe the characteristics of numerical data sets using quantitative measures of center and variability.	Lesson 29: Understand Statistical Questions and Data Distributions Develop: pp. 665–668; Refine: pp. 669–670 Lesson 30: Use Dot Plots and Histograms to Describe Data Distributions Explore: pp. 673–676; Develop: pp. 677–688; Refine: pp. 689–692 Educator Note: Unit 7: Data Collection Math in Action: Unit 7: Statistical Questions and Measures of Center and Variability: pp. 753–761

2021 Oregon Mathematics Standards Grade 6		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 6
6.DR.C	Analyze, summarize, and describe data.	
6.DR.C.3	Analyze data representations and describe measures of center and variability of quantitative data using appropriate displays.	<p>Lesson 30: Use Dot Plots and Histograms to Describe Data Distributions Explore: pp. 673–676; Develop: pp. 677–688; Refine: pp. 689–692</p> <p>Lesson 31: Interpret Median and Interquartile Range in Box Plots Explore: pp. 695–698; Develop: pp. 699–710</p> <p>Lesson 32: Interpret Mean and Mean Absolute Deviation Explore: pp. 717–720; Develop: pp. 721–726</p> <p>Math in Action: Unit 7: Statistical Questions and Measures of Center and Variability: pp. 753–761</p>
6.DR.D	Interpret data and answer investigative questions.	
6.DR.D.4	Interpret quantitative measures of center to describe differences between groups from data collected to answer investigative questions.	<p>Lesson 30: Use Dot Plots and Histograms to Describe Data Distributions Explore: pp. 673–676; Develop: pp. 677–688; Refine: pp. 689–692</p> <p>Lesson 31: Interpret Median and Interquartile Range in Box Plots Explore: pp. 695–698; Develop: pp. 699–710; Refine: pp. 711–714</p> <p>Lesson 32: Interpret Mean and Mean Absolute Deviation Develop: pp. 727–732; Refine: pp. 733–736</p> <p>Lesson 33: Use Measures of Center and Variability to Summarize Data Explore: pp. 739–742; Develop: pp. 743–748; Refine: pp. 749–752</p> <p>Math in Action: Unit 7: Statistical Questions and Measures of Center and Variability: pp. 753–761</p>

 i-Ready® Classroom
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to the

2021 Oregon Mathematics Standards

Grade 7

2021 Oregon Mathematics Standards Grade 7		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 7
Grade 7		
7.AEE	Algebraic Reasoning: Expressions and Equations	
7.AEE.A	Use properties of operations to generate equivalent expressions.	
7.AEE.A.1	Identify and write equivalent expressions with rational numbers by applying associative, commutative, and distributive properties.	<p>Lesson 15: Write Equivalent Expressions Involving Rational Numbers Explore: pp. 309–312; Develop: pp. 313–324; Refine: pp. 325–328</p> <p>Math in Action: Unit 4: Expressions, Equations, and Inequalities: pp. 403–411</p>
7.AEE.A.2	Understand that rewriting an expression in different forms in a contextual problem can show how quantities are related.	<p>Lesson 16: Understand Reasons for Rewriting Expressions Explore: pp. 331–334; Develop: pp. 335–338; Refine: pp. 339–340</p> <p>Math in Action: Unit 4: Expressions, Equations, and Inequalities: pp. 403–411</p>
7.AEE.B	Solve mathematical problems in authentic contexts using numerical and algebraic expressions and equations.	
7.AEE.B.3	Write and solve problems in authentic contexts using expressions and equations with positive and negative rational numbers in any form. Contexts can be limited to those that can be solved with one or two-step linear equations.	<p>Lesson 17: Understand Multi-Step Equations Develop: pp. 349–350</p> <p>Lesson 18: Write and Solve Multi-Step Equations Explore: pp. 355–358; Develop: pp. 359–364</p> <p>Math in Action: Unit 4: Expressions, Equations, and Inequalities: pp. 403–411</p>
7.AEE.B.4	Use variables to represent quantities and construct one- and two-step linear inequalities with positive rational numbers to solve authentic problems by reasoning about the quantities.	<p>Lesson 19: Write and Solve Inequalities Explore: pp. 377–380; Develop: pp. 381–391, 396–398</p> <p>Math in Action: Unit 4: Expressions, Equations, and Inequalities: pp. 403–411</p>

2021 Oregon Mathematics Standards Grade 7		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 7
7.RP	Proportional Reasoning: Ratios and Proportions	
7.RP.A	Analyze proportional relationships and use them to solve mathematical problems in authentic contexts.	
7.RP.A.1	Solve problems in authentic contexts involving unit rates associated with ratios of fractions.	<p>Lesson 2: Find Unit Rates Involving Ratios of Fractions Explore: pp. 33–36; Develop: pp. 37–42; Refine: pp. 43–46</p> <p>Math in Action: Unit 1: Scale Drawings, Ratios, and Proportional Relationships: pp. 119–127</p>
7.RP.A.2	Recognize and represent proportional relationships between quantities in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. Identify the constant of proportionality (unit rate) within various representations.	<p>Lesson 3: Understand Proportional Relationships Explore: pp. 49–50, 52; Develop: pp. 53–56; Refine: pp. 57–58</p> <p>Lesson 4: Represent Proportional Relationships Explore: pp. 61–62, 64; Develop: pp. 65–76; Refine: pp. 77–80</p> <p>Lesson 5: Solve Proportional Relationship Problems Explore: pp. 83–86; Develop: pp. 87–92; Refine: pp. 93–96</p> <p>One-Day Activity: Unit 1: Investigate Slope</p> <p>Math in Action: Unit 1: Scale Drawings, Ratios, and Proportional Relationships: pp. 119–127</p>
7.RP.A.3	Use proportional relationships to solve ratio and percent problems in authentic contexts.	<p>Lesson 5: Solve Proportional Relationship Problems Explore: pp. 83–86; Develop: pp. 87–92; Refine: pp. 93–96</p> <p>Lesson 20: Solve Problems Involving Percents Explore: pp. 421–424; Develop: pp. 431–442; Refine: pp. 443–446</p> <p>Lesson 21: Solve Problems Involving Percent Change and Percent Error Explore: pp. 449–450; Develop: pp. 453–458</p> <p>Math in Action: Unit 1: Scale Drawings, Ratios, and Proportional Relationships: pp. 119–127; Unit 5: Percents and Random Sampling: pp. 525–533</p>

2021 Oregon Mathematics Standards Grade 7		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 7
7.RP.B	Investigate chance processes and develop, use, and evaluate probability models.	
7.RP.B.4	Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Represent probabilities as fractions, decimals, and percents.	<p>Lesson 30: Understand Probability Explore: pp. 675–676, 678; Develop: pp. 679–682; Refine: pp. 683–684</p> <p>Lesson 31: Solve Problems Involving Experimental Probability Explore: pp. 688–689; Develop: pp. 691–702; Refine: pp. 703–706</p>
7.RP.B.5	Use experimental data and theoretical probability to make predictions. Understand the probability predictions may not be exact.	<p>Lesson 31: Solve Problems Involving Experimental Probability Explore: pp. 688–689; Develop: pp. 691–702; Refine: pp. 703–706</p> <p>Lesson 32: Solve Problems Involving Probability Models Explore: pp. 709–710, 712; Develop: pp. 713–724; Refine: pp. 725–728</p> <p>Math in Action: Unit 7: Probability: pp. 757–765</p>
7.RP.B.6	Develop a probability model and use it to find probabilities of events. Compare theoretical and experimental probabilities and explain possible sources of discrepancy if any exists.	<p>Lesson 31: Solve Problems Involving Experimental Probability Develop: pp. 694–702; Refine: pp. 703–706</p> <p>Lesson 32: Solve Problems Involving Probability Models Explore: pp. 709–710, 712; Develop: pp. 713–724; Refine: pp. 725–728</p> <p>Math in Action: Unit 7: Probability: pp. 757–765</p>
7.RP.B.7	Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	<p>Lesson 33: Solve Problems Involving Compound Events Explore: pp. 731–732; Develop: pp. 735–752; Refine: pp. 753–756</p> <p>Math in Action: Unit 7: Probability: pp. 757–765</p>

2021 Oregon Mathematics Standards Grade 7		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 7
7.NS	Numeric Reasoning: Number Systems	
7.NS.A	Apply and extend previous understandings of operations with fractions.	
7.NS.A.1	Apply and extend previous understandings of addition, subtraction and absolute value to add and subtract rational numbers in authentic contexts. Understand subtraction as adding the additive inverse, $p - q = p + (-q)$.	<p>Lesson 7: Understand Addition with Negative Integers: Explore: pp. 137, 140; Develop: pp. 141–144; Refine: pp. 145–146</p> <p>Lesson 8: Add with Negative Numbers Explore: pp. 149–150, 152; Develop: pp. 153–156, 158–164; Refine: pp. 165–168</p> <p>Lesson 9: Understand Subtraction with Negative Integers Explore: pp. 171–172, 174; Refine: pp. 179–180</p> <p>Lesson 10: Add and Subtract Positive and Negative Numbers Explore: pp. 183–184, 186; Develop: pp. 187–198; Refine: pp. 199–202</p> <p>Lesson 14: Use the Four Operations with Negative Numbers Explore: pp. 277–278, 280; Develop: pp. 281–286; Refine: pp. 287–290</p> <p>Math in Action: Unit 2: Adding Positive and Negative Numbers: pp. 203–211; Unit 3: Use Rational Numbers: pp. 291–299</p>
7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers. Interpret operations of rational numbers solving problems in authentic contexts.	<p>Lesson 11: Understand Multiplication with Negative Integers Explore: pp. 221–224; Develop: pp. 225–228; Refine: pp. 229–230</p> <p>Lesson 12: Multiply and Divide with Negative Numbers Explore: pp. 233–234, 236; Develop: pp. 237–248; Refine: pp. 249–252</p> <p>Lesson 13: Express Rational Numbers as Terminating or Repeating Decimals Explore: pp. 257; Develop: pp. 259–262</p> <p>Lesson 14: Use the Four Operations with Negative Numbers Explore: pp. 277–278, 280; Develop: pp. 284–286; Refine: pp. 287–290</p> <p>Math in Action: Unit 3: Use Rational Numbers: pp. 291–299</p>

2021 Oregon Mathematics Standards Grade 7		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 7
7.NS.A.3	Understand that equivalent rational numbers can be written as fractions, decimals and percents.	<p>Lesson 13: Express Rational Numbers as Terminating or Repeating Decimals Explore: pp. 255–256, 258; Develop: pp. 259–270; Refine: pp. 271–274</p> <p>Lesson 20: Solve Problems Involving Percents Explore: pp. 421–424; Develop: pp. 431–442; Refine: pp. 443–446</p> <p>Educator Note: Unit 5: Rational Numbers</p> <p>Math in Action: Unit 3: Use Rational Numbers: pp. 291–299; Unit 5: Percents and Random Sampling: pp. 525–533</p>
7.GM	Geometric Reasoning and Measurement	
7.GM.A	Draw, construct, and describe geometrical figures and describe the relationships between them.	
7.GM.A.1	Solve problems involving scale drawings of geometric figures. Reproduce a scale drawing at a different scale and compute actual lengths and areas from a scale drawing.	<p>Lesson 1: Solve Problems Involving Scale Explore: pp. 5–6, 8; Develop: pp. 9–18; Refine: pp. 21–30</p> <p>Educator Note: Unit 1: Scale Drawings with Technology</p> <p>Math in Action: Unit 1: Scale Drawings, Ratios, and Proportional Relationships: pp. 119–127</p>
7.GM.A.2	Draw triangles from three measures of angles or sides. Understand the possible side lengths and angle measures that determine a unique triangle, more than one triangle, or no triangle.	<p>Lesson 29: Draw Plane Figures with Given Conditions Explore: pp. 631–632, 634; Develop: pp. 635–646</p> <p>One-Day Activity: Unit 6: Find the Sum of Interior Angles of a Triangle</p> <p>Math in Action: Unit 6: Solid Figures and Plane Figures: pp. 657–665</p>

2021 Oregon Mathematics Standards Grade 7		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 7
7.GM.B	Solve mathematical problems in authentic contexts involving angle measure, area, surface area, and volume.	
7.GM.B.3	Understand the relationship between area and circumference of circles. Choose and use the appropriate formula to solve problems with radius, diameter, circumference and area of circles.	<p>Lesson 6: Solve Area and Circumference Problems Involving Circles Explore: pp. 99–100, 101; Develop: pp. 103–114; Refine: pp. 115–118</p> <p>Math in Action: Unit 1: Scale Drawings, Ratios, and Proportional Relationships: pp. 119–127</p>
7.GM.B.4	Apply facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to determine an unknown angle in a figure.	<p>Lesson 28: Find Unknown Angle Measures Explore: pp. 609–610, 612; Develop: pp. 613–624; Refine: pp. 625–628</p> <p>Math in Action: Unit 6: Solid Figures and Plane Figures: pp. 657–665</p>
7.GM.B.5	Solve problems in authentic contexts involving two- and three-dimensional figures. Given formulas, calculate area, volume and surface area.	<p>Lesson 25: Solve Problems Involving Area and Surface Area Explore: pp. 543–546; Develop: pp. 547–564; Refine: pp. 565–568</p> <p>Lesson 26: Solve Problems Involving Volume Explore: pp. 571–574; Develop: pp. 575–586; Refine: pp. 587–590</p> <p>One-Day Activity: Unit 6: Find the Surface Area and Volume of Cylinders</p> <p>Math in Action: Unit 6: Solid Figures and Plane Figures: pp. 657–665</p>

2021 Oregon Mathematics Standards Grade 7		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 7
7.DR	Data Reasoning	
7.DR.A	Formulate Statistical Investigative Questions.	
7.DR.A.1	Formulate summary, comparative investigative questions to gain information about a population and that a sample is valid only if the sample is representative of that population.	<p>Lesson 22: Understand Random Sampling Explore: pp. 471–472, 474; Develop: pp. 475–478; Refine: pp. 479–480</p> <p>Lesson 23: Reason About Random Samples Explore: pp. 483–486; Develop: pp. 487–490</p> <p>Educator Note: Unit 5: Statistical Investigative Questions</p> <p>Math in Action: Unit 5: Percents and Random Sampling: pp. 525–533</p>
7.DR.B	Collect and Consider Data.	
7.DR.B.2	Collect or consider data from a random sample to compare and draw inferences about a population with an unknown characteristic of interest.	<p>Lesson 23: Reason About Random Samples Develop: pp.493–498; Refine: pp. 499–502</p> <p>Math in Action: Unit 5: Percents and Random Sampling: pp. 525–533</p>
7.DR.C	Analyze, summarize, and describe data.	
7.DR.C.3	Analyze two data distributions visually to compare multiple measures of center and variability.	<p>Lesson 24: Compare Populations Explore: pp. 505–508; Develop: pp. 509–520; Refine: pp. 521–524</p> <p>Math in Action: Unit 5: Percents and Random Sampling: pp. 525–533</p>
7.DR.D	Interpret data and answer investigative questions.	
7.DR.D.4	Interpret measures of center and measures of variability for numerical data from random samples to compare between two populations, and to answer investigative questions.	<p>Lesson 24: Compare Populations Explore: pp. 505–508; Develop: pp. 509–520; Refine: pp. 521–524</p> <p>Math in Action: Unit 5: Percents and Random Sampling: pp. 525–533</p>

 i-Ready[®] Classroom
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to the

2021 Oregon Mathematics Standards

Grade 8

2021 Oregon Mathematics Standards Grade 8		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 8
Grade 8		
8.AEE	Algebraic Reasoning: Expressions and Equation	
8.AEE.A	Expressions and Equations Work with radicals and integer exponents.	
8.AEE.A.1	Apply the properties of integer exponents using powers of 10 to generate equivalent numerical expressions.	<p>Lesson 19: Apply Exponent Properties for Positive Integer Exponents Explore: pp. 449–452</p> <p>Lesson 20: Apply Exponent Properties for All Integer Exponents Explore: p. 473; Develop: p. 477</p> <p>Educator Note: Unit 5: Exponent Properties with Powers of 10</p> <p>Math in Action: Unit 5: Scientific Notation and Properties of Exponents: pp. 541–549</p>
8.AEE.A.2	Represent solutions to equations using square root and cube root symbols.	<p>Lesson 23: Find Square Roots and Cube Roots to Solve Problems Explore: pp. 559–560, 562; Develop: pp. 562–574; Refine: pp. 575–578</p> <p>Lesson 25: Find Rational Approximations of Irrational Numbers Develop: pp. 604, 607, 612; Refine: p. 613</p> <p>Educator Note: Unit 6: Perfect Squares up to 225</p> <p>Math in Action: Unit 6: Irrational Numbers, the Pythagorean Theorem, and Volume: pp. 679–687</p>
8.AEE.A.3	Estimate very large or very small quantities using scientific notation with a single digit times an integer power of ten.	<p>Lesson 21: Express Numbers Using Integer Powers of 10 Explore: pp. 493–494, 496; Develop: pp. 497–508; Refine: pp. 509–512</p> <p>Math in Action: Unit 5: Scientific Notation and Properties of Exponents: pp. 541–549</p>
8.AEE.A.4	Perform operations with numbers expressed in scientific notation.	<p>Lesson 22: Work with Scientific Notation Develop: pp. 525–536; Refine: pp. 537–540</p> <p>Math in Action: Unit 5: Scientific Notation and Properties of Exponents: pp. 541–549</p>

2021 Oregon Mathematics Standards Grade 8		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 8
8.AEE.B	Understand the connections between proportional relationships, lines, and linear equations.	
8.AEE.B.5	Graph proportional relationships in authentic contexts. Interpret the unit rate as the slope of the graph, and compare two different proportional relationships represented in different ways.	<p>Lesson 8: Graph Proportional Relationships and Define Slope Explore: pp. 177–180; Develop: pp. 181–186; Refine: pp. 193–196</p> <p>Lesson 17: Compare Different Representations of Functions Explore: pp. 389–392; Develop: pp. 393–402; Refine: pp. 405–408</p> <p>Math in Action: Unit 3: Linear Relationships and Systems of Equations: pp. 331–329; Unit 4: Functional Relationships: pp. 431–439</p>
8.AEE.B.6	Write the equation for a line in slope intercept form $y = mx + b$, where m and b are rational numbers, and explain in context why the slope m is the same between any two distinct points.	<p>Lesson 8: Graph Proportional Relationships and Define Slope Develop: pp. 181–186</p> <p>Lesson 9: Derive and Graph Linear Equations of the Form $y = mx + b$ Explore: pp. 199–200, 202; Develop: pp. 203–212; Refine: pp. 221–224</p>
8.AEE.C	Analyze and solve linear equations and pairs of simultaneous linear equations.	
8.AEE.C.7	Solve linear equations with one variable including equations with rational number coefficients, with the variable on both sides, or whose solutions require using the distributive property and/or combining like terms.	<p>Lesson 10: Solve Linear Equations in One Variable Explore: pp. 227–230; Develop: pp. 231–242; Refine: pp. 243–246</p> <p>Lesson 11: Determine the Number of Solutions to One-Variable Equations Explore: pp. 249–250, 252; Develop: pp. 253–264; Refine: pp. 265–268</p> <p>Math in Action: Unit 3: Linear Relationships and Systems of Equations: pp. 331–329</p>

2021 Oregon Mathematics Standards Grade 8		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 8
8.AEE.C.8	Find, analyze, and interpret solutions to pairs of simultaneous linear equations using graphs or tables.	<p>Lesson 12: Understand Systems of Linear Equations in Two Variables Explore: pp. 271–272, 274; Develop: pp. 275–278; Refine: pp. 279–280</p> <p>Lesson 14: Represent and Solve Problems with Systems of Linear Equations Explore: pp. 311–312, 314; Develop: pp. 315–318, 321–323</p> <p>Educator Note: Unit 3: Systems of Linear Equations</p> <p>Math in Action: Unit 3: Linear Relationships and Systems of Equations: pp. 331–329</p>
8.AFN	Algebraic Reasoning: Functions	
8.AFN.A	Define, evaluate, and compare functions.	
8.AFN.A.1	Understand in authentic contexts, that the graph of a function is the set of ordered pairs consisting of an input and a corresponding output.	<p>Lesson 15: Understand Functions Explore: pp. 349–350, 351; Develop: pp. 353–356; Refine: pp. 357–358</p> <p>Math in Action: Unit 4: Functional Relationships: pp. 431–439</p>
8.AFN.A.2	Compare the properties of two functions represented algebraically, graphically, numerically in tables, or verbally by description.	<p>Lesson 17: Compare Different Representations of Functions Explore: pp. 389–392; Develop: pp. 393–402; Refine: pp. 405–408</p> <p>Math in Action: Unit 4: Functional Relationships: pp. 431–439</p>
8.AFN.A.3	Understand and identify linear functions, whose graph is a straight line, and identify examples of functions that are not linear.	<p>Lesson 15: Understand Functions Develop: pp. 353–356; Refine: pp. 357–358</p>

2021 Oregon Mathematics Standards Grade 8		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 8
8.AFN.B	Use functions to model relationships between quantities.	
8.AFN.B.4	Construct a function to model a linear relationship in authentic contexts between two quantities.	<p>Lesson 16: Use Functions to Model Linear Relationships Explore: pp. 361–362, 364; Develop: pp. 365–370; Refine: pp. 383–386</p> <p>Math in Action: Unit 4: Functional Relationships: pp. 431–439</p>
8.AFN.B.5	Describe qualitatively the functional relationship between two quantities in authentic contexts by analyzing a graph.	<p>Lesson 18: Analyze Functional Relationships Qualitatively Explore: pp. 411–412, 414; Develop: pp. 415–426; Refine: pp. 427–430</p> <p>Math in Action: Unit 4: Functional Relationships: pp. 431–439</p>
8.NS	Numeric Reasoning: Number Systems	
8.NS.A	Know that there are numbers that are not rational, and approximate them by rational numbers.	
8.NS.A.1	Know that real numbers that are not rational are called irrational.	<p>Lesson 24: Express Rational Numbers as Fractions and Decimals Explore: p. 583</p> <p>Lesson 25: Find Rational Approximations of Irrational Numbers Explore: pp. 597–600; Develop: pp. 601–604, 607–612; Refine: pp. 613–616</p> <p>Math in Action: Unit 6: Irrational Numbers, the Pythagorean Theorem, and Volume: pp. 679–687</p>
8.NS.A.2	Use rational approximations of irrational numbers to compare size and locate on a number line.	<p>Lesson 25: Find Rational Approximations of Irrational Numbers Develop: pp. 601–606, 611–612</p> <p>Math in Action: Unit 6: Irrational Numbers, the Pythagorean Theorem, and Volume: pp. 679–687</p>

2021 Oregon Mathematics Standards Grade 8		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 8
8.GM	Geometric Reasoning and Measurement	
8.GM.A	Understand congruence and similarity using physical models, transparencies, or geometry software.	
8.GM.A.1	Verify experimentally the properties of rotations, reflections, and translations.	<p>Lesson 1: Understand Rigid Transformations and Their Properties Explore: pp. 5–6, 8; Develop: pp. 9–12; Refine: pp. 13–14</p> <p>Math in Action: Unit 1: Rigid Transformations in the Coordinate Plane: pp. 66–73</p>
8.GM.A.2	Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations.	<p>Lesson 3: Work with Sequences of Transformations and Congruence Explore: pp. 45–48; Develop: pp. 49–60; Refine: pp. 61–64</p> <p>Math in Action: Unit 1: Rigid Transformations in the Coordinate Plane: pp. 66–73</p>
8.GM.A.3	Describe the effect of dilations, translations, rotations and reflections on two-dimensional figures using coordinates.	<p>Lesson 2: Work with Single Rigid Transformations in the Coordinate Plane Explore: pp. 17–18, 20; Develop: pp. 21–38; Refine: pp. 39–42</p> <p>Lesson 3: Work with Sequences of Transformations and Congruence Explore: pp. 45–48; Develop: pp. 49–60; Refine: pp. 61–64</p> <p>Lesson 5: Perform and Describe Transformations Involving Dilations Explore: pp. 95–96, 98; Develop: pp. 99–110; Refine: pp. 111–114</p> <p>Math in Action: Unit 1: Rigid Transformations in the Coordinate Plane: pp. 66–73; Unit 2: Dilations, Similarity, and Angle Relationships: pp. 159–167</p>

2021 Oregon Mathematics Standards Grade 8		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 8
8.GM.A.4	Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and/or dilations.	<p>Lesson 4: Understand Dilations and Similarity Develop: pp. 87–90; Refine: p. 92</p> <p>Lesson 5: Perform and Describe Transformations Involving Dilations Explore: p. 96; Develop: pp. 99–102; Refine: pp. 112–114</p> <p>Math in Action: Unit 2: Dilations, Similarity, and Angle Relationships: pp. 159–167</p>
8.GM.A.5	Use informal arguments to establish facts about interior and exterior angles of triangles and angles formed by parallel lines cut with a transversal.	<p>Lesson 6: Describe Angle Relationships Explore: pp. 117–120; Develop: pp. 124–132; Refine: pp. 133–136</p> <p>Lesson 7: Describe Angle Relationships in Triangles Explore: pp. 139–140, 142; Develop: pp. 143–148, 153; Refine: pp. 155–158</p> <p>Math in Action: Unit 2: Dilations, Similarity, and Angle Relationships: pp. 159–167</p>
8.GM.B	Understand and apply the Pythagorean Theorem.	
8.GM.B.6	Distinguish between applications of the Pythagorean Theorem and its Converse in authentic contexts.	<p>Lesson 26: Understand the Pythagorean Theorem and Its Converse Develop: pp.625–626; Refine: pp. 627–628</p>
8.GM.B.7	Apply the Pythagorean Theorem in authentic contexts to determine unknown side lengths in right triangles.	<p>Lesson 27: Apply the Pythagorean Theorem Explore: pp. 631–634; Develop: pp. 636–652; Refine: pp. 653–656</p> <p>Math in Action: Unit 6: Irrational Numbers, the Pythagorean Theorem, and Volume: pp. 679–687</p>
8.GM.B.8	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	<p>Lesson 27: Apply the Pythagorean Theorem Develop: pp. 647–652; Refine: pp. 653–656</p>

2021 Oregon Mathematics Standards Grade 8		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 8
8.GM.C	Solve mathematical problems in authentic contexts involving volume of cylinders, cones, and spheres.	
8.GM.C.9	Choose and use the appropriate formula for the volume of cones, cylinders, and spheres to solve problems in authentic contexts.	<p>Lesson 28: Solve Problems with Volumes of Cylinders, Cones, and Spheres Explore: pp. 659–662; Develop: pp.663–668; Refine: pp. 675–678</p> <p>Educator Note: Unit 6: Volume Formulas</p> <p>Math in Action: Unit 6: Irrational Numbers, the Pythagorean Theorem, and Volume: pp. 679–687</p>
8.DR	Data Reasoning	
8.DR.A	Formulate Statistical Investigative Questions.	
8.DR.A.1	Formulate statistical investigative questions to articulate research topics and uncover patterns of association seen in bivariate categorical data.	<p>Lesson 31: Understand Two-Way Tables Explore: pp. 749; Refine: pp. 755–756</p> <p>Lesson 32: Construct and Interpret Two-Way Tables Explore: pp. 759–760; Develop: pp.763–766; Refine: pp. 775–778</p> <p>Math in Action: Unit 7: Representing Data: pp. 779–787</p>
8.DR.B	Collect and Consider Data.	
8.DR.B.2	Collect or consider data using surveys and measurements to capture patterns of association, and critically analyze data collection methods.	<p>Lesson 29: Analyze Scatter Plots and Fit a Linear Model to Data Explore: pp. 697–698, 700; Develop: pp. 701–718; Refine: pp. 719–722</p> <p>Lesson 30: Write and Analyze an Equation for Fitting a Linear Model to Data Explore: pp. 725–726; Develop: pp. 735–740</p> <p>Math in Action: Unit 7: Representing Data: pp. 779–787</p>

2021 Oregon Mathematics Standards Grade 8		i-Ready Classroom Mathematics Lessons Oregon Edition—Grade 8
8.DR.C	Analyze, summarize, and describe data.	
8.DR.C.3	Analyze patterns of association between two quantitative or categorical variables and reason about distributions to compare groups.	<p>Lesson 29: Analyze Scatter Plots and Fit a Linear Model to Data Explore: pp. 697–698, 700; Develop: pp. 701–718; Refine: pp. 719–722</p> <p>Math in Action: Unit 7: Representing Data: pp. 779–787</p>
8.DR.D	Interpret data and answer investigative questions.	
8.DR.D.4	Interpret scatter plots for bivariate quantitative data to investigate patterns of association between two quantities to answer investigative questions.	<p>Lesson 29: Analyze Scatter Plots and Fit a Linear Model to Data Explore: pp. 697–698, 700; Develop: pp. 701–718; Refine: pp. 719–722</p> <p>Lesson 30: Write and Analyze an Equation for Fitting a Linear Model to Data Explore: pp. 725–726; Develop: pp. 735–740</p> <p>Math in Action: Unit 7: Representing Data: pp. 779–787</p>