\&i-Ready Classroom Mathematics

## Program Overview

## It's why you became a teacher.

You can tell when the light bulb goes on for your students.
It could be in their eyes or a glowing smile, a subtle change in posture, or a shift in the tone of their voice.

When they know they've got it, they couldn't be prouder-and neither could you.

## These magical moments stay with you forever.

# $i$-Ready Classroom Mathematics, Oregon Edition is a comprehensive math curriculum for Grades K-8 designed to help you create those "a-ha" moments every day for every student. Here’s how ... 


Focus on High-Impact Teaching Strategies ...................... 4
Use the most impactful, research-based teaching strategies to help students become independent, mathematical thinkers.


Turn Data into Action . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 14
Accelerate students' learning by combining powerful insights from data
with thoughtfully curated resources to scaffold instruction.


Put Students at the Heart of Learning $\underline{20}$
Foster the joy of learning with a classroom environment that's focused on students' creativity, critical thinking, communication, and collaboration.


Support Teachers Every Step of the Way
Thoughtful service, support, and resources are available to make your job a little easier, so you have time to focus on what matters most-your students.

# Promote Meaningful Math Learning with a Purposeful Plan 

Make the best use of instructional time. The lessons in i-Ready Classroom Mathematics, Oregon Edition span multiple days and integrate standards to help students make connections and develop a deep conceptual understanding of the mathematics.

## Three Types of Lessons

## Strategy Lessons

Majority of Lessons in the Program
Help students make important connections and deepen their understanding while they acquire and develop mathematical skills and strategies.

## Understand Lessons

Lessons That Begin with "Understand"
Dedicate time to introduce students to new ideas conceptually before they use those ideas in problem situations.

## Math in Action Lessons

Lesson at the End of Each Unit
Review and apply unit content and teach students how to develop complete responses to multistep performance tasks.

## Structure of a Lesson

Within a lesson, each session (or "day") plays a different role in supporting students' understanding. This provides students with a variety of experiences and gives them the time they need to develop conceptual understanding, build procedural fluency, and apply the mathematics to novel situations.
Day 1
Explore
Session
Review prerequisites to
address unfinished learning
and activate prior knowledge
that relates to the lesson.


| Day 5 |
| :---: |
| Refine |
| Session |

Strengthen skills and understanding with inclass time for practice and differentiation.

## Lessons in i-Ready Classroom Mathematics, Oregon Edition Help Teachers Do It All

Address the Oregon Mathematics Standards with rigorous, student-centered discourse and practice.

Develop mathematical practices authentically through problem solving and discussion.

$\checkmark$
Incorporate NCTM's Effective Mathematics Teaching Practices naturally into instruction.
$\checkmark$
Engage all learners by encouraging all students' voices, perspectives, and experiences.

Support English Learners so all students can engage with the language of mathematics.
$\checkmark$ Integrate technology to enhance students' understanding of the mathematics.

Assess understanding formally, informally, and holistically.


Differentiate with ease in real time with a wide range of resources.

Encourage positive learning habits that promote and maintain healthy learning environments.Implement the Universal Design for Learning (UDL) to the benefit of all students.


## Spark Curiosity: Explore Session

| 1 Day |  |  |
| :---: | :---: | :---: |
| Explore | 1-3 Days <br> Develop <br> Sessions | 1 Day <br> Refine <br> Session |
| Session |  |  |

Engage students and help them build upon the schema they have already developed with problembased lessons. Each lesson starts by activating students' prior knowledge to set a foundation upon which they can place the new facts, ideas, and concepts of the lesson.

## Effective Math Teaching Practices

National Council of Teachers of Mathematics' (NCTM's) Effective Mathematics Teaching Practices are woven into each session.

## NCTM EMTP

Look for this text to see how these best practices are seamlessly incorporated into instruction.

NCTM EMTPs: Effective mathematics educators

1. Establish mathematics goals that focus on learning.
2. Implement tasks that promote reasoning and problem solving.
3. Use and connect mathematical representations.
4. Facilitate meaningful mathematical discourse.
5. Pose purposeful questions.
6. Build procedural fluency from conceptual understanding.
7. Support productive struggle in learning mathematics.
8. Elicit and use evidence of student thinking.
(NCTM, 2014)


## Activate and Assess Prior Knowledge

Students are introduced to lesson concepts with a problem they can solve using previously learned models and strategies that are relevant to the new content of the lesson.
NCTM EMTP 2


## TRY

## FAN Math Toolkit double number lines, grid paper



Ask:How is your strategy similar to mine? How is it different? Share: My strategy is similar to yours is simnilar to II is different because

## Learning Targets SMP 1, SMP 2, 5MP 3, SMP 4, SMP 5, SMP 6, SMP 8

 Use division to find unit rates. Use unit rates to convert measururemen and compare atios.Vocabulary Development To build on their vocabulary, students use a graphic organizer to review a previously learned term that plays a key role in the upcoming lesson. This helps students reflect on concepts they know and will build upon throughout the lesson.

## Build a Bridge to New Lesson Content

Look Back/Look Ahead prompts prepare students for the new content they will learn in the rest of the lesson.
NCTM EMTP 5

LESSON 16 | SESSION 1

## connect It

Look Back Can Chloe get to Los Angeles in less than $3 \frac{1}{2}$ hours? Explain.

Look Ahead Chioe's constant speed of 55 miles per hour is a rate. The
numerical part of the rate, 55 , is called the unit rate.
a. What does the unit rate 55 tell you in this situation?
. On another trip, chloe drives at a constant speed of 60 miles per hour. What is Chloe's unit rate? What does the unit rate tell you?

The table shows that Chloe travels 240 miles in 4 hours. Complete the equivalent ratios in the firs wo columns. Where do you see Chloe's unit rate?
d. The third column of the table shows the quotient of the numbers in each equivalent ratio. Complete the third column. What do you notice?

3. Reflect How could you use unit rates to help you identify equivalent ratios?

LESSON 16 SESSION 1

Prepare for Using Unit Rates to Solve Problems
1 Think about what you know about rates. Fill in each box. Use words, numbers,
and pictures. Show as many ideas as you can
now as many ideas as you can


## Build Understanding: Develop Sessions

## 1-3 Days

 Develop Sessions1 Day Refine Session

Help students make sense of math by making connections across multiple representations.
Each lesson includes several sessions devoted to helping students integrate new concepts into their existing understanding of related mathematical ideas, patterns, and procedures.

## A Powerful Framework for Instruction

The Try-Discuss-Connect instructional framework seamlessly incorporates multiple routines, math practices, and effective teaching practices into instruction.


## Try It

Students make sense of the problem and persevere in solving and supporting their thinking. NCTM EMTP 7
By having time to think through the problem as a class and then try it on their own first, students learn to tap into their existing knowledge and develop perseverance.

## Discuss It

Students share their thinking with a partner and compare their strategies. NCTM EMTP 2
By engaging in peer-to-peer discourse, students build confidence and learn from one another.

Use the problem from the previous page to heip you understand how to convert between units of measure.
(1) Look at the first Model it. How are the refationships 1,000 meters $=1$ kilomete nd 60 minutes $=1$ hour similar to rates?
-
.eter $=1,000$ meters is used $\frac{1}{1,000}$ kilometer per meter. How is this rate shown by a row of the table of meters and kilometers in the first Model I?

3 There are two rates that relate meters and kilometers. In the second Model it
why is $\frac{1}{1,000}$ the unit rate that is used to convert 3,200 meters to kilometers?
4) How many kilometers does the band march in 1 hour?
(5)

How is converting between measurements similar to finding equivalent ratios?

6 Reflect Think about all the models and strategies you have discussed today. Describe how one of them helped you better understand how to convert beiween
units of measure.

Apply it
Use what you learned to solve these problem
3 The unit of money in England is the pound ( $£$ ). When Anne visits England spend less than $\$ 20$.


8 A can contains 4 cups of pineapple juice. The can of juice costs $\$ 2.56$ What is the unit price in dollars per fluid ounce? ( 8 fluid ounces $=1$ cup)
A $\$ 12.50$ per fluid ounce
B $\$ 1.56$ per fluid ounce
C $\$ 0.64$ per fluid ounce
D $\$ 0.08$ per fluid ounce
9 A model train takes 10 seconds to travel along a section of track that is 5 yards long. At this rate, how many feet does the model train travel every minute?


ESSON 16 SESSION 4 Name:
Practice Using Unit Rates to Convert Measurements

- Study the Example showing how

| Example |  |  | Price |
| :---: | :---: | :---: | :---: |
| The table shows the prices of two brands of flour. Which brand is the better buy? | Brand A | 5 pounds | \$2.40 |
| Convert the weight of Brand $A$ to ounces.$1 \text { pound }=16 \text { ounces }$ |  |  |  |
|  |  |  |  |
| The rate is 16 ounces per pound. |  |  |  |
| pounds ounces per pound | Brand A |  |  |
| $\frac{\downarrow}{5} \times \frac{\downarrow}{16}=80$ | DoHars |  |  |
| Brand A weighs 80 ounces. <br> Find the unit prices in dollars per ounce, | Ounces | 80 |  |
| Find the unit prices in dollars per ounce, shown in the tables. | Brand $\mathrm{B} \sim^{48}$ |  |  |
| Brand A costs $\$ 0.03$ per ounce. | Dohars | 1.920 .04 |  |
| Brand B costs $\$ 0.04$ per ounce. | Ounces | $48 \quad 1$ |  |

## Make Learning Stick: Refine Session

## 1-3 Days

 Develop Sessions1 Day
Refine
Session

Give students time to practice and cement their learning from the lesson. Each lesson ends with dedicated class time for practice and options for one-on-one or small group differentiation activities.

Dedicated Class Time for Practice and Differentiation


## Reteach, Reinforce, or Extend Learning

## Approaching Proficiency: Provide additional support with the Reteach activity in the Oregon Teacher's Guide. <br> NCTM EMTPs 2 and 3

RETEACH
Hands-On Activity
Make a model to show the
relationships between unit
conversions and unit rates.
Students approaching proficiency with using
Students approaching proficiency with using
unit rates to solve problems will benefit from unit rates to solve problems will benefit from using unit conversions.

Materials For each group: 15 sticky notes
 the better deal? Discuss with students that they will need to compare unit prices.

- Have one group find the rate of dollars per foot and the other group find the rate of dollars per yard. cher 4 sticky notes. Have them find the unit conversion. Students should label each sticky note using the unit conversion to find the number

Repeat with the group that is finding the rate of dollars per yard. Ask: How many yards will each sticky note represent? How do you know? $\frac{1}{3}$ yard; $\frac{1}{3}$ yard is the same as 1 foot. Have the group model eeet in sticky notes. Ask: What is this length in yards? [3 yards]

Ask: Who got the better deal and why? [Ayana; She paid less per foot (or yard)]
Discuss how students could build similar models to compare prices: Which is the better deal: $\$ 0.12$ per ounce; Green: $\$ 2.08$ per pound or $\$ 0.13$ per ounce; Red grapes are the better deal.]

Meeting Proficiency: Reinforce learning with additional practice problems in the Student Worktext.

NCTM EMTP 6

## Extending Proficiency:

Deepen students' understanding with the Challenge Activity in the Oregon Teacher's Guide.

NCTM EMTPs 2 and 3

## EXTEND

Challenge
Solve rate problems involving conversions between systems.

Students extending beyond proficiency will benefit from solving rate problems with multiple conversions.

- Have partners research conversion rates to solve this problem: A car travels 55 miles per hour. What is this speed in kilometers per second, rounded to the nearest thousandth?
- Some students may first convert miles to kilometers, and then convert hours to seconds. Others may make all conversions at once. [ 0.025 kilometer per second]
- Repeat with solving the following problem: A small pool can hold 3,785 liters of water. Water flows through a hose into the empty pool at a rate of 1 gallon per minute. About how many hours will it take to fill the pool? [about $16 \frac{2}{3}$ hours]


## Practice That's Just Right

Reinforce students' mathematical understanding with a variety of rich practice opportunities. The print and digital practice in i-Ready Classroom Mathematics, Oregon Edition solidifies students' conceptual understanding first, then provides fluency practice and opportunities for students to apply their learning to new problems. NCTM EMTP 6

$\qquad$
(2) Fajah has 58 . She
buying lunch?
$\qquad$
3 Adiver swimming atan elevation or
up 12 meters. What is her elevation now?
(4) A football team gains 5 yards on their first play. It loses 5 yards on the next play. How many yards didid it gain in total over the two plays? (5) Th
$\qquad$
$\qquad$
$\qquad$

Cumulative Practice
Students revisit previously learned content to deepen their understanding and retention. Available for every unit.


Google Classroom

Easily assign resources to Google Classroom.
Student resources, including the digital worktext and PDFs, work with most learning management systems.


Hands-On Games
Unit Games and Math in Action lessons develop the math practices and use students' critical-thinking skills.


## Interactive Practice with TechnologyEnhanced Items

Available for every lesson!

This assignable and auto-graded digital practice reinforces understanding. Teachers receive performance reports, while students receive immediate, meaningful feedback to keep them on track.


## Digital Math Tools Powered by Desmos

Students have access to the online graphing and scientific calculators, as well as geometry tools, to explore concepts and deepen understanding.

## Plan for Success

When students are lifelong learners, data is a roadmap—not a destination. Valid, reliable, and timely data lets you know where your students are so you can meet them there and give them the right resources and support to continue their journey.


## Identify Students’ Needs with the Diagnostic

Unfinished learning can lead to challenges as students work on grade-level standards. Knowing every student's needs is critical for success.

- Adaptive (Grades K-12): Pinpoint students' strengths and needs across all skills and domains.
- Criterion referenced: Compare students' performance against the standards.
- Norm referenced: Compare students' performance to other students.


## State and Nationally Recognized

Numerous third parties have deemed the Diagnostic as a valid and reliable academic screener and progress monitoring tool.


BUROS
CENTER FOR TESTING
Received a positive review in The
Twentieth Mental Measurements Yearbook (published by the Buros Center for Testing)

To see evidence that the Diagnostic is proven to work, visit CurriculumAssociates.com/Research-and-Efficacy.

## Accelerate Learning with a Custom Plan

Based on results from the Diagnostic, the Prerequisites report identifies the essential prerequisite skills to focus on for every student for every lesson.
(1) Learning Progression:

Understand the progression of standards going back two+ years.
(2) Whole Class Guidance and Pacing Support: Integrate and scaffold prerequisite skills into the grade-level content scope and sequence.
(3) Small Group Resources: Address specific in-depth needs with targeted resources for teacher-led, partner, and independent activities.

Prerequisites

| Subject | Class/Report Group | Grade | Unit |
| :---: | :---: | :---: | :---: |
| Math | A. Shah - Grade 6, Section 1 - | Grade 6 |  |

Unit Overview
jor Themes of Unit (i)
Unit 2: Decimals and Fractions: Base-Ten Operations, Division with Fractions, and Volume
In this unit, students use what they know about adding, subtracting, and multiplying decimals to hundredths to extend their understanding of computing with decimals. They learn the standard algorithm for whole number and decimal division and use both visual models and equations to divide with fractions. They will also build on their prior understanding of volume and of multiplying with fractions to find volumes of rectangular prisms with fractional edge lengths.

Whole Class
After familiarizing yourself with the needs of the students based on the data below, you may decide to address these prerequisite skills during whole class instruction.


| Prerequisite Groups | Unit Group A 2 Students | Unit Group B 8 Students | Unit Group C 2 Students | Unit Group D 7 Students |
| :---: | :---: | :---: | :---: | :---: |
| Prerequisites | Recommendations (\%) | Recommendations | Recommendations | Recommendations |
| Understand decimals. | $\checkmark$ | $\checkmark$ | $\checkmark$ | Additional Support |
| Add, subtract, and multiply decimals to hundredths. | $\checkmark$ | $\checkmark$ | Additional Support | In-depth Review |
| Divide multi-digit whole numbers and decimals to hundredths. | $\checkmark$ | $\checkmark$ | Additional Support | In-depth Review |
| Essential Skill <br> Multiply with fractions and divide with unit fractions. | $\checkmark$ | Additional Support | In-depth Review | In-depth Review |
| Find volume with whole numbers. | $\checkmark$ | Additional Support | In-depth Review | In-depth Review |
|  | Banks, Abby <br> Sanchez, Laura | Graves, Christian Cheng, Bianca Delaney, Aaron | Royce, Logan <br> McIntosh, Markus | Gonzales, Bella <br> Hopper, Carla <br> Vu, Kaylee |



# Make a Difference Every Day 

Math class goes by quickly. You need a thoughtful approach to effectively differentiate in that short amount of time. Whether it's addressing unfinished learning or responding in the moment to unlock a tricky concept or address a misconception, i-Ready Classroom Mathematics, Oregon Edition has the plan and resources for efficient differentiation.

# Proactively Address Prerequisite Skills during Instruction 



## - ON-THE-SPOT TEACHING TIPS FOR GRADE 6

- Use simpler numbers. It is easier to see patterns and relationships when the fractions are easy to envision. Provide additional problems with simpler numbers, spending extra time with problems where one number is a unit fraction or a whole number.
- Connect division and multiplication. Reinforce the foundational work students did with division with unit fractions and whole numbers in Grade 5 to build their understanding of important relationships between division and multiplication. For example, students can understand that $3 \div \frac{1}{4}=12$ because they know that $12 \times \frac{1}{4}=3$. Students can also recognize that the division expression $3 \div \frac{1}{4}$ is equivalent to the multiplication expression $3 \times 4$ because one way to answer the question "How many $\frac{1}{4}$ s are in 3 ?" is to multiply 3 by 4 .
- Make sense of the operation in word problems. As in their Grade 5 work on division with unit fractions, encourage students to use both a visual model and an appropriate division equation when solving word problems. Visual models help them make sense of situations that involve division with fractions and help them determine which quantity is the dividend and which is the divisor.

Unit 2 Decimals and Fractions: Base-Ten Operations, Division with Fractions, and Volume
Unit 2, Lesson 7 continues to build fluency with decimal addition,
subtraction, and multiplication. There are no recommended prerequisite lessons.

| Lesson 7 Add, Subtract, and Multiply Multi-Digit Decimals | 2 to 4 days |
| :---: | :---: |
| PREPARE for Unit 2, Lesson 8 by reviewing dividing with two-digit divisors and with decimals to support students in learning an algorithm for division. | 0 to 4 days |
| Grade 5, Lesson 5 Divide Multi-Digit Numbers |  |
| Grade 5, Lesson 17 Divide Decimals |  |
| Lesson 8 Divide Whole Numbers and Multi-Digit Decimals | 2 to 5 days |
| PREPARE for Unit 2, Lessons 9-10 by reviewing fraction multiplication and division with unit fractions to support students as they expand their skills with dividing fractions. | 0 to 4 days |
| Grade 5, Lesson 22 Multiply Fractions in Word Problems |  |
| Grade 5, Lesson 24 Divide Unit Fractions in Word Problems |  |
| Lesson 9 Understand Division with Fractions | 3 days |
| Lesson 10 Divide Fractions | 4 days |
| Lesson 11 Solve Volume Problems with Fractions | 2 to 4 days |

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Authentically Respond to Students in the Moment

Monitor Understanding
Throughout each session, there are opportunities to observe students' understanding and multiple options to differentiate.

DIFFERENTIATION | RETEACH or REINFORCE
Hands-On Activity Compare equations to identify the solutions of a system.

Just-in-Time Supports
If students are unsure about how to identify the number of solutions a system of linear equations has, then use this activity to spark discussion.

Reteach, reinforce, or extend learning Materials For each student: transparency markers, transparency of Activity Sheet Graph Paper 敛

- Tell each student to write an equation in the form $y=m x+b$ on their transparency, selecting $m$ and $b$ from the set of numbers: 1,2 , and 3 . Then have students draw axes and graph their equations.
- Have students circulate and compare equations and overlay their graphs matching up the axes. As they compare equations, ask students to discuss the number of solutions the system has.
- After students have finished their comparisons, ask them to share what they have learned. Have students connect the number of solutions to the values of $m$ and $b$ in the equations for each system.
using the activities provided in the yellow differentiation boxes in the Oregon Teacher's Guide. The line points to where these activities can be used during instruction to support students' needs.


# Track, Support, and Celebrate Students' Growth 

Know what your students know. i-Ready Classroom Mathematics, Oregon Edition includes print and digital assessments and a wealth of resources to meet all students' learning needs. Reports are in depth yet intuitive, so you can easily plan the next steps for instruction.

## Assess Students' Understanding and Monitor Progress

Choose how you want to gather data on students' strengths and dig deeper into their individual needs.


## Paper/Pencil Assessment

To check students' understanding with a printbased option, use the editable Lesson Quizzes and Mid-Unit and Unit Assessments.

Digital Assessments
Comparable to the paper/pencil options, digital Comprehension Checks
provide in-depth reports analyzing students' understanding of concepts.


## Differentiation Resources for Each Lesson

Once you identify instructional needs, choose the resource that will help students grow and succeed.

Unfinished Learning:
Prerequisite Lessons and Interactive Tutorials can address skills to help students access grade-level content.


Reteach: Tools for Instruction are minilessons for reteaching lesson concepts.

## Student-Led Small Groups:

Leveled Math Center Activities are collaborative games to reinforce concepts and skills.


Independent Reinforcement: Learning Games offer fun, challenging, and personalized practice and help students develop a growth mindset.


Out-of-Class Support: The Develop Session Video Library provides instructional videos for remote learning, homework supports, or reteaching concepts.

## Extension:

Enrichment Activities challenge students with higher-order thinking tasks.


Personalized Instruction: These digital lessons are tailored to meet individual student needs and are designed to accelerate growth and gradelevel learning.

## Embrace Students as Individuals

Allow students to explore the world through the lens of mathematics. i-Ready Classroom Mathematics, Oregon Edition incorporates features of the UDL to ensure that instruction is flexible, equitable, and accessible to all students.

## Celebrate and Inspire

STEM Stories spotlight the lives and STEM contributions of people with diverse
backgrounds and provide a real-life instance of mathematical practices in action.



As Raye moved closer to her goai, she kept As Raye moviens. When no one would ted
solving proble sor how to use the computer at wark


Raye faced another problem when her bo said she could be promoted only if she worked at night: Buses didn trun anght to drive Raye bought
$15 T$ Unit S SEM Strikes

## Real-World Connections

STEM-focused connections show how mathematics is used in everyday life.

## REAL-WORLD CONNECTION

Builders need to budget the costs for new projects before beginning the physical work. The National Association of Home Builders keeps records on the average cost per square foot for homes across the United States. The cost per square foot is calculated by dividing the cost of the land, materials, and labor used to build the home by the number of square feet of the home. The largest factor that influences a home's cost per square foot is the value of the land. For example, a home in a major metropolitan area may have a higher land value than a home in a rural area. Ask students to think of other real-world examples when examining rates might be useful.


## Create a Community of Interconnected Learners

Supports for Community: Try-Discuss-Connect incorporates UDL principles to give every student a voice and the opportunity to engage with the content in a way that is meaningful to them.


## Action and Expression:

Students make sense of the problem in a way that engages their identity and honors their prior experience, community, and individuality.

## Representation:

Partner and whole class discussion place value on students' ideas and contributions.

## Connect It

## Engagement:

Students make connections to strategies, the underlying mathematics, and each others' thinking and ideas.


## Draw on Students' Cultural and Linguistic Background and Behaviors

Every lesson includes background information, cultural connections, and instructional protocols to engage students while affirming and validating their identities.

## Integrate Language and Mathematics

Math class is the perfect place for multilingual learners to develop academic language while also building content knowledge. i-Ready Classroom Mathematics, Oregon Edition includes the resources to support both of these goals as students engage in reading, writing, speaking, and listening.

## Increase Student Engagement

Supports for Language Development: Try-Discuss-Connect incorporates language routines to increase class participation and support students as they learn content, apply mathematical practices, and develop language.

| (豇) Try It | Discuss It | (Q) Connect It |
| :---: | :---: | :---: |
| Language Routines <br> - Three Reads <br> - Co-Craft Questions <br> - Notice and Wonder <br> - Say It Another Way <br> Teacher Moves <br> - Turn and Talk <br> - Individual Think Time | Language Routines <br> - Compare and Connect <br> - Collect and Display <br> Teacher Moves <br> - Turn and Talk <br> - Individual Think Time <br> - Four Rs <br> Conversation Tips | Language Routines <br> - Collect and Display <br> - Compare and Connect <br> Teacher Moves <br> - Turn and Talk <br> - Individual Think Time <br> - Four Rs |

## Differentiation for English Learners

Scaffolds for each session suggest ways to help English Learners access and engage with rigorous mathematics.

## DIFFERENTIATION | ENGLISH LEARNERS

Use with Session 2 Model It

Levels 1-3: Speaking/Writing To help students interpret Model It problem 2, read the problem aloud. Use Act It Out to clarify the phrase catch up. Use a volunteer or classroom objects to role play the meaning of catch up. State the phrase in the past tense: I caught up with__. Display catch up and caught up. Have partners use both phrases to describe a situation. Then reread problem 2, clarifying words as needed Ask a student to explain same rate. Use sentence frames to help students answer part a:

- Paloma___ catch up to Charlotte.
- I know because they are
- I can tell from the graphs that Paloma catch up, because the lines

Levels 2-4: Speaking/Writing Help students interpret Model It problem 2. Use Act It Out to have students demonstrate catch up and caught up. When a student catches up, have them discuss how that is different from the situation in the problem. Encourage them to use the word rate: - I caught up to ___ because - In the problem, Paloma and Charlotte Then help students connect the situation to the graph. Ask: How does the graph show the distance Paloma and Charlotte hike? Have students draft a response to 2a. Then have them answer $2 b$ and make connections with partners:

- Our answers are the answer by

Levels 3-5: Speaking/Writing Help students interpret Model It problem 2. Have students read the problem and turn to a partner to discuss how the graph connects to the problem. Encourage partners to explain how the graph shows both girls hiking on the same trail at the same rate. Have them draft a response to 2 a and have partners review each other's responses. Then have students work independently to answer 2 b . When ready, have them turn to partners to connect and discuss answers. Ask: How does your answer compare to your partner's? Do both answers include an explanation? How can you test your answer?
Encourage students to use same, different, both, and, or but as they explain their ideas.


## Additional Language and Discourse Supports

Resources like the Discourse Cards and Multilingual Glossaries help students talk through their ideas using academic language.
Teach
Academic
Language

## Academic Vocabulary Activities and Routine

Engage students in rigorous mathematics and encourage effective communication.


## Support at the Word, Sentence, and Discourse Levels

Prompts help students ask and answer questions, express ideas, and unpack complex sentences.



## Cultivate a Mindset for Learning

Create a community of interconnected learners. By developing the whole child, encouraging collaboration, and making time to reflect on their thinking, students not only become good mathematicians, but they also develop important life skills.

## UNIT 4

Algebraic Thinking

## Unit Big Ideas

This unit introduces students to generating equivalent expressions and solving mult-step equations and be learning in this unit and assess skill they will be lean do not know about them.
what they know and dither what they inow their progress after completing
Students record Students record reflect on their learning at the end of the unit.
The major themes of this unit are:

- You can apply properties of operations to generate equivalent expressions that reveal denerate equivalentaspects of a problem. - You can use what you know about solving one-step equatios.
and inequalities.
Reasoning about the effect of multiplying by a negative number can help you understand why the inequality symbol sometimes changes when solving inequalities.
$\checkmark$ Self Check
- Take a few minutes to have each student Take a few mitly read through the list of skills. Ask students to con sider each skill andy have. box if it is a skit hey h these skills are likeis to all Remind students that thase ver time, they will be able to check off more and more skills.
Support Whole Class Discussion Engace students in a discussion about the skills viith questions such as:
-Which skilis seem related to something you
already know?
- Which skills do you think you would use in your everyday life? Why?
Support Positive Learning Habits At the beginning of the unit, share the individual and social responsibility goa! Persevere. At the end of the unit, support growth mindset by having dreview the skills in the Self Reflection page.


## 305



## Unit Skills

Find equivalent expressions.
Rewrite linear equations in diffierent forms.
Solve multi-step equations.
Solve probiems using equations.
Solve inequalities.
Solve problems using inequalities.
Graph the solution set of an inequality.
Aclively participate in discus

## Support Positive Learning Habits

Embedded support helps teachers promote and maintain healthy learning environments.

## Encourage Individual and Social Responsibility

Students reflect on their understanding and develop self-awareness, self-management, social awareness, relationship skills, and responsible decision making.

## Support Student Agency

## Self Check

Let students check off skills they already know before starting a unit, and then reflect on their progress at the end of a unit.

## UNTT4 <br> Self Reflection

## Support Positive Learning

 Habits
## Growth Mindset

Have students review the skills on the Self Reflection page and work in pairs to respond to the prompts. Encourage students to revisit the work they did in each lesson in order to help develop growth inindses.

- Remind students that this is the same list of skills that they saw on the Self Check page at the beginning of the unit.
Tell students that revisiting the list of skilsis an opportunity for them to reflect on their learning and progress during the unit,
Have students read through the list of skills independently and then work in pairs to respond to the prompts. Encourage students to revisit the work they did in each lesson as they think about Discuss stund to the prompts. class if time permits. Tells to the prompls as a build on these skills in later lessons dut they will year and/or in other grade levsels. during the

Individual and Social Responsibility ASK You have worked hard to learn a iot of new math. When you are confused or frustrated while IST Whot con you do?
LISTEN FOR Students may share strategies for persevering that include taking a short break, asking for a hint to get back on track, asking a classmate or teacher for heip, and remembering Sturnal for new learning to feel difficult. Students might also mention trying different visual representations to think about problems in new ways.

ASK Students in a strong classroom community help each other. How did you and your classimates help each other when you were confused or frustrated while doing math?
LISTEN FOR Students may share strategies for persevering as part of a group that include encouraging each other and explaining things different ways to heip others understand.

## Develop Persistent Problem Solvers

Supports for Growth Mindset: The Try-Discuss-Connect framework provides a structure to help students embrace challenge, collaborate with others, and reflect on what they have learned.

| 而 Try It | Discuss It | Students evaluate methods and <br> Students persevere through a novel <br> problem independently. |
| :---: | :---: | :---: |
| Students share their thinking <br> and learn how to agree or <br> disagree respectfully. | consider the merits of different solution <br> strategies. |  |



## Promote Self-Management

Learning Games give students immediate feedback they can use to test strategies. After completing a level, students can choose whether the next round is harder or not, giving them agency over their learning.

## Get What You Need, When You Need It

Whether you're a 30 -year veteran refining your craft or a first-year teacher exploring your new profession, our time-saving resources and support enable you to build your expertise. Choose from our wealth of resources to get what you need, when you need it.

## Support That Works for You

An abundance of resources and support are available to meet the unique needs of each teacher.


> Plan Lessons with Ease
> Lesson Overview pages cover everything you need to quickly and effectively plan instruction.

## Embedded Support

Strategies, prompts, and in-themoment guidance are available in the Oregon Teacher's Guide.

Common Misconception Listen for students who identify $192 \frac{1}{2}$ miles as the distance Chloe can travel in $3 \frac{1}{2}$ hours but conclude that since the distance is less than 200, the time to reach the destination would also be less. As students share their strategies, ask them to apply their reasoning to explain the steps they used to solve the problem.

[^1]
## Facilitate Whole Class Discussion

Call on students to share selected strategies. Prompt students to describe what they noticed or assumed about the problem, what they decided to do as a result, and why.
Guide students to Compare and Connect the representations. Allow time for students to think by themselves before starting the discussion.
ASK How does [student name]'s strategy use the rate given in the problem?
LISTEN FOR The given rate is 55 miles in 1 hour. Use the rate and equivalent ratios to find how many miles Chloe can drive in $3 \frac{1}{2}$ hours.

## Professional Learning That Empowers

Teacher support designed to enhance the art and science of teaching mathematics

## Math Background

See how the models and strategies used in the unit fit into the learning progression.

## Pacing Video Series

Stay on track to deliver all grade-level content

Proportional Relationships
insights on

Scale and Scale Drawings
ratio reasoning g studentent sdevelopoped in Grade 6 . 11 Serves as a bidde to the subsequent work with
proportional relationships in this unit, and it lays the foundation for students s understa)
diations and simlarity in Grade Ascale describes the relationstio berween
length
linthe orginal figure and lengest in in the lengths in the original f fyure and lengths in the
scale e rawing. A scale factor is the number you multiply an orgiginal length by to get the
corresponding length in the scale drawing
$\checkmark$ Students apply equivelent ratios and unit rates
 EXAMPLE $A$ map with a scale $1 \mathrm{~cm}: 5$ mi has as
ccale factor of 5 . Pu con find the distance in scale factoro 5 . You can find the distance in
centimeers beveentwo otites ont me mp and
.
 Students use proportional reasoning to recreate
a sale
scal rawewnin of an obbect using a different scale, recognizing that the new drwining is
scale drawing of the orgignald drawing. EXAMPLE On a scale drawing where

 the new drawing $i 55 \mathrm{~cm}$.
Common Misconception Students may think
that areas scales by the same factor as iength.
 larger square is 4 times the area of the
smale
smaller one.
After students have learned about the constant
of proporitionality they can revisit scale factortio connect the two concepts.

Your Year with i-Ready Classroom Mathematics


```
Students use equivalent ratios to explore
```

            scale drawings
    \(\triangle D E F\) is a scale drawing of \(\triangle A B C\).
    $\stackrel{\mathrm{cm}}{A} \overbrace{25 \mathrm{~cm}}^{B} \mathrm{~cm} C$
$\qquad$
The ratio $A B: D E$ is $1: 3$.
The ratio $B C: E F$ is $2: 6$, or $1: 3$.
muttiply by scale factors to find unknown dimensions.

The scale factor from $\triangle A B C$ to $\triangle D E F$ is 3 by the end of the year.

Implementation Guidance and More
From how-to tips to planning tools, get ondemand access to everything teachers need on i-ReadyCentral.com/Classroom-Math.


Onsite, Online, and On-Demand Professional Development (PD)
Our ongoing, classroomfocused PD supports teachers in using students' thinking and mathematical practices to transform mathematics classrooms.

## Bring Classrooms and Communities Together

Extend learning beyond the classroom. i-Ready Classroom Mathematics, Oregon Edition has a wealth of resources families can use at home to support their students' mathematical growth.


## Resources for Families



## Support Website Dedicated to Families

The Family Center, available in English and Spanish, helps families explore the program and provide support at home.

## Need Help? We're Here for You!

No matter how big or small your school is, you have an i-Ready partner dedicated to your account. We're experts in our product, so if you have a question or a problem, we can give you the answer-so you can get back to your students.

"i-Ready Classroom Mathematics, Oregon Edition resources provide teachers with routines and structures that support the implementation of the effective teaching practices. This allows students to build a deep understanding of mathematical concepts, and it creates a seamless connection that supports both students and teachers."
—Marsha Burkholder
Elementary Curriculum Specialist
"Curriculum Associates ... developed the tools and customer support systems that provide us with real-time information so we may maximize the skillset of our staff to do what's in the best interest of our students."
—Josh Almeida
Curriculum, Data, and Assessment Manager for Mathematics

## The Data Speaks for Itself

To help students thrive, teachers need high-quality instructional materials that make an impact. Our programs are designed, tested, and refined to maximize students' success. Don't take our word for it. Check out our proven results and top ratings from third parties.


Third-party research conducted in three states, with 32 schools and 21,000 students, provides evidence of Ready Mathematics'* success.

Read the full report:
CurriculumAssociates. com/Ready-Math-Blended-ESSA.

Because our program has been top rated from the beginning, educators have had time to teach with and see real results from our blended instructional approach.

## Growth in Student Performance

Based on i-Ready Diagnostic Scale Scores


| Non-Ready <br> Users | Fall | Ready Mathematics <br> Blended Core Users | $\square$ Fall | Scores and score <br> differences are rounded <br> to the nearest whole <br> number. |
| :--- | :--- | :--- | :--- | :--- | number.

i-Ready Classroom Mathematics, Grades K-8 received all green ratings from EdReports.


EdReports Ratings: i-Ready Classroom Mathematics, Grades K-8
Visit EdReports.org to see the full report.
$\begin{array}{lllllllll}K & 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8\end{array}$


Gateway 2:
Rigor \&
Mathematical
Practices
Gateway 3:
Usability

17/18

$18 / 18$


38/38


24/27
$24 / 27$

## Student Materials



## Student Worktext ${ }^{(3)}$

Students take ownership of the learning as they work through the rich tasks and practice new skills in each lesson.


Fluency and Skills Practice Book
Targeted fluency practice for every lesson. Included on the Oregon Teacher Toolbox and available in print for additional purchase


Hands-On Materials
Engage students in hands-on learning. Available at: Hand2Mind.com/ Curriculum-Associates

## Student Digital Experience

The Student Digital Experience, accessible through i-ReadyConnect.com, provides access to all student components of $i$-Ready Classroom Mathematics, Oregon Edition.
Student Bookshelf provides online access to student resources, including:

- Digital Student Worktext E/S includes tools, such as note-taking, text-to-speech, highlighting, and a calculator.
- Family Resources E/S includes a Family Letter for every lesson and Unit Flow \& Progression Videos.
- Multilingual Glossary E/S available in 11 languages
- Student Handbook $\mathbb{E / 5}$ with a guide to the Standards for Mathematical Practice, a mathematical language reference tool, and 100 Mathematical Discourse Questions
- Develop Session Video Library offers instructional videos for remote learning, homework support, or reteaching concepts.
Digital Math Tools powered by Desmos provide virtual representations of various models.
Interactive Learning Games E/S develop conceptual understanding, improve fluency, and build a positive relationship to challenge.
Interactive Practice E/S helps students build procedural fluency and skills by providing immediate, meaningful feedback.
i-Ready Personalized Instruction E/S designed to accelerate growth and grade-level learning



## Teacher Materials



## Oregon Teacher's Guide ©

Two volumes include discourse-based instructional support, math background, and embedded professional learning.
Available in print and online


Discourse Cards ${ }^{\text {(3) }}$
This resource provides questions and sentence starters to get students talking about mathematics. Available in print and online

i-Ready Classroom Central
Online teacher portal provides on-demand access to tips and resources for a successful implementation.

## Teacher Digital Experience

The Teacher Digital Experience, accessible through i-ReadyConnect.com, provides access to all teacher components of $i$-Ready Classroom Mathematics, Oregon Edition.

## Oregon Teacher Toolbox

provides access to all Grades $\mathrm{K}-8$ resources in one convenient location. A few highlights include:

- Oregon Enhancement Activities (as)
- Interactive Tutorials (1/5
- Digital Math Tools Powered by Desmos
- Lesson PowerPoint ${ }^{\oplus}$ Slides (1/3)
- Fluency and Skills Practice ©
- Center Activities (1/5
- Enrichment Activities (5)
- Assessment Resources (1)
- Unit Flow \& Progression Videos*
- Literacy Connections (1/8)
- Unit Games (1/8
- Develop Session Video Library

Digital Practice Resources

- Learning Games
- Interactive Practice (1/8
- i-Ready Personalized Instruction (1/S


## Digital Assessments

- Diagnostic ©
- Comprehension Checks © ${ }^{63}$


## Reports

- Diagnostic Results
- Comprehension Check Results
- Prerequisites
- Learning Games


## Professional Learning

- Online Educator Learning

[^2]
## Learn more at i-ReadyClassroomMathematics.com/24.

To see how other educators are maximizing their i-Ready Classroom Mathematics, Oregon Edition experience, follow us on social media!


[^0]:    Yearly Pacing for Prerequisites
    provides guidance on when and how to use Prerequisite Lessons to address unfinished learning throughout the year.

[^1]:    ## Select and Sequence Student Strategies

    Select 2-3 samples that represent the range of student thinking in your classroom. Here is one possible order for class discussion:

    - tables of equivalent ratios that show the number of miles traveled each hour and half hour when moving at a constant speed of 55 miles per hour
    - (misconception) strategies that identify the distance of $192 \frac{1}{2}$ miles in $3 \frac{1}{2}$ hours but conclude that since the distance is less than 200 miles, the time to reach the destination would be less
    - double number lines that show the number of miles traveled in $3 \frac{1}{2}$ hours when traveling at a constant speed of 55 miles per hour
    - equations that find the number of miles Chloe can travel in $3 \frac{1}{2}$ hours when traveling at a constant speed of 55 miles per hour

[^2]:    *Closed captioned in English and Spanish
    Microsoft PowerPoint ${ }^{\oplus}$ is a registered trademark of Microsoft Corporation.

