

enVisionmath2.0 © 2017

Differentiation

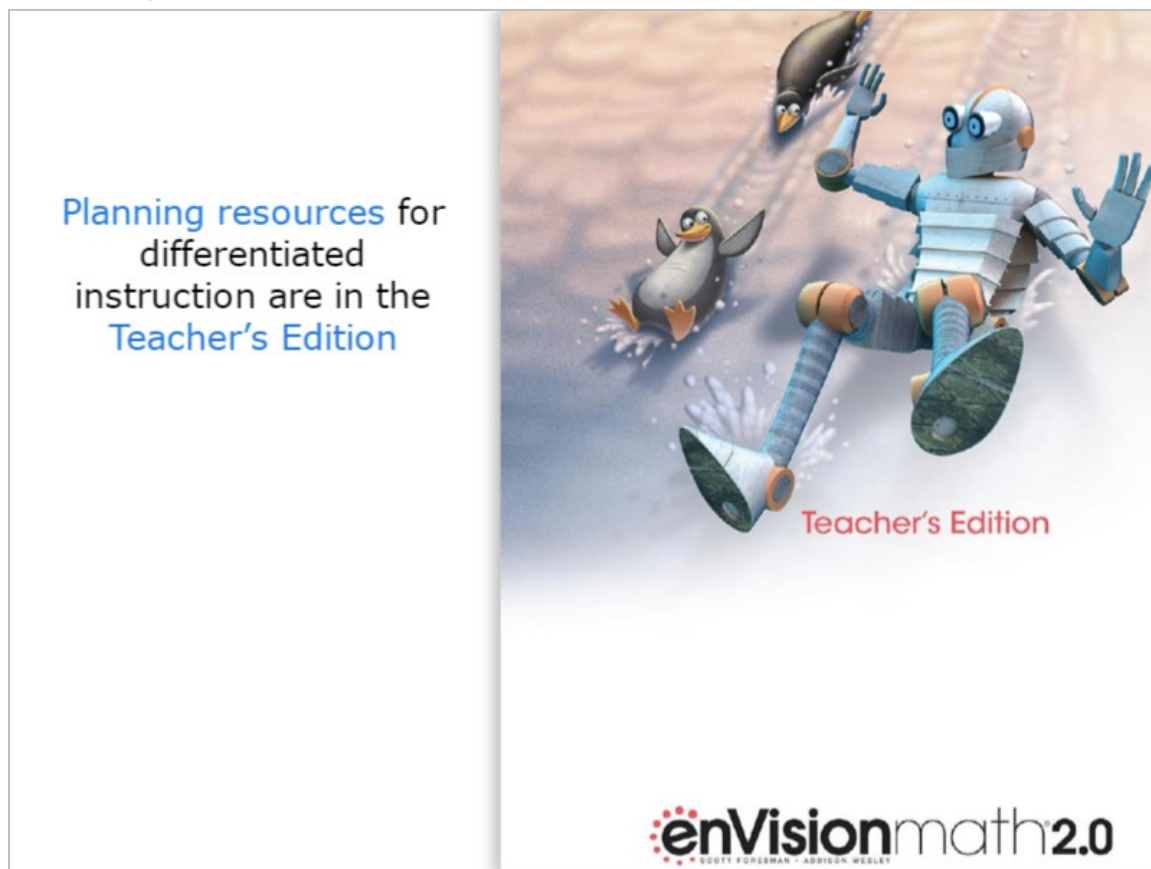
Introduction



Hi, **enVisionmath2.0** teachers!

Let's take a look at the resources for differentiated instruction available within a lesson, after assessments, or any time you need targeted interventions.

Planning for Differentiation



First, let's find the **enVisionmath2.0** planning resources for differentiated instruction.

In the Teacher's Edition, find the Differentiated Instruction page at the beginning of each topic.

This page gives you a topic-level overview of available differentiation resources, categorized into the three Response to Intervention tiers. You'll see Intervention, On-Level, and Advanced icons to help you identify the type of resource available.

On the Language of Math topic overview page, explore the English Language Learners, Math Vocabulary, and Math and Reading resources.

Use these resources in conjunction with the Topic Planner to help you plan differentiated instruction for all of your students.

Differentiation in a Lesson

ENGLISH LANGUAGE LEARNERS

Reading Use visual support to develop background knowledge.
Use with the Visual Learning Bridge on Student's Edition p. 8.

Ask 6 volunteers to stand. Divide students into 3 groups of 2. Give each student a note card labeled Factor. *Factors are the numbers you multiply. How many groups are there? How many are in each group?* On the board

write, "3 groups \times 2 students = 6 in all." *Repeat after me. 3 and 2 are the factors. 6 is the product.*

Beginning Ask students to complete and read aloud the following: "3 and 2 are the _____. 6 is the _____."

Intermediate Ask students to complete and read aloud the following: "In $3 \times 2 = 6$, 3 and 2 are the _____, and 6

is the _____." Ask students to define *factor* and *product* in their own words.

Advanced Ask students to read the following sentences, identify the errors, correct them, and explain why they made the corrections: "3 and 2 are the product. 6 is a factor."

Summarize What are the factors and the product?

Differentiation support for
English Language learners

You'll find differentiation resources and tips in each step of an **enVisionmath2.0** lesson.

In the Lesson Overview, notice the English Language Learners section. Use these strategies to support the development of your students' English language proficiency.

Step 1: Develop: Problem-Based Learning

Grouping
recommendations
support instruction

STEP 1 DEVELOP: PROBLEM-BASED LEARNING

COHERENCE: Engage learners by connecting prior knowledge to new ideas. Students extend their understanding of addition and determine the relationship between multiplication and addition. They will confirm that multiplying or adding equal groups will give them the same results.

BEFORE

- Pose the Solve-and-Share Problem**
Give 20 two-color counters (or Teaching Tool 9) to each student pair if needed.
Make Sense and Persevere Listen and look for students who analyze the numbers in the problem and understand the math they can use to find the total.
- Build Understanding**
What are you asked to find in this problem? [The total number of jars that Ms. Witt bought] *What tools can you use to solve the problem?* [Counters, drawings]

DURING

- Ask Guiding Questions As Needed**
How can you use counters to find the total number of jars? [Use counters to represent each jar of paint in 3 boxes.] *How can you find the total number of jars?* [Multiply 3×5 or add the total number of jars in each box.]

AFTER

- Share and Discuss Solutions**
Start with students' solutions. If needed, project Phyllis's correct work.
- Transition to the Visual Learning Bridge**
Repeated addition involves joining equal groups and is one way to think about multiplication.
- Extension for Early Finishers**
Ms. Witt bought 4 packages of paintbrushes. Three of the packages had 2 brushes. The other package had 3 brushes. How many paintbrushes did Ms. Witt buy? [9 paintbrushes]

Analyze Student Work

Phyllis's Work

○ ○ ○
○ ○ ○
○ ○ ○

$5 + 5 + 5 = 15$

Ms. Witt bought 15 jars of paint.

Rosa's Work

| | | | | |
|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 |

Ms. Witt bought 15 jars of paint.

In Step 1 of each lesson, use the grouping recommendations, including small-group options, to support differentiated instruction as students work on the Solve & Share.

Step 2: Develop: Visual Learning

Guiding questions
help you monitor
students'
understanding

DEVELOP: VISUAL LEARNING

The Visual Learning Bridge connects students' thinking to Solve & Share to important math ideas in the lesson. Use the Visual Learning Bridge to make these ideas explicit. Also available as a Visual Learning Animation Plus at www.pearsoned.com.

Reason Quantitatively
How does the addition equation relate to the counters? [Sample answer: It shows adding 3 groups of 8.]

Be Precise
What does each number in the multiplication equation represent? [Sample answer: The first factor represents the 3 groups, or bags. The second factor represents the 8 goldfish in a bag. The product is the total number of fish.]

Model with Math
Does the picture show the problem? How do you know? [Yes; Sample answer: The picture shows 3 bags of 8 goldfish each.]

Reason Abstractly
Why is a question mark used in the equation? [Sample answer: Because a question mark represents the sum that is not yet known in an addition equation or the product that is not yet known in a multiplication equation.]

Prevent Misconceptions
Students may not understand that if the groups are not equal, addition is the only way to solve the problem. If the three bags of goldfish had 8, 7, and 5 fish in them, each group of fish would be added separately.

In Step 2 of the lesson, ask students the guiding questions in the Teacher's Edition to monitor student understanding and guide your instruction.

Notice the Prevent Misconceptions note. These notes help you clarify concepts, prevent common errors, and support Tier 1 interventions.

Keep an eye out for Error Intervention notes as well. These notes spotlight common student errors and provide suggestions for addressing them.

Throughout this part of the lesson, use your students' responses to determine whether you need to revisit any part of the lesson before administering the Quick Check.

Quick Tip!

The screenshot shows the Savvas Realize interface for enVisionmath2.0 Grade 3. The top navigation bar includes 'realize', 'PROGRAMS', 'CLASSES', and 'DATA'. Below this, the 'Table of contents' is visible, with 'Assess & Differentiate' selected. A list of resources is shown, with the first item, 'Multiplication as Repeated Addition: Quick Check', highlighted by a red box. This item includes a checkmark icon and options to 'Assign', 'Info', 'Teacher Resources', 'Customize', and 'Remediation'. Other resources listed include '1-1: Reteach to Build Understanding Worksheet', '1-1: Reteach to Build Understanding: Answer Key', '1-1: Enrichment Worksheet', '1-1: Enrichment: Answer Key', and '1-1: Center Games'. A blue callout box on the right states: 'You can also assign the Quick Check digitally on Savvas Realize.com. When students take the Quick Check online, their responses are automatically scored, and Savvas Realize will assign differentiated resources based on each student's results. When you're done, click **Next**.'

Step 3: Assess and Differentiate

Use the **QUICK CHECK** on the previous page to prescribe differentiated instruction.

2 **RtI** **1** **Intervention** 0–3 points on the Quick Check **0** **On-Level** 4 points on the Quick Check **A** **Advanced** 5 points on the Quick Check

Intervention Activity 1

Multiplication as Repeated Addition

Materials

- Two-color counters (or Teaching Tool 9)

- Have students use counters to show 4 groups of 3. Draw the groups on the board.
- Write how many counters are in each group. Ask a volunteer to write an addition equation to find the total number of counters.
- Have another student write a multiplication equation to find the total number of counters and then explain what the factors and product mean.

Repeat the activity with other groups of counters; for example, 2 groups of 9 counters or 5 groups of 6 counters.

$3 + 3 + 3 + 3 = 12$
 $4 \times 3 = 12$

Reteach 1

Materials

- Two-color counters (or Teaching Tool 9)

1. Represent 3 groups of 4 counters on the board. How many counters are there?
 $3 \times 4 = 12$

2. Represent 4 groups of 3 counters on the board. How many counters are there?
 $4 \times 3 = 12$

3. Represent 2 groups of 6 counters on the board. How many counters are there?
 $2 \times 6 = 12$

4. Represent 6 groups of 2 counters on the board. How many counters are there?
 $6 \times 2 = 12$

5. Represent 1 group of 12 counters on the board. How many counters are there?
 $1 \times 12 = 12$

6. Represent 12 groups of 1 counter on the board. How many counters are there?
 $12 \times 1 = 12$

7. Represent 3 groups of 4 counters on the board. How many counters are there?
 $3 \times 4 = 12$

8. Represent 4 groups of 3 counters on the board. How many counters are there?
 $4 \times 3 = 12$

9. Represent 2 groups of 6 counters on the board. How many counters are there?
 $2 \times 6 = 12$

10. Represent 6 groups of 2 counters on the board. How many counters are there?
 $6 \times 2 = 12$

11. Represent 1 group of 12 counters on the board. How many counters are there?
 $1 \times 12 = 12$

12. Represent 12 groups of 1 counter on the board. How many counters are there?
 $12 \times 1 = 12$

On-Level and Advanced Activity Centers

Center Games

Students work in pairs or in small groups to toss number cubes and then explain how to find the total. Have students record their explanations as they play the game.

★ On-Level

Toss and Talk

1. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

2. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

3. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

4. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

5. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

6. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

7. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

8. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

9. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

10. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

11. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

12. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

★★ Advanced

Toss and Talk

1. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

2. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

3. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

4. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

5. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

6. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

7. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

8. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

9. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

10. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

11. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

12. Toss two number cubes. Record the numbers. How many more counters do you need to make 10? Write the equation.

Quick Check results help you prescribe differentiation

In Step 3, use the results of the Quick Check to prescribe differentiation.

Use the Intervention Activity, Reteach, On-Level and Advanced Activity Centers, and Technology Center information to find resources to use when you work with small groups.

Use the Leveled Assignment guide to provide differentiated homework to Intervention, On-Level, and Advanced groups.

Quick Tip!

realize.
PROGRAMS
CLASSES
DATA


Grades 3-5 teachers, check out two digital homework options on Savvas Realize with built-in differentiation—

Practice Buddy Online with Learning Aids, powered by MathXL®
Adaptive Homework & Practice Powered by Knewton

Find these assignments on Savvas Realize at the bottom of the list of each lesson's Assess & Differentiate resources.


See MySavvasTraining.com for more information about these digital homework options.

When you're done, click **Next**.

☐


1-1: Practice Buddy: Homework & Practice

Assign Info Customize




☐


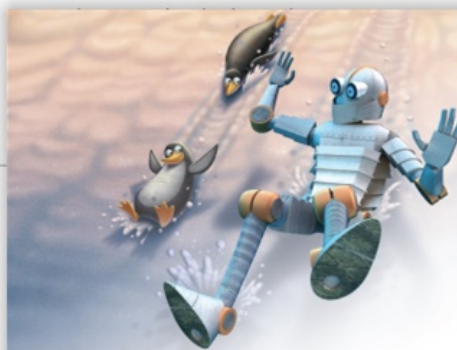
1-1: Adaptive Homework & Practice Powered by Knewton
Powered by Knewton

Assign Info

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Response to Intervention

| DIFFERENTIATION RESOURCES | | | |
|--|-------------------------------|--|--|
| ONGOING INTERVENTION  | During a LESSON | F Prevent Misconceptions F Error Intervention (If... Then...) E Reteaching Set C Learning Aids Online E Higher Order Thinking problems | During the Visual Learning Bridge During Guided Practice Before Independent Practice In Practice Buddy during lesson practice In lesson practice |
| STRATEGIC INTERVENTION  | At the end of a LESSON | F Intervention Activity I Reteach to Build Understanding I Center Games I Math and Science Activity C Problem-Solving Reading Activity J Digital Math Tools Activities A Online Math Games E Leveled Homework and Practice C Learning Aids Online | Teacher time with struggling students Guided reteaching In the On-Level and Advanced Activity Centers In the On-Level and Advanced Activity Centers |
| INTENSIVE INTERVENTION  | As needed ANYTIME | H Intervention Lesson H Intervention Lesson Teacher Support B Visual Learning Animation Plus A Online Math Games C Learning Aids Online C D I Fluency subskills practice | |
| KEY | | | |
| A Online Math Games | | E Student's Edition, eText, ACTIVE-book | |
| B Visual Learning Animation Plus | | F Teacher's Edition, eText | |
| C Practice Buddy Online (Grades 3–5) | | G Problem-Solving Reading Activity Guide | |
| D ExamView® CD-ROM | | H Math Diagnosis and Intervention System | |






Teacher's Edition
Program Overview
Grade 3

enVisionmath2.0



enVisionmath2.0 contains a variety of differentiation resources to help you address the needs of all of your students and provide Response to Intervention (or RtI) for all three tiers. Take a moment to explore the Differentiation Resources chart, which you can find in your *Teacher's Edition Program Overview*.

Differentiation Resources



| DIFFERENTIATION RESOURCES | | | |
|--|-------------------------------|--|--|
| ONGOING INTERVENTION  | During a LESSON | <ul style="list-style-type: none"> F Prevent Misconceptions F Error Intervention (If... Then...) E Reteaching Set C Learning Aids Online E Higher Order Thinking problems | <ul style="list-style-type: none"> During the Visual Learning Bridge During Guided Practice Before Independent Practice In Practice Buddy during lesson practice In lesson practice |
| STRATEGIC INTERVENTION  | At the end of a LESSON | <ul style="list-style-type: none"> F Intervention Activity I Reteach to Build Understanding I Center Games I Math and Science Activity G Problem-Solving Reading Activity J Digital Math Tools Activities A Online Math Games E Leveled Homework and Practice C Learning Aids Online | <ul style="list-style-type: none"> Teacher time with struggling students Guided reteaching In the On-Level and Advanced Activity Centers In the On-Level and Advanced Activity Centers In the On-Level and Advanced Activity Centers In the Technology Center In the Technology Center With differentiated assignments In Practice Buddy during homework and practice |
| INTENSIVE INTERVENTION  | As needed ANYTIME | <ul style="list-style-type: none"> H Intervention Lesson H Intervention Lesson Teacher Support B Visual Learning Animation Plus A Online Math Games C Learning Aids Online C D I Fluency subskills practice | <ul style="list-style-type: none"> Two pages of guided instruction and practice A plan for a short, teacher-guided lesson For use anytime to refresh understanding For use anytime for more reinforcement In Practice Buddy for use anytime For use anytime |

Now, let's learn more about the differentiation resources.



Ongoing Intervention

| ONGOING INTERVENTION  | During a LESSON | F Prevent Misconceptions F Error Intervention (If... Then...) E Reteaching Set C Learning Aids Online E Higher Order Thinking problems | During the Visual Learning Bridge During Guided Practice Before Independent Practice In Practice Buddy during lesson practice In lesson practice |
|--|---|---|--|
| KEY | | | |
| A Online Math Games | E Student's Edition, eText, ACTIVE-book | I Teacher's Resource Masters | |
| B Visual Learning Animation Plus | F Teacher's Edition, eText | J Digital Math Tools | |
| C Practice Buddy Online (Grades 3–5) | G Problem-Solving Reading Activity Guide | | |
| D ExamView® CD-ROM | H Math Diagnosis and Intervention System 2.0 | | |
|  | | | |

Strategic Intervention

| <p>STRATEGIC INTERVENTION</p>  | <p>At the end of a LESSON</p> | <p>I Intervention Activity I Reteach to Build Understanding I Center Games I Math and Science Activity G Problem-Solving Reading Activity J Digital Math Tools Activities A Online Math Games E Leveled Homework and Practice C Learning Aids Online</p> | <p>Teacher time with struggling students Guided reteaching In the On-Level and Advanced Activity Centers In the On-Level and Advanced Activity Centers In the On-Level and Advanced Activity Centers In the Technology Center In the Technology Center With differentiated assignments In Practice Buddy during homework and practice</p> |
|--|---|---|---|
| KEY | | | |
| A Online Math Games | E Student's Edition, eText, ACTIVE-book | I Teacher's Resource Masters | |
| B Visual Learning Animation Plus | F Teacher's Edition, eText | J Digital Math Tools | |
| C Practice Buddy Online (Grades 3–5) | G Problem-Solving Reading Activity Guide | | |
| D ExamView® CD-ROM | H Math Diagnosis and Intervention System 2.0 | | |
|  | | | |

Intensive Intervention

| INTENSIVE INTERVENTION  | As needed ANYTIME | <ul style="list-style-type: none"> H Intervention Lesson H Intervention Lesson Teacher Support B Visual Learning Animation Plus A Online Math Games C Learning Aids Online C D I Fluency subskills practice | <p>Two pages of guided instruction and practice</p> <p>A plan for a short, teacher-guided lesson</p> <p>For use anytime to refresh understanding</p> <p>For use anytime for more reinforcement</p> <p>In Practice Buddy for use anytime</p> <p>For use anytime</p> |
|--|---|---|--|
| KEY | | | |
| A Online Math Games | E Student's Edition, eText, ACTIVE-book | I Teacher's Resource Masters | |
| B Visual Learning Animation Plus | F Teacher's Edition, eText | J Digital Math Tools | |
| C Practice Buddy Online (Grades 3–5) | G Problem-Solving Reading Activity Guide | | |
| D ExamView® CD-ROM | H Math Diagnosis and Intervention System 2.0 | | |
|  | | | |

Quick Tip!



enVisionmath2.0 includes a comprehensive intervention system for RtI: the Math Diagnosis and Intervention System 2.0 (MDIS). Use the diagnostic tests, intervention lessons, and teacher support included in the MDIS to help you identify struggling students' needs and provide effective intervention. When you're done, click **Next**.

Closing



Thanks for exploring how **enVisionmath2.0** resources can help you differentiate instruction and provide targeted intervention.

There's plenty of information on [MySavvasTraining.com](https://www.mysavvas.com) about **enVisionmath2.0** and Savvas Realize when you're ready to learn more!