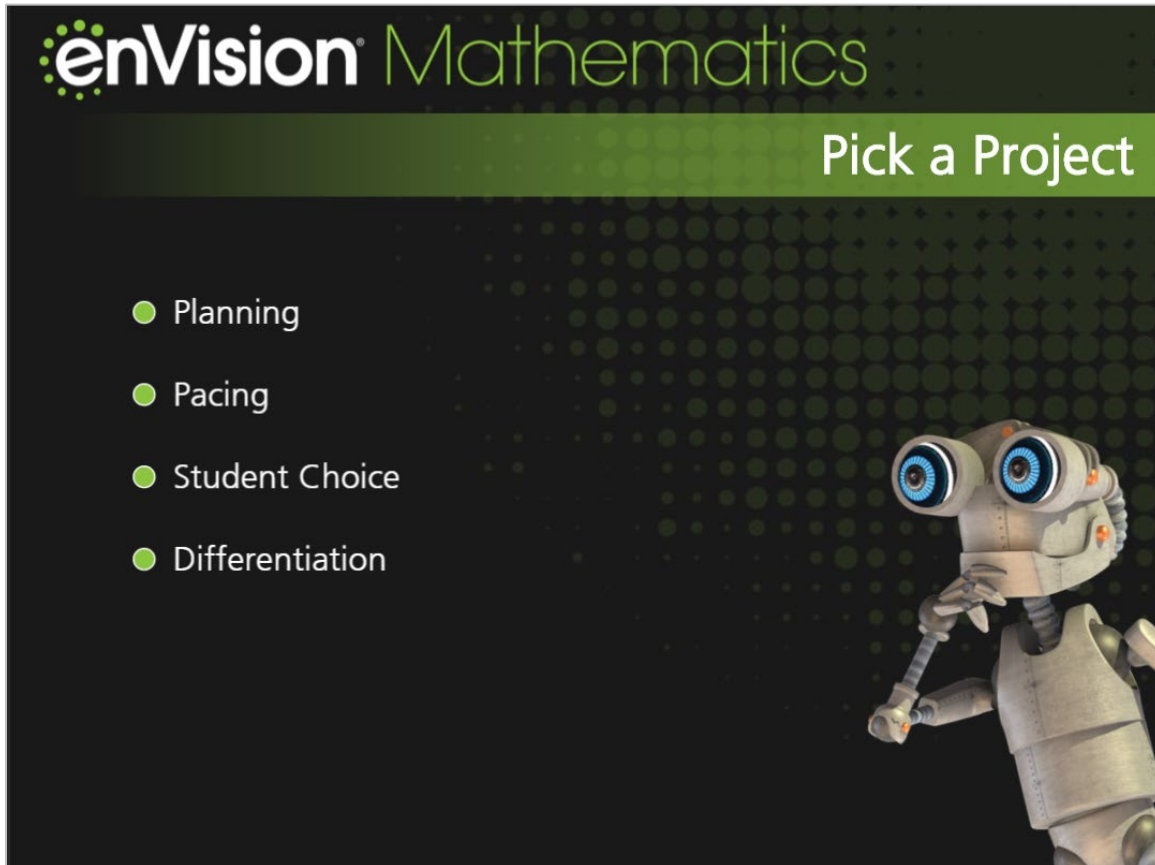


# enVision Mathematics

## Pick a Project

### *Introduction*



Hi, **enVision** teachers! Let's take a look at Pick a Project today. These engaging projects make math inviting and interesting for all students.

We'll look at ways to plan and pace projects during each topic. You'll find that providing student choice and time to work on projects can even help you with differentiated instruction.

**Quick Tip**

	Varied Engaging Contexts	Varied Activity Modalities	Varied Final Products
<b>1A</b>	Buildings	Construct	Poster
<b>1B</b>	Space probes	Build	Model
<b>1C</b>	Neighborhoods	Draw	Picture

Pick a Project provides student choice with varied contexts, modalities, and activities. Students can choose a project by considering these options:

- The contexts (what interests students)
- The modalities (how students like to work)
- The final products (what students like to create)



**Planning and Pacing**

3 project options in odd-numbered topics

4 project options in even-numbered topics

**GRADE 3 CONTENTS** (continued)

In Topics 1–2, students are introduced to multiplication and division. They use patterns to solve multiplication facts.

**TOPIC 1 OVERVIEW**

Planner	1A
Math Background: Focus	1C
Math Background: Coherence	1D
Math Background: Rigor	1E
Math Practices	1F
Effective Teaching Practices	1F
Differentiated Instruction	1G
Build Mathematical Literacy	1H

**TOPIC 1**  
Understand Multiplication and Division of Whole Numbers

Topic Overview	1A
enVision® STEM Project	1
Review What You Know	2
Vocabulary Cards and Activity	2
Pick a Project	3
3-ACT MATH: What's the Point?	4
1-1 Relate Multiplication and Addition	5A
1-2 Multiplication on the Number Line	9A
1-3 Arrays and Properties	13A
1-4 Division: How Many in Each Group?	17A
1-5 Division: How Many Equal Groups?	21A
3-ACT MATH: What's the Point?	
The 3-ACT MATH on page 4 can be used any time after Lesson 1-5.	
1-6 PROBLEM SOLVING Use Appropriate Tools	25A
Fluency Review Activity	29
Vocabulary Review	30
Reteaching	31
Topic Assessment	33–34
Topic Performance Task	35–36
Basic-Facts Timed Tests	36B

You can represent multiplication as an array with equal rows and columns.

$4 \times 5 = 20$

number of rows      number in each row

Students will work on a Pick a Project during each topic. At the start of a new topic, give students time to choose the project that interests them the most.

Your Teacher's Edition has an overview of the projects as well as tips on helping students choose a project. Review the During the Topic section for more information about pacing, grouping, content, project sharing, extensions, and look fors.

Check out the details of each project so you can prepare materials and consider extensions for each project.

You can have students work on projects anytime during the topic that works for you, but review the Topic Planner to see which lessons have time specifically scheduled for projects. Step 3 of each lesson offers a rotation of center activities. The rotation often includes time for students to work on their projects while you pull small groups for differentiated instruction.

**Quick Tip**

**PICKING THE TOPIC**

Topic	Project 1	Project 2	Project 3
1	Project 1	Project 2	Project 3
2	Project 1	Project 2	Project 3
3	Project 1	Project 2	Project 3
4	Project 1	Project 2	Project 3
5	Project 1	Project 2	Project 3

**PICKING THE PROJECT**

**WORKING ON THE PROJECTS**

**Picking a Project**

- **Students pick from 3 or 4 projects** At the start of odd-numbered topics (Topics 1, 3, 5, ...), students pick one of 3 projects as shown on the facing page. At the start of even-numbered topics (Topics 2, 4, 6, ...), students pick one of 4 projects as shown above.
- **Pick a Project page(s) in the Student's Edition** at the start of a topic include engaging questions and photographs about the contexts for the 3 or 4 projects and give the titles of the projects.
- **Pick a Project masters** in the Teacher's Resources Masters provide interesting data related to the context and give instructions for the project.

**Working on the Projects**

- **Pacing** will depend on the student and the project. You may wish to let early finishers pick an additional project.
- **Activity Centers** on the last page of some lessons in the Teacher's Edition provide time for students to work on their projects.
- **Students work alone or together** with a partner or in a small group.
- **Content** in the project relates to the content of the topic and activates students' prior knowledge. As students continue their work on projects during a topic, new math ideas should be incorporated.
- **Project sharing when a project is complete** can involve students presenting to a partner, a small group, or the whole class.
- **Look for** whether students achieved the goal of the project and applied the math they used correctly.
- **Extensions** are suggested in the Teacher's Edition. One extension suggests a continuation of the project. The other extension suggests a way for students who worked separately on the same project to compare or combine their results.

Pacing will often vary depending on the student and the project. See the Pick a Project section of your *Teacher's Edition Program Overview* for more tips about grouping, content, project sharing, and extensions.

**Materials**

**Find Pick a Project materials here:**

- Teacher's Edition
- Student's Edition
- *Teacher's Resource Masters*
- Pearson Realize™

In addition to the planning and pacing information in your Teacher's Edition, there is a Pick a Project page in the Student's Edition. This page has engaging questions and photographs about the projects to help students make a choice.

You can also find Pick a Project masters in *the Teacher's Resource Masters* book and on Savvas Realize™. These masters provide interesting data and give students instructions for completing the projects.

## Differentiation

**STEP 3 ASSESS AND DIFFERENTIATE**

The time allocated to STEP 3 will depend on the teacher's instructional decisions and differentiation needs.

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

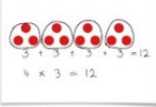
**Intervention** 0-3 points **On-Level** 4 points **Advanced** 5 points

**INTERVENTION ACTIVITY**

**Relate Multiplication and 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.



**TECHNOLOGY CENTER**

**Math Games**


A link to the Power House – Equal Groups to 25 math game to use with this lesson is provided at Pearsonrealize.com.



**ACTIVITY CENTERS**

**Pick a Project**

Have students continue to work on a project introduced on page 3 in the Student's Edition.



**RETEACH TO BUILD UNDERSTANDING**

Worksheet with math problems and diagrams.

**BUILD MATHEMATICAL LITERACY**

Worksheet with math problems and diagrams.

**ENRICHMENT**

Worksheet with math problems and diagrams.

**ADDITIONAL PRACTICE**

Worksheet with math problems and diagrams.

Students can work on their **projects** while you work with **small groups**

As teachers, we know that every student is a unique learner. The Pick a Project design invites all students to be active participants as they work at their individual levels on a project that incorporates their interests and strengths.

During Step 3, Assess & Differentiate, students can work on their projects while you work with small differentiated groups using a variety of other enVision resources.

**Quick Tip**

Research  
into Practice:  
MATHEMATICS

## PROJECTS: Opportunities for Conceptual Connections, High-Interest Tasks, and Differentiation


BY DR. JUANITA COPLEY

It was the end of the school year and it was our last math team meeting. As the math coach, I had asked everyone to bring one example of how teachers in their grade level had "engaged students in meaningful learning through individual and collaborative experiences," a teaching and learning principle we had studied during the year (NCTM 2014). Their reflections are very exciting.


*"Our roller coaster project was fantastic! It all started with three boys making a model of a roller coaster, using a marble for the coaster and cardstock for the track. By the end of the month, fifteen teams entered the contest for the fastest coaster (inches per second), the coaster that traveled the greatest distance (measured in inches), and the coaster that traveled for the longest time (measured in seconds). Lots of meaningful practice measuring and calculating!"*

*"Several of my artistically-oriented students covered large squares with right triangles at a geometry center. When they displayed their work, others contributed similar squares, resulting in a large quilt hanging outside of our classroom and a question for everyone: How many triangles can you find?"*

*"My example illustrates engagement for just one special student. Jonathan was a quiet child and was not easily engaged in math activities. When he mentioned that he had a new puppy, I invited him to describe the puppy using as many numbers as he could and to share the results. All of us were impressed"*



For more information, read the article, *PROJECTS: Opportunities for Conceptual Connections, High-Interest Tasks, and Differentiation* by enVision author Dr. Juanita Copley which is available for download on the Getting Started tab of Pearson Realize.



**Closing**



Thanks for learning more about Pick a Project; a fun and engaging way to reach all students and get them excited about math!

Continue your learning journey here on My Savvas Training to learn more about **enVision** Mathematics and Savvas Realize.