EnVision Math Unit Lesson Plan		Common Core Standards: 4.NBT.5; 4.OA.3
Grade Level: Fourth Grade	**Topic 8:** Developing Fluency: Multiplying by 2-Digit Numbers	

Instructional Emphasis: Number and Operations in Base Ten	Essential Questions:
Big Ideas: • 8-1: The expanded algorithm for multiplying by two-digit numbers is just an extension of the expanded algorithm for multiplying with one-digit numbers. • 8-2: Making an array with place-value blocks provides a way to visualize and find products using an expanded algorithm. • 8-3: The standard algorithm for multiplying a two-digit number by a multiple of 10 is just an extension of the algorithm for multiplying multi-digit numbers by a one-digit number. • 8-4: The standard multiplication algorithm is a shortcut for the expanded algorithm. Regrouping is used rather than showing all partial products. • 8-5: Sometimes the answer to one problem/question is needed to find the answer to another problem/question.	• How can arrays help you multiply 2-digit numbers? (8-1) • How can you record multiplication of 2-digit numbers? (8-2) • How can you find a product of a 2-digit number and a multiple of ten? (8-3) • How do you multiply 2-digit by 2-digit numbers? (8-4) • How do you use the answer from one question to answer a second question? (8-5)

Lesson 1: Arrays and Multiplying 2-Digit Numbers	Lesson 2: Arrays and an Expanded Algorithm	Lesson 3: Multiplying 2-Digit Numbers by Multiples of 10	Lesson 4: Multiplying 2-Digit Numbers by 2-Digit Numbers	Lesson 5: Problem Solving: Two-Question Problems
Vocabulary: Objective: Students will use arrays to multiply two-digit numbers by two-digit numbers to find the product. Materials: 1/4-inch Grid Paper (Teaching Tool 5) Colored Pencils or Crayons Colored Chalk Content Reviewed: Addition; Problem Solving; Comparing Numbers; Division; Addition Subtraction Standard: 4.NBT.5	Vocabulary: Objective: Students will use an expanded algorithm to multiply two-digit numbers by two-digit numbers to find the product. Materials: Centimeter Grid Paper (Teaching Tool 4) Colored Pencils or Crayons Colored Chalk Content Reviewed: Ordering Numbers; Multiplication; Mental Math; Division; Patterns Standard: 4.NBT.5	Vocabulary: Objective: Students will use grids and patterns to multiply 2-digit numbers and multiples of 10. Materials: ¼-in Grid Paper (Teaching Tool 5) (3 sheets per student) Tape Content Reviewed: Partial Products; Number Patterns; Estimation; Multiplication; Problem Solving Standard: 4.NBT.5	Vocabulary: Objective: Students will use partial products to multiply 2-digit numbers by 2-digit numbers and find the products. Materials: Content Reviewed: Place Value; Estimating Differences; Estimating Products; Multiplication; Problem Solving Standard: 4.NBT.5	Vocabulary: Objective: Students will solve two-question problems. Materials: Content Reviewed: Choose the Operation; Model Division; Ordering Numbers; Multiplication; Mental Math; Multiple-Step Problem Standard: 4.NBT.5; 4.OA.3
Assessment	**Assessment**	**Assessment**	**Assessment**	**Assessment**
Topic 8 Introduction Daily Common Core Review Problem-Based Interactive	Daily Common Core Review Problem-Based Interactive Learning	Daily Common Core Review Problem-Based Interactive Learning	Daily Common Core Review Problem-Based Interactive Learning	Daily Common Core Review Problem-Based Interactive Learning

Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework	Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework Topic 8 Assessment