Math & Science Collaborative Lesson Plan

Northwest Educational
Service District 189
Together We Can

Lesson Title: Two digit Multiplication

Unit Learning Target (Standard/Performance Expectation(s))	**4.1.C**	*CCSSM 4.NBT.5*

Represent multiplication of a two-digit number by a two-digit number with place value models.

Building Block or Lesson Learning Target: Multiply a 3-digit number by a 2-digit number using expanded notation form versus the standard notation form.	**Student Success Criteria:** Students can represent multiplication of a two-digit number by a two-digit number with proper place value models.
Previous Lesson Learning Target: Represent the multiplication of a 3 digit by a 1 digit problem in expanded notation form.	

Target Introduction/ Thinking Question *

What would be a close answer or estimate for 28 times 15?

Lesson Progression (Flow) with Talk-Structures (Student Discourse)	Key terms for this lesson	Formative Task or Question*

Talk to your table group about how you can estimate this 28 times 15 problem.
 	
Students discuss with their group how to estimate.
 	
Model how we know the approximate value we are multiplying.   (Landmark #)
 	
Using whiteboards and markers, students model the needed steps.
 	
Teacher models the ones column multiplication and students practice.
 	
Teacher demonstrated zero place holder and models the 10s column
    multiplication using a different color and students practice on their white
    boards.
 	
Teacher models the addition of the multiplicands and students practice on their
    white boards.   Then check the work and complete the problem
 	
Students practice on pairs on a variety of different additional problems.
 	
Students compare their work in small groups.
	place value, digits, distributive property, factors, columns skip counting, expanded form ones column tens column hundreds column	*Designed to elicit student misconception(s)*
		How many tens are there in the problem?
		
		What tens would you use for your estimate?

	Forms of Student Discourse to include: Student to Teacher Student to small group Student to student Large group discussion	
Lesson Closure Teacher and class review the processes and discuss the differences in the processes. Teacher assigns exit problems.	**Exit Task*** Successful completion of two multiplication problems of 3-digit by 2-digit numbers.	

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Do the Math for the Thinking Question

 If   30 x 10 = 300   30 x 20 = 600   So 30 x 15 = 450

Therefore, my answer should be slightly less than 450

$$20 \times 5 = 100$$
$$20 \times 10 = 200$$
$$8 \times 5 = 40$$
$$8 \times 10 = 80$$
$$420$$

Lesson Anticipated Misconceptions:

Understanding that 28 x 15 is really (20 x 5) plus (20 x 10) plus (8 x 5) plus (8 x 10)

Lesson Instructional Adjustment(s) (if needed)
Tied to common misconception(s)

Diagram problems

Manipulatives and materials to include and have ready to support the lesson *

Color tiles
Graph paper
White boards and dry erase markers

* Opportunity for formative assessment