Teacher: Cirignani/Lehner   **Grade:** 4th

Subject/Content Area: Math   **Unit:** Topic 4

CCSS	**Unit standard:** 4.NBT.B.5: Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculations by using equations, rectangular arrays, and/or area models.
Essential Questions	1. What place value patterns can be used to mentally multiply a 2-digit number by a multiple of ten? 2. How can you use an array or area model to multiply? 3. How can estimating help you solve a two digit by two digit multiplication problem mentally?

MONDAY 4-1	**Objective**	The students will be able to use mental math strategies to multiply 2-digit by 2-digit multiples of ten. The students will be able to decode word problems in order to find a strategy for solving the task.

208	**Do Now/ Warm Up:** Multiplication.com or IXL
	
	Mini-Lesson (I do): Give the students a copy of the problem (on page p.172).
	  1. Read it to read it.
	  2. Figure out what we are looking for--actually is asking us 3 separate questions (adults under 65 in 20 days, children in 30 days & adults over 65 in 50 days)
	  3. Record notes
	  4. model how to draw the problem in pictures.
	Make sure to put a unit on the people and days.
	
	Guided Practice (We do): p. 171 solve and share Read problem in head and go over note taking with whole class. **Model how to take notes.** Draw picture by yourself then solve. Then compare with partner.
	
	Assessment: Exit slip on paper 60X40= _____, 500X70=_____, Word problem, we want to see a picture, equations, and solution make word problem similar to the previous problems

Differentiation	**Got It!:** Come up with your own word problem & solve it using the strategies we learned today. If time we will have them switch with another student who came up with their own, too. **Needs Work:** Meet with Cirignani/Lehner **IEP Acc./Mods:** Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis.
Homework	P.175 or 176 depending on Quick Check results--write in groups at end of day

TUESDAY 4-2	Objective	The students will be able to use models and properties of operations to multiply 2-digit by multiples of ten.
208		**Do Now/ Warm-Up:** Solve and share p.177 **must include picture** (Read it once, Read it twice and annotate, Read it three times to solve, Draw picture and solve) **Math Talk:** 40 x _____= 2,800 **Mini-Lesson (I do):** Visual Learning Video: Using models to multiply 2-digit numbers by multiples of 10 Do not draw PV block model--discuss the visual but only draw area model and have students draw along too. Discuss why we break apart 24 into 20 & 4 **Guided Practice (We do):** 30 x 27-area model **Independent Practice (You do):** Practice Buddy on pearson realize 4-2 **be prepared to cut them off for the quick check **Assessment:** Quick Check 4-2
Differentiation		**Got It!:** **Needs Work:** **IEP Acc./Mods:** Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis.
Homework		**P.181--must draw an array or area model for full credit**
WEDNESDAY 4-3	**Objective**	The students will be able to estimate products for 2-digit by 2-digit multiplication problems by rounding the factors to multiples of ten.
208		**Do Now/ Warm Up:** Multiplication.com **Math Talk:** Ms. Lane wanted to buy 67 pencils that each cost $1. 43. If she were to estimate how much money she needed so that she had **more than enough money**, how much money would she need? ***Talk about over vs. under estimates*** **Mini-Lesson (I do):** 87 x 12, 87→ 90, 12→ 10, 90 x 12 & 29 x 37 Explain that we want to round both numbers because the rounded number will be simpler to do using mental math. Round to the highest place value for the same reason--the numbers will have more zeros making the task into a mental math question. Like last unit, doing these quick estimation checks is a great way to check if your answer is reasonable. However, you can round to any place value that you want and only round one of the numbers for an extra challenge but right now we are focusing on simplifying the math tasks. **Guided Practice (We do): on paper** Game**:** partner 1 rolls 2 dice and rounds to the tens place. Partner 2 writes the numbers in a multiplication problem and rounds. Then switch. **Independent Practice (You do):** if time, page 185 **Assessment:** collect game sheets
Differentiation		**Got It!:** High level kids: http://cd1.edb.hkedcity.net/cd/maths/en/ref_res/material/NA_e/NA03_e.pdf over vs,

		under estimate practice
		Needs Work: Meet with Ms. Cirignani/Lehner/ Lane
		IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis.
Homework	**p.187**	
THURSDAY 4-5	**Objective**	**The students will be able to use arrays, place value, ~~partial products~~, and properties of operations to multiply two 2-digit numbers.**
208	**Do Now/ Warm Up:** Solve & share pg. 189 share with partner when finished	
	Mini-Lesson (I do): Give students- 14 seats and 23 rows. Ask them to draw a visual for this and then turn and talk with a partner about what they think the question to come might be asking for. P.195 flip chart and instruction (A theater contains 14 rows of seats with 23 seats in each row. How many seats are in the theater?) Remember to ask students to read 3 times (once to read it, 2nd to figure out what we are looking for, 3rd time to take notes and draw what we read)	
	Guided Practice (We do): 16x34 & 55x24 together	
	Independent Practice (You do): p.197	
	Assessment: Quick check: 17x22, 46x32	
Differentiation	**Got It!:** IXL/Khan Academy/multiplication.com	
	Needs Work: Meet with Ms. Cirignani/Lehner/ Lane	
	IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis.	
Homework	**p.199**	

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Essential Questions	1. What place value patterns can be used to mentally multiply a 2-digit number by a multiple of ten? 2. How can you use an array or area model to multiply? 3. How can estimating help you solve a two digit by two digit multiplication problem mentally?

MONDAY 4-6	**Objective**	The students will be able to use the distributive property and an area model to multiply two 2-digit numbers.
208	**Do Now/ Warm Up:** p.201 **Mini-Lesson (I do):** Area Model review. **Independent Practice (You do):** Give directions for group activity. Students will be given an area of a house. They can break up the house into smaller rooms. Must solve for the area of each room (must have at least 5 rooms) and then solve for the area of the entire house. Struggling students will complete the activity with Ms. Lehner/Cirignani at front carpet all together as a group. **Assessment:** Activity	
Differentiation	**Got It!:** IXL/Khan Academy/multiplication.com **Needs Work:** Meet with Ms. Cirignani/Lehner/ Lane **IEP Acc./Mods:** Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis.	
Homework	**p.205**	

TUESDAY 4-7	**Objective**	The students will be able to use place value and partial products to calculate products of 2-digit by 2-digit multiplication problems.
208	**Do Now/ Warm Up:** IXL or muliplcation.com **Math Talk:** 14x10 **Mini-Lesson (I do):** Video 4/7 Visual learning use partial products to multiply by 2-digit numbers demonstrate how the product of each of the 4 sections inside the area model are the partial products and when added together they are the product of the entire task. **Guided Practice (We do):** 35x82 have students solve and review what the 4 partial products are before adding them all up (students draw array on their own) 43x55 **no array for the second problem.**	

	Independent Practice (You do): p.209
	Assessment: 4-7 Quick check
Differentiation	**Got It!:** IXL/Khan Academy/multiplication.com
	Needs Work:
	IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis.
Homework	**p.211**

THURSDAY High Level Task	Objective	The students will be able to use arrays, place value, ~~partial products~~, and properties of operations to multiply two 2-digit numbers.

208	**Do Now/ Warm Up:** multiplication.com
	Mini-Lesson (I do): Give directions on high level group task:
	   1. Explain that we are having a fancy class party and the students need to give us the shopping list.
	   2. Review overestimating vs. under estimating (because when dealing with money you always want to have more than enough money)
	   3. Each group will be responsible for bringing 4 items to the party.
	   4. Explain the budget for each group (may or may not have one depending on if the class is ready for the challenge)
	   5. There will be no wrong answer for the amount of each item each group brings as long as it fits within the budget.
	   6. Each group will be given their list of options (pictures) with the prices, an organized sheet of paper to work on and a final shopping list paper to turn in as a group.
	   7. The groups will be: silverware, decorations, desserts, dinner, drinks, party favors and appetizers.
	   8. Can solve this task any way you choose just be clear with showing your work.
	
	Assessment: Participation in high level task. Keep track of those who are on task/making connections/speaking mathematically. Grade whole group work.

Differentiation	**Got It!:** IXL/Khan Academy/multiplication.com **Needs Work:** **IEP Acc./Mods:** Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis.
Homework	**None**

Weekly Snapshot
Week 3

Teacher: Cirignani/Lehner	**Grade:** 4th
Subject/Content Area: Math	**Unit:** Topic 4

CCSS	**Unit standard:** 4.NBT.B.5: Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculations by using equations, rectangular arrays, and/or area models.	
Essential Questions	1. What place value patterns can be used to mentally multiply a 2-digit number by a multiple of ten? 2. How can you use an array or area model to multiply? 3. How can estimating help you solve a two digit by two digit multiplication problem mentally?	
MONDAY 4-8	**Objective**	The students will be able to use the expanded and standard algorithm to multiply 2-digit by 2-digit numbers. Estimate to check if products are reasonable.
208	**Do Now/ Warm Up:** Solve & Share pg. 219 **Mini-Lesson (I do):** teach the standard algorithm for 2 digit by 2 digit multiplication (starting with examples with a multiple of 10, then move to examples with no multiples of 10) TALK ABOUT HOW TO CHECK IF ANSWER IS REASONABLE--ESTIMATE AND THEN MULTIPLY **Guided Practice (We do):** 1 problem on their own with a multiple of 10, discuss. 1 problem on their own without a multiple of 10, discuss. **Independent Practice (You do):** 4-8 Practice Buddy **Assessment:** 4-8 Quick Check	
207 Revisions		
Differentiation	**Got It!:** IXL/Khan Academy/multiplication.com **Needs Work:** **IEP Acc./Mods:** Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis.	
Homework	**p.217**	
TUESDAY 4-9	**Objective**	The students will be able to use the expanded and standard algorithm to multiply 2-digit by 2-digit numbers.
208	**Do Now/ Warm Up:** multiplication.com/IXL **Math Talk:** 37x24 Push for all of the different strategies taught (distributive/area model, partial products, standard) **Guided Practice (We do):** Word problem practice p. 221. Pick 1-2 depending on where students are at. Model how to complete next activity and make your own word problems. **Independent Practice (You do):** Make 2 2 digit by 2 digit multiplication word problems. You must solve them first to make sure what you are asking makes sense. Once you are finished raise hand and we will switch your problems with other students and you will solve each others. **Assessment:** Completed p. 221	
Differentiation	**Got It!:** IXL/Khan Academy/multiplication.com	

	Needs Work:	
	IEP Acc./Mods: Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis.	
Homework	**P. 224**	
WEDNESDAY 4-10/4-11	**Objective**	The students will be able to make sense of problems and persevere in solving them.
208	**Do Now/ Warm Up:** Solve & Share p. 231--go over different answers **Guided Practice (We do):** Admission to a science museum is $22 for an adult. The cost for a child is $5 less than an adult. What would the total cost of admission for 12 adults and 15 children be? **Independent Practice (You do):** Questions 22 & 23 on p. 230 (word problems) **Assessment:** Quick Check TBD- will be on word problems	
Differentiation	**Got It!:** IXL/Khan Academy/multiplication.com **Needs Work:** **IEP Acc./Mods:** Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards on a daily basis.	
Homework	**p.229**	
THURSDAY	**Objective**	
208	**Do Now/ Warm Up:** Vocabulary cards (product, partial product, area model, array, distributive property, standard method/algorithm, properties) Hannah & Emma will be back at the Hyatt for classes, mentor teacher may plan review day or we will provide her with review bingo for the students. **Math Talk: TBD** **Mini-Lesson (I do): TBD** **Guided Practice (We do): TBD** **Independent Practice (You do): TBD** **Assessment:**	
Homework		

FRIDAY	Objective	
208	*Independent Practice (You do): Test* *Assessment: Test*	
207 Revisions		
Differentiation	**Got It!:** **Needs Work:** **IEP Acc./Mods:** Give verbal directions in clearly stated steps. Provide extra examples when teaching new vocabulary/concepts. Reinforce assignments with verbal instruction. Explain directions and give concrete examples. Focus on one concept at a time. Walk by student's desk to check for accuracy every 5 minutes. Provide visual cues and guides. Provide motivation and verbal rewards daily.	
Homework	None	