Teacher: ROBINSON, HALL Date: 10/14-18/2024 Subject: Math Period:

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| **Alabama CCRS/COS: Standards** 11. \*Find the product of two factors (up to four digits by a one-digit number and two two-digit numbers), using strategies based on place value and the properties of operations. a. Illustrate and explain the product of two factors using equations, rectangular arrays, and area models. |

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| **Outcome(s)/Objective(s) Standards:****Mathematical Practices:** Ƒ M.4.11.3: Multiply within 100, using strategies such as properties of operations. Ƒ M.4.11.4: Multiply within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 x 5 = 4=, one knows 40 ÷ 5 = 8). Ƒ M.4.11.5: Recall products of two one-digit numbers NUMBER. |

**ACTIVATING LEARNING STRATEGY/STRATEGIC TEACHING STRATEGIES:**

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|  [ ]  | KWL |  |  [ ]  Word Splash |   | [ ]  Anticipation Guide |  | [ ]  Lecture |  | [ ]  Graphic Organizer/VLT |   | [ ]  Poem, Rhymes, etc. |
|  [ ]  | Survey |   |  [ ]  Possible Sentence |   | [x]  Think-Pair-Share |  | [ ]  Reading |   | [x]  Pictograph |   | [ ]  Acronyms/Word |
|  [ ]  | First Word |   |  [ ]  Concept Map |  | [x]  Vocabulary Overview |   | [ ]  Model |   | [ ]  Diagram |   | [ ]  Other: \_\_\_\_\_\_\_\_\_\_\_\_ |
|  [ ]  |  Word Map |   |  [ ]  Frayer Model |  | [ ]  Daily Language Practice (DLP)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |   | [ ]  Hands-on |   | [x]  Mind Map/Visual Guide |  |  |
|   |   |   |   |   |   |   |   |   |   |   |   |
| **Engagement Strategies:**[x]  - Collaborative Group Work [ ]  - Writing to Learn [ ]  - Literacy Groups [ ]  Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [ ]  - Questioning Techniques [ ]  - Scaffolding Text [ ]  -Classroom Talk [x]  - T.W.I.R.L. |
| **Technology Integration:** [x]  Smart board [ ]  Document Camera [ ]  IPADS [ ]  Mac Books [x]  Computers [ ]  Kindles [ ]  Interactive Tablets [ ]  Digital/ Video Camera [ ]  Clickers [ ]  ACCESS [x]  Computer Program:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [ ]  Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  |

**This Week’s Vocabulary:**

Compatible numbers

**PROCEDURAL CONTENT (application)**

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| --- | --- | --- | --- | --- | --- |
|  | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| ***Essential Question*** | * How can you use mental-math strategies to multiply 2-digit multiples of 10 by 2-digit multiples of 10.
 | How can you use models and properties of operations to multiply 2-digit numbers by multiples of 10? | How can you use rounding or compatible numbers to estimate products of two 2-digit numbers? | How can you use arrays, place value, partial products, and properties of operations to multiply two 2-digit numbers? | * How can you use the Distributive Property and an area model to multiply two 2-digit numbers?
 |
|  ***I Can Statement***  | I CAN USE MENTAL MATH STRATEGIES TO MULTIPLY 2 DIGIT MULTIPLES OF 10 BY 2-DIGIT MULTIPLES OF 10. | I CAN USE MODELS AND PROPERTIES OF OPERATIONS TO MULTIPLY 2-DIGIT NUMBERS BY MULTIPLES OF 10. | I CAN USE ROUNDING OR COMPATIBLE NUMBERS TO ESTIMATE PRODUCTS OF TWO 2-DIGIT NUMBERS.  | I CAN USE ARRAYS, PLACE-VALUE, PARTIAL PRODUCTS, AND PROTERTIES OF OPERATIONS TO MULTIPLY TWO 2-DIGIT NUMBERS. | I CAN USE THE DISTRIBUTIVE PROPERTY AND AN AREA MODEL TO MULTIPLY TWO 2-DIGIT NUMBERS. |
| *Preview* *(Before)**Warm-up- Hook* | SAY SOMETHINGNumber StringCalendar MathBell RingerPrior Knowledge Real World Scenarios Pose the Solve and Share ProblemExample | SAY SOMETHINGNumber StringCalendar MathBell RingerPrior Knowledge Real World Scenarios Pose the Solve and Share ProblemExample | SAY SOMETHINGNumber StringCalendar MathBell RingerPrior Knowledge Real World Scenarios Pose the Solve and Share ProblemExample | SAY SOMETHINGNumber StringCalendar MathBell RingerPrior Knowledge Real World Scenarios Pose the Solve and Share ProblemExample | Review and Model LessonNumber StringCalendar Math |
|  *Instruction* *(During)*I Do-We Do-Y’all Do-You Do- | Observe Student at WorkModel ProblemGuided PracticeIndependent PracticeShare and show | Observe Student at WorkModel ProblemGuided PracticeIndependent PracticeShare and show | Observe Student at WorkModel ProblemGuided PracticeIndependent PracticeShare and show | Observe Student at WorkModel ProblemGuided PracticeIndependent PracticeShare and show | Assess the students |
|  Small Group | PROBLEM SOLVING AND ACAP INTERVENTION | Centers: Fluency/Skill- Envision pg.311Teacher TableWord WorkTechnology | Centers: Fluency/Skill- Envision pg.311Teacher TableWord WorkTechnology | Centers: Fluency/Skill- Envision pg.311Teacher TableWord WorkTechnology | PROBLEM SOLVING AND ACAP INTERVENTION |
| *After/Homework* | GRAND CONVERSATION Solve the Problem Pad, Kahoot, BookletProdigy, Practice and Study Notes and Problems | GRAND CONVERSATIONSolve the Problem Pad, Kahoot, BookletProdigy, Practice and Study Notes and Problems | GRAND CONVERSATION Solve the Problem Pad, Kahoot, BookletProdigy, Practice and Study Notes and Problems | GRAND CONVERSATION Solve the Problem Pad, Kahoot, Booklet Prodigy, Practice and Study Notes and Problems MATH PLC | STUDENTS CONTINUE TESTINGINTERACTIVE ACTIVITY/EXPERIMENT |
| **Assessment (Formative):** [x] Class work [x] Notebook [x] Homework [x] quizzes [x] Tests [ ] Computer activities [x] Collaborative work [ ]  Project/ Other: |

**Assessment (Summative):** [ ] Quizze**s** [ ] T**ests** [ ] Group activities **[ ]** Project based **[ ]** Other:

**Summarizing****:** [ ]  3-2-1 [ ]  Ticket out the Door [ ]  The Important Thing [ ]  Cue Cards [x]  Teacher Questions [ ]  Student Summary [x]  Other:

**Lesson Plan: Multi-Digit Multiplication**

**Grade Level:** 4
**Subject:** Math
**Topic:** Multi-Digit Multiplication
**Duration:** 2-3 class periods

**Objectives:**

* Students will understand the concept of multi-digit multiplication.
* Students will be able to multiply multi-digit numbers using the standard algorithm.
* Students will apply multiplication to solve real-world problems.

**Materials Needed:**

* Whiteboard and markers
* Graph paper
* Worksheets with practice problems
* Visual aids (e.g., multiplication charts)
* Real-world problem scenarios for group activities

**Day 1: Introduction to Multi-Digit Multiplication**

1. **Warm-Up (10 minutes):**
	* Review basic multiplication facts (single-digit).
	* Quick mental math exercises to build confidence.
2. **Direct Instruction (20 minutes):**
	* Introduce the concept of multi-digit multiplication.
	* Demonstrate the standard algorithm step-by-step on the board:
		+ Multiply the bottom number by each digit of the top number.
		+ Emphasize lining up numbers properly.
		+ Discuss the importance of place value.
3. **Guided Practice (15 minutes):**
	* Work through a few example problems as a class.
	* Encourage students to ask questions and clarify any misunderstandings.
4. **Independent Practice (15 minutes):**
	* Hand out worksheets with multi-digit multiplication problems.
	* Circulate the room to assist students who may need extra help.
5. **Closure (5 minutes):**
	* Recap what was learned and highlight the importance of multi-digit multiplication.

**Day 2: Application and Problem Solving**

1. **Warm-Up (10 minutes):**
	* Review homework and address any common errors.
2. **Group Activity (25 minutes):**
	* Divide students into small groups.
	* Present them with real-world problems that require multi-digit multiplication (e.g., calculating total items, budgeting).
	* Each group will work together to solve a problem and present their solution.
3. **Independent Practice (15 minutes):**
	* Provide additional practice problems with varying levels of difficulty.
	* Include word problems to enhance critical thinking.
4. **Closure (10 minutes):**
	* Have groups share their solutions.
	* Discuss different strategies used and reinforce the importance of teamwork in problem-solving.

**Day 3: Assessment and Review**

1. **Warm-Up (10 minutes):**
	* Quick review game or quiz on multiplication facts.
2. **Assessment (30 minutes):**
	* Administer a quiz covering multi-digit multiplication concepts and problem-solving skills.
3. **Review and Reinforcement (15 minutes):**
	* Go over quiz answers as a class.
	* Discuss common mistakes and clarify any lingering questions.
4. **Closure (5 minutes):**
	* Highlight key takeaways from the topic.
	* Preview the next topic to generate interest.

**Differentiation:**

* **For advanced learners:** Provide challenging word problems or projects that require additional steps or concepts.
* **For struggling students:** Offer one-on-one support, use manipulatives, or provide simpler problems to build confidence.

**Assessment:**

* Formative: Participation in discussions, completion of practice worksheets.
* Summative: Quiz or test at the end of the topic.