



**Instructor's Name:** Cassie Schroer

**Subject :** Math

**Grade:** 3

**Title of Lesson:** Multiplication and Division Fact Families

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**Materials and Resources (including technology):** Smartboard presentation

**Standard(s) the Lesson will Address:**

3.1.2.3: Represent multiplication facts by using a variety of approaches, such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line and skip counting. Represent division facts by using a variety of approaches, such as repeated subtraction, equal sharing and forming equal groups. Recognize the relationship between multiplication and division.

3.1.2.4: Solve real-world and mathematical problems involving multiplication and division, including both "how many in each group" and "how many groups" division problems.

**Objective:**

Students will be able to use fact triangles and the facts table to generate multiplication and division fact families.

Students will look for patterns on the fact table.

Students will explore the inverse relationship between multiplication and division fact families.

Students will apply the turn-around rule.

**Vocabulary:**

**Content:** Fact families, Multiplication/Division facts table

**Pre-Assessment Plan (if any):** "Students can you tell me what you think a fact family is for multiplication and division. I know you have learned about fact families in addition and subtraction so can you use what you know to relate it to multiplication and division."

**Input: (SCRIPTED)**

1. Rocket math
2. Pre-assessment question
3. "Can you name the fact family" Slide 5

4. Slide 6: "Can you see any patterns on the table?"
5. Talk about the different rows/columns and how the pattern is throughout
  - a. Use the cover sheet on the slide to only show one row at a time
  - b. Talk about each row and uncover each row as you go along
  - c. Have students talk about the different patterns they see
6. Go through the slides 10-14 and talk about the fact triangles on those slides
7. Have students cut their fact triangles

### **Guided Practice (Formative Assessment):**

Math boxes

Shown on slide 15

### **Closure: (SCRIPTED):**

Review what fact families are for multiplication and division.

**Independent Practice/Summative Assessment:** (How will students extend or apply their learning OR demonstrate mastery? If demonstrating mastery, include criteria for evaluation (checklist, rubric, sample, etc).)

Workbook pages: Start working together and students will be able to work independently

Shown on slides: 16 and 17

**Accommodations & differentiation for learners:** (For all practice lesson assume that you have at least one student in each category: attention/focus issue, language processing issue, sensory issues)

For the two students with IEPs for reading a teacher will help them to read the pages in the workbook for the independent practice time.

**Multiple Intelligences Addressed:** Address at least ONE of these intelligences: verbal linguistic, musical/rhythmic, visual/spatial, intrapersonal, **logical/mathematical**, interpersonal, bodily/kinesthetic, naturalistic

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## **AFTER TEACHING THE LESSON:**

Respond with *professional insights that go beyond superficial considerations*.

- As I reflect on the lesson, to what extent were students productively engaged?
  - The students were all engaged
  - Questions were being asked so the students had to be listening so they could answer the questions
- To what extent did the students learn what I intended? Were instructional objectives met?
  - Yes the objectives were met all of the students passed the exit ticket
  - I was able to see that the students learned the new material
- To what extent did I alter my objectives or instructional plan as I taught the lesson? Why?
  - I adjusted time based on how fast or slow the students were understanding the material
  - I gave more time for cutting because some students were slower than others
- To what extent did I practice effective classroom management strategies? What issues do I need to address when I teach again?
  - I kept the students engaged by asking a lot of questions and making the learning more interesting by the way I talked about the material
- To what extent did I provide closure to the lesson?
  - I ended with an exit ticket to see if the students understood what was taught during the lesson
  - Each student had to do the sheet on their own
- If I had the opportunity to teach this lesson again to the same group of students, what would I do differently? Why? How would this affect the outcome of this and future instruction?
  - I would talk about what the finger is covering up a number so the students know that they are going to figure out what the missing number is
  - I would allow students to come up to move the finger for the triangles and fact families.
  - Students would be more involved with coming up to the board