

**Lesson Plan Template**

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**BETHANY**  
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Time allotted: \_\_\_\_\_ minutes

Subject: Math Grade level: 3

Topic / Title: 4.6 Fact Families

Course **EDUC 320**

Approved by Cooperating Teacher: \_\_\_\_\_ Portfolio # \_\_\_\_\_

**A. Standards; objectives / requisite skills / learner outcomes** “At the completion of this lesson, learners will be able to ...” (Use observable / measurable terms + strong verbs.)

Standard(s):

Cognitive objective(s): After the lesson, students will be able to write division and multiplication fact families.

Affective objective(s): During the lesson, students will contribute by answering questions asked by the teacher and collaborating with their peers to write fact families.

Psychomotor objective(s): During the lesson, students will be raise their hands to answer questions, work with their partners to put together fact acorns, and write their fact families.

**B. Assessment plan:** How will you know that the learners met the objectives? What will you be able to observe and measure? What percentage of the class will be meeting your objectives? Incorporate this plan into the Input section of the lesson. I will give the students an activity with a worksheet in which they will practice writing fact families.

**C. Multiple intelligences:** Select one primary (p) and one secondary (s)

- |                                   |                                |                              |
|-----------------------------------|--------------------------------|------------------------------|
| <u>  P  </u> verbal linguistic    | <u>      </u> musical/rhythmic | <u>      </u> visual/spatial |
| <u>  S  </u> logical/mathematical | <u>      </u> interpersonal    | <u>      </u> intrapersonal  |
| <u>      </u> bodily/kinesthetic  | <u>      </u> naturalistic     |                              |

**D. Accommodations & differentiation for learners:** Includes all students with emphasis on ELL/ESL/LEP, LD, highly capable, etc. How will knowledge of your students inform your planning, instruction, and assessment?

**E. Materials / equipment needed:**

Teacher: Marker board, markers

Students: Acorn fact family worksheets, fact table

**F. Academic language demands**

Vocabulary: Fact family

Function (verb):

worksheet, pencil. Marker boards	Literacy strategy (ELA only):
<p><b>G. Academic language support:</b> How will the teacher model and the students engage with the language demands?  I will show the students a review of addition and subtraction fact families. Then I will model a multiplication and division fact family. Lastly, they will be given an activity so that they can practice writing the families.</p>	
<p><b>I. Assumptions:</b> What prior knowledge do students hold and how will prior knowledge be activated? What prerequisite skills have learners mastered?  Students will remember writing addition and subtraction fact families.</p>	<p><b>J. Anticipated questions &amp; misunderstandings:</b> What common misunderstandings or errors may occur? What pre-assessment is used?  Students may not be able to make the switch in their head from multiplication to division and that the two are opposites from each other.</p>
<p><b>L. Technology:</b> What, if any, use of instructional tech. are involved during instruction, learning tasks, and/or assessment?  Smart board</p>	
<p><b>Pacing / Time Allotted</b></p>	<p><i>Detailed planning: Write plans to a level of depth that would allow another teacher to use the plan to deliver the instruction. Script the learning target(s), transitions, conclusion, and key questions.</i></p> <p><b>M. Lesson planning of instructional activities &amp; learning tasks:</b></p> <p>1. <b>Anticipatory Set:</b> (set induction / introduction / focusing event / activating prior knowledge)  I am going to introduce you to one of my favorite families. The dad's name is 6 and the mom's name is 8. They also have a child whose name is 48. Sometimes mother 8 likes to be the center of attention, but then baby 48 begins to cry and mother 8 has to take care of him while father 6 sleeps. Then baby 48 does not want mother 8, but instead father 6. So mother 8 and father 6 both work together to take care of baby 48 and together they make a happy fact family.  *As you tell the story write out the equations that make the fact family.</p> <p><b>Statement of Objective (scripted): Today we are going to be learning about fact families and using a fact table to find answers to multiplications and division problems.</b></p> <p><i>Transition: First let's talk about what fact families are.</i></p> <p>2. <b>Input:</b> Outline of presentation – steps / strategies / modeling (means of instruction, learning</p>

tasks, active engagement) *Include what teacher will do & what students will do. Script key questions.*

- A. “You all have worked with fact families before so let’s review” Write the equation  $4+2=6$ . Ask volunteers to tell you what other equations would be in their fact family.
- B. Then write the multiplication problem  $4 \times 3=12$ . Ask which numbers are facts and products. Explain that when multiplying it does not matter what order the facts are in, they will always have the same product. Draw out the problem. Then write the division problem  $12/3=4$ . Explain that the dividend cannot change, it is always the biggest number. However, the divisor and quotient can trade places. Draw out the picture for this division problem and show them that the two pictures are very similar. Then write out the fact family for  $4 \times 3=12$ .
- C. Explain how when two facts are the same number, the family will be smaller.  $3 \times 3=9$
- D. Then distribute a fact table to all of the students and pull up one on the smart board. Explain that this can give answers just like a calculator can. And give them some demonstrations on how to use the fact table.
  
- E. Explain how they can use the table to find fact families. Using  $3 \times 7=21$ ,  $2 \times 8=16$ ,  
 $4 \times 5=20$

*Transition: Let’s practice writing fact families together.*

### 3. **Guided Practice: Acorn worksheets**

- Distribute the worksheet that the students will be filling in the fact families.
- Get the first acorn out and call on a student to say what the top of the acorn says.
- Ask the class to do the multiplication on the top of the acorn. Explain that this is the first member of the fact family. When they know the answer they can find the bottom part of the acorn that matches.
- Then ask the students to tell you the rest of the equations that fit the acorn.
- They can use their fact table to solve these problems.
- Split the class into groups of two and give each group acorn pieces.
- Have them begin the worksheets then with their partner.

*Transition: When you are finished, you may turn the worksheets into me. Then you will make your own fact families.*

**4. Evidence of Learning:** *How will you know when the learners have reached the objectives? What type of feedback is provided? How is assessment aligned with the objectives / skills? Will students be involved in assessment / reflection upon their own learning?*

The students will give me verbal feedback of their answers. The worksheet that they do independently will also give me visual feedback to see if they successfully identified all of the fact families.

*Transition: Now you may work on your math journals.*

**5. Closure & Independent Practice:** (transfer of learning / assignment) *How does the assignment support mastery of the objectives / skills? How will the assignment be evaluated?*

The worksheet they do independently will allow them to create their own equations and then create a fact family on their own. The math journals will allow the students to further work on the new concepts and apply them in different ways.

**Closing Statement** (scripted): Now you have learned how to do multiplication and division fact families, which is something we will apply next time to baseball multiplication.

**N. Evaluation & reflection of teaching / learning:** *Respond with thoughtful, professional insights that go beyond superficial considerations. For example, consider whether and how you know that students reached the learning targets, what strategies might have led to improved instruction, whether assessments provided useful data, and the extent to which the whole class, individuals, and subgroups achieved the objectives. How did I teach? What did I learn about my teaching? What specifically do I need to work on for improvement? What missed opportunities for learning can I identify? What is to be taught next? How will data from the assessment guide future instruction?*

**1. As I reflect on the lesson, to what extent were students productively engaged?**

**2. To what extent did the students learn what I intended? Were instructional objectives met?**

**3. To what extent did I alter my objectives or instructional plan as I taught the lesson? Why?**

**4. To what extent did I practice effective classroom management strategies? What issues do I need to address when I teach again?**

**5. To what extent did I provide closure to the lesson?**

**6. 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?**