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| **Name: Molly Rice**  **Lesson Title: Fact Families**  **Grade level(s)/Course: 2nd grade Math**  **Date taught: 10-10-12** |

**GENERAL CONTEXT**

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| **Textbook or Instructional Program referenced to guide your instruction (if any)**  **Title: EveryDay Mathematics**  **Publisher:**  **Date of Publication:** |
| **District, school or cooperating teacher requirement or expectations that might influence your planning or delivery of instruction.**  N/A |
| **Amount of time devoted each day or week in your classroom to the content or topic of your instruction.**  Math class is usually from 10:40-11:40 every day. The Fact Families lesson will be a one day lesson during this time. |
| **Describe how ability grouping or tracking (if any) affects your planning and teaching of this content.**  N/A |
| **List any other special features of your school or classroom that will affect the teaching of this lesson.**  N/A |

**INFORMATION ABOUT STUDENTS AND THEIR LEARNING NEEDS**

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| **Total students\_\_\_\_\_\_\_\_\_ Males\_\_\_\_\_\_\_\_\_\_ Females\_\_\_\_\_\_\_\_\_\_** | | |
| **Students with Special Needs: Category** | **Number of Students** | **Accommodations and/or pertinent IEP Objectives** |
| **Students with IEPs** |  |  |
| **English Language Learners** | **0** |  |
| **Gifted** |  |  |
| **504** |  |  |
| **Students with autism or other special needs** |  |  |
| **Students with Behavioral Disorders** |  |  |

**INFORMATION ABOUT THE LESSON**

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| **Content Strand – found within the** [**Wisconsin Academic Content Standards**](http://dpi.wi.gov/standards)  Operations and Algebraic Thinking 2.OA  **Represent and solve problems involving addition and subtraction.**  1. Use addition and subtraction within 100 to solve one- and two-step  word problems involving situations of adding to, taking from, putting  together, taking apart, and comparing, with unknowns in all positions*,*  e.g., by using drawings and equations with a symbol for the unknown  number to represent the problem*.*1  **Add and subtract within 20.**  2. Fluently add and subtract within 20 using mental strategies.2 By end of  Grade 2, know from memory all sums of two one-digit numbers. | |
| **Enduring Understanding and/or Essential Question**  Demonstrate the inverse relationship between addition and subtraction, and to provide practice for addition and subtraction facts for sums up to and including 10. | |
| **GLE(s) or EOC and Symbolic Notation**  Grade Level Expectation/End of Course  Symbolic Notation for the GLE  Found on the Wisconsin DPI website under the Benchmarks or within SPA Content Standards for K-12 learner Example (WI-PE 3.1) (NASPE 1.2) | **DOK**  Depth of Knowledge  A number between 1 and 4 representing a realistic estimation of the DOK , given the demands of the lesson. |
| **Outcome(s)**  1. Students will be able to use the fact triangles to solve both addition and subtraction facts on a given triangle.  2. Students will be able to complete math boxes 2-7 and home link 2-7 bases on fact families. | |
| **Academic Language related to the lesson**  Fact triangles  Fact family  Sum  Turn-around facts | |
| **Prior Learning/Prior Thinking**  The class has been working on number stories that include addition and subtraction problems. They have also learned about turn-around facts in previous lessons. Every Friday, the class takes addition timed tests to get their math facts down. | |

**LESSON IMPLEMENTATION**

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| **Anticipatory Set/Elicit Prior Knowledge**  Teacher will pose a couple of simple subtraction number story problems that get the children thinking about number stories. Have the children share their solution strategies. |
| **Focus/Purpose Statement**  The purpose of this lesson is to teach children about fact families. |
| **Procedures**  1. Have the class bring their whiteboards and sit on the carpet. Pose simple subtraction number story problems, and have the children share their solution strategies.  2. Draw a fact triangle on the smartboard. Ask the children to describe ways in which the three numbers are related.  3. Put different numbers in the fact triangle (include a doubles fact as well), and have the class continue to describe both addition and subtraction facts.  4. Explain that the collection of facts is called a fact family.  5. Have the class go back to their seats and cut out the pages with fact triangles on them.  6. Demonstrate how to use fact triangles with a student in front of the class. See page 27 in math journal.   * One partner covers one corner of a fact triangle with a finger. * To practice addition, cover the number by the dot. * To practice subtraction, cover one of the other numbers.   7. Have the students partner up with the person they sit next to and practice using fact triangles.  8. Then have students solve subtraction number stories on page 37 in their math journal independently as a review from the previous lesson.  9. They may move on the page 38 in their math journal when they are done (math boxes 2-7). |
| **Differentiation**  Content: N/A  Process: Teach solving subtraction facts with counters for a concrete, hands-on model.  Product: N/A |
| **Closure**  The teacher will bring the class together to review what a fact family is. Have them share with the partner next to them what they learned today. She will remind the class to put their fact triangles in their tool boxes and to do home link 2-7 for practice. Have the students line-up at the door by tables for lunch. |
| **Materials and Resources**  Math Journal  Smartboard  Fact Triangles from activity sheets  Scissors |
| **Classroom Management/Democratic Practices**  All students will begin class with whole group work on the carpet. Students will be motivated by hands-on flashcards (fact triangles). Partner work will be monitored by the teacher to make sure they are actually practicing. Independent work must be quiet, so students can focus. |

**ASSESSMENT**

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| **Before the lesson**  Ask the class subtraction number stories and have them answer and share their strategies. |
| **During the lesson**  The teacher will observe partner practice with fact triangles. Teacher will observe independent book work. As students work teacher will observe: 1) Explanations of their thinking 2) ability to get the correct answer 3) ability to work with their partner |
| **At the end of the lesson**  *Formative*  Each student will give an example of a subtraction or addition problem on a fact triangle as they exit the room. |

[**Assessment Rubric**](file:///\\Shared1_svr\shared1\WGROUPS\Health&PE\Teaching%20Materials%20Templates%20and%20Rubrics\Assessment%20Rubric-UnitPlan.docx)

**LESSON PLANNING CHECKLIST**

* Does the plan logically lay out what you will say and do?
* Did you include specific questions you will ask to invite, guide, and develop students’ thinking throughout the lesson?
* What strategies will you use?
* Have you included how you will set expectations for student behavior before and during the lesson (picking up materials; collaborative work time; listening behaviors, moving from one place to the next, etc.)?
* If students work in groups, have you included how you will group them and why that approach is appropriate to their learning needs?
* Have you specified how you will ensure students understand the academic language needed to succeed during this lesson?
* What content-specific vocabulary will you introduce and how will you introduce it?
* Do you plan for guided work so that students must use the ideas/skills they learn?
* Do you plan for students to independently work with or apply the ideas/skills?
* Do you include how you will differentiate for the varying needs of diverse students (gifted/remedial; ELL; social/emotional)?
* How will you collect evidence of students’ thinking and learning (formative assessments) during the lesson?

**REFLECTION**

If you have not had a conference at the completion of your lesson, or if your instructor asks for this, send a REFLECTION to your practicum supervisor.

In your reflection address each of the following.

1. Focus on student thinking and learning.
2. What was working? What was not working? For whom? Why?
3. Use specific examples of students’ work, actions or quotes to support your claims.
4. What missed opportunities for student learning are you aware of that happened?
5. If you could do it over, what might you have done to take advantage of missed opportunities to improve the learning of students with diverse needs?
6. In your own classroom what would you teach next to build on this lesson?

Link your ideas to your methods class content and readings, using appropriate and accurate quotes from text or theorists as you analyze and evaluate your work.