# DAILY LESSON PLAN

# Math GRADE:4

# (NO.5/6)

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**DAILY LESSON PLAN**

**Unit 2**: Factors and Multiples. **Date**: _____

**Topic**: Factorization, Prime factorization **Year Level: 4**

**Key Learning Area**: Prime factorization, Factors, Prime number, Factor tree, Cake method.

**Outcomes**: Students will be able to define factorization and prime factorization

Students will be able to solve for prime factorization

Students will be able to explain how prime factorization is used in real life.

**Lesson Structure:**

| Time | Introduction (Set): | Teaching Approaches |
|---|---|---|
| 10 min. | Prepare for the topic by asking them to write the definitions for 'factors' and 'prime numbers.' If necessary, review the concept of prime numbers | **Warm-up Activity:**<br>Ask your students to recall the tables. |



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|---|---|---|
| | with the lesson What Are Prime Numbers? - Definition & Examples.<br><br>Share the answer and preview vocabulary.<br><br>Define **Factorization:**<br><br>Factorization is when you break a number down into smaller numbers that, multiplied together, give you that original number.<br><br>Define **Prime Factorization:**<br><br>A process in which we find the factors of the given numbers and all those factors are prime numbers.<br><br>Tell students they will be learning how to find the prime factors of a number, called 'prime factorization.' Write this term on the board and have students label their math notebooks as well. | Ask them to write down the definition of prime number and composite numbers.<br><br>Ask some examples about factors and multiples.<br><br>You can also write a number on the board as 36. Inquire that how many possible factors they can write for this number? Ask them to write the factors on their notebooks and then check their performance. |

**LESSON STRUCTURE:**

| Time | Main Content: | Teaching Approaches |
|---|---|---|
| 25 min. | Teacher will show them 2 different methods of finding the prime factorization of a number and explain that they can choose the method that they prefer.<br><br>**<u>Method 1: The Factor Tree Method</u>** | **Factor Tree:**<br><br>The teacher will model the factor tree and help to find out |



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| | You can use the analogy of climbing a tree. If a number is composite there are more branches to climb. If a number is prime, they've reached a leaf and it needs to be circled. A common mistake made by students is to circle a number that is composite and not factor it completely.<br><br>**Method 2: The Division (Birthday Cake) Method**<br>This method is usually new to students. Teacher will explain that it is time to create their birthday cake. What's most important to remember for this method is that the divisor, the number outside the cake must be a prime number. Teacher will work through an example with students.<br><br>**Importance of Prime Numbers:**<br>Prime Factorization is very important to people who try to make (or break) secret codes based on numbers.<br>That is because factoring very large numbers is very hard, and can take computers a long time to do.<br><br>Once the students get the concept ask them to solve the page number 52 of *incredible Mathematics of grade 4.* | the factors and multiples from it:<br><br>(root) 24<br>/ \<br>4 × 6<br>/ \ / \<br>(leaves) 2 × 2 × 2 × 3<br><br>The teacher will give some numbers to students to find the prime factorization on their own and then check their answers.<br><br>**Birthday Cake Method:**<br>Demonstrate your students that this method starts from bottom to top. Students need to work on factors step by step and reach on the top.<br><br>1<br>2 \| 2<br>5 \| 10<br>3 \| 30<br>3 \| 90<br>2 \| 180<br>2 \| 360<br>360 = 2 x 2 x 2 x 3 x 3 x 5<br><br>**Activity:**<br>Hand over some printed worksheets related to both methods. Assist your students to find out the factors of prime factorization. |


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| Time | Conclusion: | Teaching Approaches |
|---|---|---|
| 5 min. | Students will be able to:<br><br>Define factorization and prime factorization<br><br>Solve for prime factorization<br><br>Explain how prime factorization is used in real life. | Review the lesson with students. Ask students, "what did we learn about Factorization today"?<br><br>Give enough practice as homework<br><br>Ask for questions. |

**Resources:**

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| Division/cake method worksheets, Chart paper and marker, Factor Tree worksheets, Incredible Mathematics Grade 4 book, notebooks etc. |

**Safety Consideration/ Materials**

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| None |

**Assessment**

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| Related worksheets<br><br>Board test<br><br>Mind-teasers.<br><br>Quiz etc. |

**Reflection**

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| The students have understood that:<br><br>How to define factorization and prime factorization.<br><br>How to solve sums for prime factorization. |



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How to explain and apply prime factorization in real life.

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