

LESSON PLAN

FACTORS AND MULTIPLES

Year: 5

Subject: Mathematics

Topic: Factors and Multiples

Duration: 60 minutes

Objectives:

- 1. Students will understand the concepts of factors and multiples.**
- 2. Students will be able to find the factors of a given number.**
- 3. Students will be able to identify the multiples of a given number.**
- 4. Students will understand the difference between factors and multiples.**

Materials Needed:

- Whiteboard and markers
- Chart paper
- Coloured markers
- Worksheets on factors and multiples
- Flashcards with numbers
- Math textbooks
- Notebooks and pencils

Lesson Outline:

1. Introduction (10 minutes)

- Begin with a brief discussion on what students already know about multiplication and division.
- Introduce the terms "factors" and "multiples" with simple definitions:
 - **Factors:** Numbers that can be multiplied together to get another number.

- **Multiples:** The product of a number and any other whole number.

2. Direct Instruction (15 minutes)

- **Factors:**

- Write a number on the board (e.g., 12).
- Ask students to list all the pairs of numbers that can be multiplied to get 12 (1×12 , 2×6 , 3×4).
- Explain that these numbers (1, 2, 3, 4, 6, 12) are the factors of 12.
- Emphasize that factors are always smaller than or equal to the number.

- **Multiples:**

- Write a number on the board (e.g., 5).
- Ask students to list the first five multiples of 5 (5, 10, 15, 20, 25).
- Explain that these numbers are obtained by multiplying 5 by whole numbers (1, 2, 3, 4, 5).
- Emphasize that multiples are always greater than or equal to the number.

3. Guided Practice (10 minutes)

- Distribute flashcards with different numbers to pairs of students.
- Ask each pair to find the factors and first five multiples of their number.
- Circulate around the room to provide assistance and ensure understanding.

4. Independent Practice (15 minutes)

- Distribute worksheets that contain exercises on finding factors and multiples.
- Students will complete the worksheet individually.
- Example worksheet exercises:
 - List all the factors of 18.
 - List the first five multiples of 7.
 - Identify if a given number is a factor of another number.
 - Identify if a given number is a multiple of another number.

5. Review and Recap (5 minutes)

- Go over the worksheet answers with the class, addressing any mistakes or misunderstandings.
- Highlight the key differences between factors and multiples:
 - Factors divide into the number without leaving a remainder.
 - Multiples are the result of multiplying the number by whole numbers.

6. Closing Activity (5 minutes)

- Quick-fire round: Call out a number and ask students to quickly say a factor or a multiple of that number.
- Encourage participation and praise correct answers to boost confidence.

7. Homework

- Assign a set of numbers for students to find the factors and multiples of, to be completed in their math notebooks.
- Example homework:
 - Find the factors of 24 and 36.

- List the first five multiples of 8 and 9.

Evaluation:

- Monitor student participation during guided and independent practice.
- Assess understanding through worksheet completion and homework assignments.
- Provide feedback and additional support where necessary.

Additional Resources:

- Interactive online games and quizzes on factors and multiples.
- Math manipulatives like factor trees and multiplication charts.

By the end of the lesson, students should have a clear understanding of factors and multiples and be able to find and differentiate between them confidently.
