# Lesson Plans: Operations with Fractions

## Unit Overview

Strand: Number
Specific Expectation: B1.4 – Use the four operations with positive fractions, including mixed numbers, to solve problems.

## Day 1: Understanding Fractions and Equivalent Fractions

Learning Goal: I can represent, compare, and generate equivalent fractions using models and numbers.

Success Criteria: I can simplify fractions and find equivalent fractions. I can use visual models (area models, number lines) to explain equivalence.

Materials: Fraction strips, number lines, chart paper, practice worksheet.

Minds-On: Quick review of fractions. Group activity matching equivalent fractions using fraction strips.

Action: Teacher models generating equivalent fractions. Students create their own sets and simplify fractions.

Consolidation: Exit Ticket – Write two fractions equivalent to 5/6.

Assessment: Observation, student exit ticket.

## Day 2: Adding and Subtracting Fractions with Like Denominators

Learning Goal: I can add and subtract fractions with the same denominators.

Success Criteria: I can use models and algorithms to add and subtract fractions accurately.

Materials: Fraction circles, whiteboards, visual aids.

Minds-On: Review equivalent fractions. Warm-up: 1/2 + 1/4 using visual models.

Action: Demonstrate addition and subtraction with like denominators. Practice with real-world examples.

Consolidation: Class reflection on reasonableness of answers.

Assessment: Anecdotal notes, student work samples.

## Day 3: Adding and Subtracting Fractions with Unlike Denominators

Learning Goal: I can add and subtract fractions with different denominators.

Success Criteria: I can find common denominators and add/subtract accurately using models and numbers.

Materials: Fraction strips, anchor chart, worksheet.

Minds-On: Review like denominators. Discuss how to make denominators the same.

Action: Model finding least common denominator (LCD). Students solve examples and practice independently.

Consolidation: Exit Ticket – Explain why we need a common denominator to add fractions.

Assessment: Exit ticket, formative observation.

## Day 4: Multiplying Fractions

Learning Goal: I can multiply fractions and mixed numbers using models and algorithms.

Success Criteria: I can represent fraction multiplication visually. I can multiply proper and improper fractions accurately.

Materials: Grid paper, visuals, manipulatives, task cards.

Minds-On: Discuss meaning of multiplying fractions using area models.

Action: Model multiplication of fractions and mixed numbers. Real-world problem: Find 3/4 of 12 cookies.

Consolidation: Reflection on how multiplying fractions differs from adding.

Assessment: Student work, group participation.

## Day 5: Dividing Fractions and Real-World Applications

Learning Goal: I can divide fractions and mixed numbers and solve real-life problems.

Success Criteria: I can represent division of fractions using models and words. I can use the reciprocal method to divide fractions accurately.

Materials: Whiteboards, problem-solving cards, visuals.

Minds-On: Review multiplication of fractions. Introduce division as 'how many groups' or 'sharing equally.'

Action: Demonstrate 3/4 ÷ 1/2 using visuals and reciprocal algorithm. Solve real-world word problems.

Consolidation: Reflection Journal – What does dividing fractions mean in real life?

Assessment: Observation, reflection journals, exit slips.

## Differentiation

Support: peer support.
Extension: Apply operations to multi-step problems

Evaluation Tools

- Anecdotal records
- Exit tickets
- CLASSWORK

- Student reflections