Session 20: Fraction problems

Session Title	Fraction problems
Objective	1. Understand and visualize fractions usir shading. 2. Perform operations with fractions: addi subtraction, multiplication, and divisior 3. Practice teamwork, self-awareness, an empathy through group work and refle
Topics	1. To remember again fractions, shading, addition, subtraction, multiplication an division through real-life scenarios.
Materials Required	1. Fraction circles or bars 2. Colored pencils or markers 3. Whiteboard and markers 4. Group reflection sheets 5. Chart paper
Methodology	Learning through real-life scenarios and act
Session Duration	90 Minutes

Introduction Activity (15 minutes):

"Fraction of Me" Art & Share

"The teacher gave each student a paper and asked them to draw a circle on it. The students divided the circle into 8 parts and shaded the sections to represent their interests." (e.g., 3/8

sports, 2/8 music).

Instructions:

1. Each student thinks about their hobbies or interests (e.g., sports, music, reading, video games, etc.).
2. They decide how much time or how interested they are in each activity, and represent that as a fraction out of 8.
   For example:
   3/8 sports
   2/8 music
   2/8 reading
   1/8 video games
3. Students color the slices of the circle based on these fractions using different colors for each interest.
4. The total should always add up to 8/8 (1 whole circle).

Share with a partner or group:

Discuss: "How are we similar or different? How does it feel to express yourself through fractions?"

Main Activity (55 minutes):

Fraction Addition and Subtraction Relay (10 minutes)

Divide students into two teams. In teams, students solve fraction addition/subtraction problems at stations. Each correct answer earns 10 points. The team that solves the problem first will win.

1. Liam drank 2/5 of a bottle of juice in the morning and 1/5 in the afternoon. How much juice did he drink in total?
2. There was 5/6 of a litre of water in a bottle. Jack drank 2/6 of It. How much water is left in the bottle?

Fraction Multiplication with Real-life Scenarios (15 minutes)

Divide students into groups of 3. Each group receives a word problem card with a multiplication of fractions scenario. Examples:

1. A recipe uses 2/3 of a cup of flour. If you make 1/2 of the recipe, how much flour do you need? A garden is 3/5 of a yard wide.
2. A weed grows on 1/4 of it. How much space does the weed take up?
   Sarah jogs 3/4 mile each day. She jogs for 2/3 of a week. How many miles did she jog?

Group Task

Each group must:

1. Read the problem together
2. Identify the fractions and what they represent
3. Write a multiplication sentence
4. Solve it and explain the answer in words

Solve It, Show It (30min)

Students work in pairs or small groups. Each group gets a fraction division word problem card, such as:

1. You have 2/3 liter of juice. Each glass holds 1/6 liter. How many glasses can you pour?
2. A 1/2 kg bag of rice is divided equally among 1/4 kg portions. How many portions?”
3. 2/3 pan of lasagna is shared equally by 6 friends. What fraction of the pan will each friend get?
4. Emma has 3/4 of a chocolate bar. She wants to share it equally among 3 friends.
   How much chocolate does each friend get?

Review Questions (10 minutes):

1. How do you know when to multiply or divide in a word problem?
2. What clues in the question help you decide what to do?

Follow-up Tasks (10 minutes):

Home Work

1. Anumol baked 3/4 of a cake. She gave 2/3 of it to her friend.
   How much of the whole cake did she give to her friend?
   (Solve: 3/4 × 2/3)
2. You have 5/6 of a pizza and want to share it equally between 2 people.
   How much pizza does each person get?
   (Solve: 5/6 ÷ 2)

Expected Learning Outcome:

Knowledge building:

- Students will understand and apply the concept of shading, addition, subtraction, multiplication and division of fractions.

Skill Building:

- Practice teamwork, self-awareness, and empathy through group work and reflection.
- Logical thinking

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