Session 21: Decimals introduction, place value

Session Title	Decimals introduction, place value
Objective	1. By the end of the lesson, students will be able to: 2. Understand what a decimal is. 3. Identify the place value of digits in a decimal number (tenths and hundredths)
Concept	1. Understanding decimal place value and comparing, ordering, and rounding decimals.
Material required	1. Chart paper/board 2. Decimal place value chart 3. Paper coins or "play money" (rupees and Paise) 4. Decimal flashcards (e.g., ₹0.25, ₹0.50, ₹1.75)
Methodology	Use interactive activities and guided practice help students understand and apply decimal value concepts.
Session Duration	90 minutes

Introduction activity (10 minutes):

Ask: “Have you ever seen ₹0.50 or ₹0.75 on a price tag? What do they mean?”

Explain that decimals are used to represent parts of a whole, like paisa out of one rupee.

Main activity (65 minutes):

What is a Decimal? (30 minutes)

A decimal is a number that has a dot called a decimal point. It helps us show parts of a whole, like halves, tenths, and hundredths.

Example: 0.5 means five tenths – like half of 1.

Example: 1.25 means 1 whole and 25 hundredths.

How to Teach Children to Read Decimals

Step-by-Step Strategy:

Start with the Decimal Point
Teach: “The decimal point separates whole numbers from parts of a number.”

Show examples like:

- 1.2 → one and two tenths
- 0.75 → zero and seventy-five hundredths
- 0.1 → zero and one tenth
- 0.5 → zero and five tenths
- 1.2 → one and two tenths
- 2.9 → two and nine tenths
- 0.25 → zero and twenty-five hundredths
- 9.01 → nine and one hundredth
- 6.007 → six and seven thousandths
- 0.009 → zero and nine thousandths
- 8.501 → eight and five hundred one thousandths.

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Activity 1: Decimal Card Game – Call-Out numbers (10 minutes)

Hand out decimal cards. Call out decimal numbers and have students hold up the correct card.

Give students numbers and ask:

What digit is in the hundredths place?

What is the value of the digit 6 in 0.62?

1. 3.5
2. 0.78
3. 4.06
4. 7.302
5. 1.09

Activity 2: Place Value Questions

1. What digit is in the hundredths place in 5.37?
   → Answer: 7

2. What digit is in the hundredths place in 0.62?
   → Answer: 2

3. What digit is in the hundredths place in 8.905?
   → Answer: 0

4. What digit is in the hundredths place in 12.749?
   → Answer: 4

5. What is the value of the digit 6 in 0.62?
   → Answer: 0.6 (six tenths)

"Decimal Shopping", (25 minutes)

Purpose:

This fun activity introduces students to the concept of decimals in real-life using familiar Indian currency.

Setup:

Imagine you’re in a classroom “store,” and you have a set of items (pencil, eraser, notebook, etc.). Each item has a price tag written in decimal rupees (e.g., ₹0.75 for a pencil, ₹1.25 for a notebook).

Example Items:

- Pencil = ₹0.50
- Eraser = ₹0.25
- Notebook = ₹1.00
- Marker = ₹0.75

Instructions:

1. Give each student “play money” (can be paper cutouts or imaginary rupees and paise).
2. Ask students to "buy" an item by selecting one from the store, writing the price as a decimal (e.g., ₹0.75), and explaining what part of ₹1.00 it represents.
3. Ask guiding questions like:

"How many paisa are there in ₹0.75?" (Answer: 75 paisa)

"What part of ₹1.00 is ₹0.25?" (Answer: One-fourth or ¼)

Goal:

To connect decimal numbers to real-life experiences with money. This helps students understand:

Review Questions (5 minutes):

1. What digit is in the hundredths place in 5.37?
   → Answer: 7

2. What digit is in the hundredths place in 0.62?
   Answer: 2

3. What digit is in the hundredths place in 8.905?

   Answer: 0

4. What digit is in the hundredths place in 12.749?

   → Answer: 4

5. What is the value of the digit 6 in 0.62?

   → Answer: 0.6 (six tenths)

Follow-Up task (10 minutes):

1. What is the value of the digit 7 in the number 5.732?

A) 7

B) 0.7

C) 0.07

D) 0.007

Answer: B) 0.7

2. Which number is smaller?

A) 4.09

B) 4.9

Answer: A) 4.09

3. Round 6.843 to the nearest tenth.

A) 6.8

B) 6.84

C) 6.9

D) 7.0

Answer: C) 6.9

4. What comes next in this sequence: 0.1, 0.2, 0.3, ___?

A) 0.35

B) 0.4

C) 0.33

D) 0.5

Answer: B) 0.4

5. Write 7 tenths as a decimal.

A) 0.07

B) 7.0

C) 0.7

D) 0.007

Answer: C) 0.7

6. Which is the correct order from smallest to greatest?

A) 0.3, 0.03, 0.333

B) 0.03, 0.3, 0.333

C) 0.333, 0.3, 0.03

D) 0.03, 0.333, 0.3

Answer: B) 0.03, 0.3, 0.333

Expected learning outcome:

Knowledge building:

- Understand the concept of decimals

Skill building

- Understand the concept of place value

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