Lesson Plan: Profit and Loss

Grade: 6
Duration: 360 minutes
Subject: Mathematics
Topic: Profit and Loss

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1. Learning Objectives:

By the end of the lesson, students will be able to:

1. Understand the concepts of Cost Price (CP), Selling Price (SP), Profit, and Loss.
2. Calculate Profit and Loss using formulas.
3. Identify real-life applications of profit and loss.
4. Analyze and present profit and loss scenarios using Spreadsheet / other tools.

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2. Previous Knowledge Required:

Students should be familiar with:

1. Basic arithmetic operations (addition, subtraction, multiplication, division).
2. Understanding of money transactions.
3. Concept of percentage (basic idea).

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3. Lesson Flow:

A. Introduction (10 minutes)

1. **Real-Life Connection:** Start with a discussion:
    - "Have you ever bought or sold something? Did you make a profit or loss?"
    - Show simple examples (e.g., buying a toy for ₹50 and selling it for ₹60).
2. **Introduce Formulas:**
    - **Profit = SP - CP**
    - **Loss = CP - SP**
    - **Profit % = (Profit / CP) × 100**
    - **Loss % = (Loss / CP) × 100**

B. Unplugged Activity (15 minutes) - Market Simulation Game

Objective: Help students experience profit and loss through role-play. **Materials:** Own designed currency, printed price tags, items (toy items or images of products).

Process:

1. Divide students into small groups.
2. Assign roles: buyers, sellers, and shopkeepers.
3. Give each seller an item and a fixed Cost Price (CP).
4. Buyers negotiate and buy products at a Selling Price (SP).
5. Each group calculates their profit or loss.
6. Discuss which strategies led to higher profits and what caused losses.

C. Project Making

Activity: Create a Digital Storefront (Spreadsheet-Based Project) Tools: Google Sheets / Microsoft Excel / Scratch / TinkerCad

Steps:

1. **Data Entry:** Students create a spreadsheet to enter CP, SP, and calculate profit/loss automatically using formulas.
2. **Graph Representation:** Use bar charts to visualize profit and loss.
3. **Scenario Analysis:** Students change SP and observe how profit/loss changes.
4. **Alternative:** If using Scratch, students can create a basic profit-loss calculator.
5. **Presentation:** Each student/group presents their findings using digital tools.

Case Studies / Tasks / Problem Statements:

- **Task 1:** A student starts a small business selling handmade greeting cards. They spend ₹200 on materials and sell 10 cards for ₹30 each. Calculate the total cost, revenue, and profit/loss percentage.
- **Task 2:** A fruit vendor buys apples at ₹80 per kg and sells them at ₹100 per kg. However, due to wastage, 10% of the apples get spoiled. Calculate the vendor's actual profit/loss.
- **Task 3:** A family runs a food stall during a school event. They invest ₹500 in ingredients and sell snacks, earning ₹700. Calculate the profit percentage and discuss ways to increase profit.
- **Task 4:** A bookstore buys 50 books at ₹150 each and sells them for ₹180 each. However, 5 books remain unsold. Calculate the total profit/loss.
- **Task 5:** A student starts an online shop selling phone accessories. They invest ₹1000 in inventory and sell products worth ₹1200 after offering discounts. Calculate the profit/loss and discuss the impact of discounts on earnings

Critical Thinking Tasks:

- **Task 1:** You are a shop owner and have two suppliers offering the same product at different costs. One offers bulk discounts while the other provides better quality. Which supplier would you choose and why? Justify using calculations.
- **Task 2:** A bakery sells cakes at ₹200 each, but customers complain about high prices. The owner wants to reduce prices but still make a profit. What changes could be made in cost or selling strategy to achieve this?
- **Task 3:** A student sells handmade bookmarks at ₹20 each, costing ₹10 to make. If demand increases and the price rises to ₹30, how will the profit margin change? Should they produce more? Why or why not?
- **Task 4:** A company launches a new mobile phone at ₹30,000 but sells very few. They decide to drop the price by 20%. How does this affect profit? Could lowering the price lead to an overall gain?
- **Task 5:** A toy store is running a "Buy 2, Get 1 Free" offer. How does this impact their profit compared to simply offering a 30% discount on each item? Which strategy is better?

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1. Encourage students to apply/ visualize profit and loss concepts in everyday life.
2. Assign a small project: "Track a week's pocket money expenses and analyze profit/loss. Present in a digital format."

4. Level 2 Extension Activity:

Virtual Shop - Simulation:

- Use a simple website builder or a visual coding tool (like Scratch) to create a mock online store.
- Set prices and simulate buying and selling.
- Analyze profit/loss in a more dynamic environment.
