

Lesson Plan: Understanding Depreciation

Overview

This lesson plan, tailored for the International Baccalaureate (IB) Diploma Programme (DP) students, delves into the concept of depreciation, focusing on its application within the realm of finance and asset management. The lesson aims to elucidate the process of calculating annual depreciation, its impact on asset value over time, and its significance in financial decision-making.

Objectives

- Define depreciation and understand the formula used to calculate it.
- Explore the effects of different depreciation rates on the value of an asset over time.
- Analyze the financial implications of asset depreciation for businesses and individuals.
- Apply depreciation concepts to real-world scenarios to make informed financial decisions.

Materials

- Whiteboard and markers
- Projector for presentation and "Annual Depreciation" applet demonstration
- Handouts with depreciation formulas and examples
- Calculators for practice calculations

Lesson Duration

60 minutes

Lesson Structure

1. Introduction (10 minutes)

- Briefly discuss the concept of depreciation and its importance in finance and asset management.
- Introduce the standard formula for calculating annual depreciation.

2. Direct Instruction (15 minutes)

- Derive and explain the depreciation formula, highlighting the significance of each component.
- Discuss different methods of depreciation, focusing on straight-line depreciation for simplicity.

3. Guided Practice (15 minutes)

- Use the "Annual Depreciation" applet to demonstrate how depreciation is calculated and visualized over time.
- Walk through a practical example, calculating the depreciation of a piece of farming equipment and analyzing the graph to determine when the asset dips below critical value.

4. Interactive Activity (15 minutes)

- Engage students in a "Depreciation Derby" game, where they use the applet to predict the depreciation of various assets.
- Conduct a group discussion on the implications of depreciation for tax purposes and the decision-making process for replacing assets.

5. Closure and Reflection (5 minutes)

- Summarize the key points of the lesson, emphasizing the role of depreciation in financial planning and asset management.
- Encourage students to reflect on how understanding depreciation can aid in making informed business decisions.

Assessment

- Assess students' understanding through their participation in the "Depreciation Derby" and their ability to accurately calculate depreciation using the formula.
- Review students' analyses of depreciation graphs to evaluate their grasp of critical values and replacement timing.

Extensions

- Assign a project where students assess the depreciation of assets in a chosen industry, considering different depreciation methods.
- Encourage students to research tax implications of depreciation and present findings to the class.

Resources

- "Annual Depreciation" applet for demonstration and interactive activities.
- Handouts with the depreciation formula, examples, and practice problems.

This lesson plan aims to equip students with a foundational understanding of depreciation, enhancing their analytical skills in finance and mathematics within the IB DP curriculum.