

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Eco-Logic at the Goal Line: 11th Grade Sustainability Audit

Calculate life-cycle impacts, analyze cradle-to-cradle logistics, and defend resource management strategies in this advanced environmental systems simulation.

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**1. A multinational corporation adopts the 'Triple Bottom Line' framework. Which specific metric would best represent the 'Social' pillar in an 11th-grade ESG (Environmental, Social, and Governance) analysis?**

- A. Net reduction in Scope 3 carbon emissions
- B. Implementation of gender-neutral pay equity across global subsidiaries
- C. The ratio of liquid assets to short-term debt obligations
- D. The energy efficiency rating of the new headquarters building

**2. The concept of \_\_\_\_\_ describes a circular economy model where products are designed for infinite recovery and revitalization, contrasting with 'Cradle-to-Grave' systems.**

- A. Cradle-to-Cradle
- B. Bio-remediation
- C. Phytoremediation
- D. Internalization

**3. In the context of the 'Tragedy of the Commons,' sustainability can only be achieved if individual short-term interests are prioritized over collective long-term yields.**

- A. True
- B. False

**4. Which economic concept refers to the unintended environmental costs (like mercury pollution from coal) that are not reflected in the market price of a product?**

- A. Opportunity costs
- B. Natural capital
- C. Negative externalities
- D. Marginal utility

**5. When a city implements 'Green Gentrification,' they are often criticized for failing the \_\_\_\_\_ pillar of sustainability by displacing lower-income residents.**

- A. Technological
- B. Ecological
- C. Equity/Social
- D. Industrial

**6. The Precautionary Principle suggests that if an action has a suspected risk of causing harm to the public or the environment, the burden of proof that it is NOT harmful falls on those taking the action.**

- A. True

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B. False

**7. Analyze the impact of 'Jevons Paradox' on resource conservation. Which scenario best illustrates this phenomenon?**

- A. A new dam provides clean energy but destroys local fish spawning grounds.
- B. Higher fuel efficiency in cars leads to people driving more, offsetting any fuel savings.
- C. A carbon tax causes a company to move its manufacturing to a country with laxer laws.
- D. The use of solar panels decreases as the price of natural gas drops.

**8. The tool used by environmental scientists to quantify the total environmental impact of a product from raw material extraction to disposal is the \_\_\_\_\_.**

- A. Gini Coefficient
- B. Life Cycle Assessment (LCA)
- C. Environmental Impact Statement (EIS)
- D. Gross National Happiness

**9. Biomimicry is a sustainable design approach that focuses solely on using organic materials like wood and hemp in construction.**

- A. True
- B. False

**10. In a 'Steady-State Economy,' which variable is intentionally kept stable to remain within the Earth's carrying capacity?**

- A. Stock market volatility
- B. Technological innovation
- C. Throughput of matter and energy
- D. Global human migration