

Name:_____ Date:_____ Period:_____

Lesson 1 Assessment

Part 1: Fill in the Blank (10 points)

Complete each statement by filling in the blank with the best vocabulary term. Words may be used once, more than once, or not at all.

WORD BANK

Ecosystem Services (not used)

1. ____ Sustainability is the capacity of the Earth's natural systems to maintain stability of life.

There will be many challenges for us to achieve this. For example, people are living 2.

Unsustainably ____ and depleting the Earth's 3. Natural Resources People do not always realize that they are participating in 4. Environmental Degradation but we all contribute to some extent.

Biologist 5. Garret Hardin described a situation where there is a 6. Conflict between the short-term interests of individuals and the 7. Long-term welfare of society. Hardin called the situation 8. Tragedy of the Commons. This situation results in sixty percent of the Earth's ecosystem services being overused. There is some good news though, for example we can use creative thinking, 9. Scientific Research and political pressure to improve the quality of life for people now and into the future but it all starts by studying 10. _ Environmental Science where you will develop an understanding for the problems and challenges that face us so you can solve them.

Matching: 10 points

11._C_Worldview

12._A__ Life-centered worldview

13._D__Environmental ethics

14._E__Environmental science

15. B__Environment

- A. Worldview holding that all species have value in fulfilling their particular role within the biosphere, regardless of their potential or actual use to society.
- B. All external conditions, factors, matter, and energy, living and nonliving, that affect any living organism or other specified system.
- C. An individual's set of assumptions and values concerning the natural world and what they think their role in managing it should be.
- D. Study of varying beliefs about what is right or wrong with how people treat the environment.
- E. Interdisciplinary study of how humans interact with the environment

16._I_Exponential growth

17._J_ Nonrenewable resource

18._G__Inexhaustible resource

19._F__ Environmental worldview

20._H__Environmental degradation

- F. Worldview maintaining that people are part of, and dependent on, nature.
- G. Resource available in continuous supply for the conceivable future.
- H. Depletion, deterioration, or waste of Earth's natural capital.
- I. Growth in which some quantity, such as population size or economic output, increases at a fixed percentage per unit of time.
- J. Resource that exists in a fixed amount and takes millions to billions of years to form.

Multiple Choice: 10 points

21. Wind, moving water and solar energy are all derived from

- A. electrical energy
- B. lightning
- C. the sun

22. The state in which a human population can survive indefinitely is called

- A. sustainability.
- B. loss of biodiversity.
- C. renewable resource.

23. The study of how humans interact with the environment is called

- A. environmental science.
- B. ecology.
- C. agriculture.

24. Single identifiable source that discharges pollutants into the environment.

Examples include the smokestack of a power plant, drainpipe of a meatpacking plant, chimney of a house, or exhaust pipe of an automobile.

- A. life-centered worldview
- B. point source of pollution
- C. nonpoint source of pollution

25. What essential resource is likely to limit the how many people the Earth can hold?

- A. water
- B. oil
- C. space

26. The human population growth rate in 2020 can be best described as

- A. exponential
- B. logistical
- C. slow growth

27. Hardin's "Tragedy of the Commons" essay addressed the conflicts associated with which environmental challenge?

- A. preventing pollution
- B. preserving biodiversity
- C. protecting shared resources

28. Population growth can result in what ethical environmental problem, addressed by ecologist Garrett Hardin in "The Tragedy of the Commons"?

- A. the conflict between water resources and industrial growth
- B. the conflict between individual interests and the welfare of society
- C. the conflict between forest resources and the lumber companies

29. The ecological footprint of an individual is based on what requirements for supporting him/her?

- A. land used for crops
- B. land taken up by housing
- C. forested area that absorbs pollution
- D. all the above

30. Attempts to create a sustainable society strive to achieve what?

- A. greater resource consumption
- B. stable resource consumption
- C. negative population growth

Critical Thinking: 5 total points

31. (2 points) **Define** sustainability and **discuss** one challenge that humans face to achieve sustainability.

Definition: Capacity of Earth's natural systems that support life (including human social systems) to maintain stability or to adapt to changing environmental conditions indefinitely.

Challenge: Students could list any number of issues. Examples: Tragedy of Commons, people are living unsustainably, and our populations is growing.

32. (1 points) **Identify** one factor that may cause an individual or family to have a higher ecological footprint.

-Examples: Mode of Transportation, Where they live (developing vs developed country) and how they live (wasteful?)

33. (1 point) Choose **one** factor (**economic, political, ethical**) and describe how that factor has an influence on sustainable living.

Answers will vary:

Example: Economic- people will do not all have solar panels because they are expensive.

Political- People could vote for candidates who support change that will lead to sustainable living.

Ethical- Making decisions about saving a species that could impact the economy of an entire community of people.

34. (1 point) **Explain** how different worldviews (environmental, human centered, life centered, Earth centered) create challenges as we strive for a sustainable Earth.

Different world view could cause conflict when changes are trying to be made. For example, a person with a human centered worldview would put the needs and wants of people before the needs of an ecosystem or species.