

ONE: Intro to ES

- The environment is best described as the**
 - interactions between the physical world, the living world, and the human world.
- A ___ is a major change in scientific thinking based on new discoveries and observations.**
 - A paradigm shift
- Which of the following pieces of the Scientific Process is critical to ensuring that scientific results are valid?**
 - Peer review
- Which of the following describes linear change?**
 - Remains constant
- An important characteristic of exponential change is**
 - It is not sustainable
- How has human consumption of crude oil changed over the last 100 years?**
 - Exponentially
- Most of the environmental problems we face (i.e. population, pollution, resource use) are**
 - Increasing exponentially
- If the US Economy can maintain a 3% growth rate, approximately how long will it take for the entire economy to be twice the size it is now?**
 - 23 years
- Who issued a warning in the late 1700's concerning the potential threat of unchecked population growth on human civilization?**
 - Thomas Malthus
- What is the major reason that Malthus' predictions on the consequences of unchecked population growth have not exactly come to pass?**
 - Advances in agriculture and health care
- Which of the following statements best illustrates the concept of the "Tragedy of the Commons"?**
 - A factory pollute the air as much as the law allows
- In poor countries, ___ is usually low and ___ is usually high.**
 - Per capita income... infant mortality rate
- Why is poverty such a significant environmental problem?**
 - Poor people make decisions for short-term survival and not long term sustainability
- The two most powerful countries in terms of income, economics, industrialization, and technological ability are ___.**
 - Japan and the U.S.
- Fundamentally, what does a tool allow humans to do?**
 - Manipulate
- Which of the following describes hunter-gatherer cultures?**
 - Intimate interactions with the environment

17. Which of the following human-resource relationships does not characterize a shift from hunter-gatherer to agricultural societies?
- Use of coal as an energy resource
18. The Industrial Revolution is characterized by all of the following EXCEPT
- Increased concern for the environment
19. iPods and cell phones are associated with
- the information revolution
20. The ability to meet humanity's current needs without compromising the ability of future generations to meet their needs is termed:
- Environmental sustainability
21. ___ would state that nature deserves to exist for its own sake, regardless of its usefulness to us.
- Ecocentrists
22. In the book *Silent Spring*, ___ started the ___ movement, based on ___.
- Rachel Carson . . . Modern Environmentalism . . . assessing the problems associated with increasing pollution from chemicals and the resulting effects on the environment
23. Which of the following individuals was the first scientifically-trained forester to head the US Forest Service?
- Gifford Pinchot
24. During which of the following points in the history of environmentalism would laws like the Clean Water Act, Clean Air Act, and the Endangered Species Act have been passed?
- Pollution, Health, and Ecology
25. Which of the following countries would require the most land per person to support the average citizen?
- Japan

TWO: Merp

1. Protons, neutrons, and electrons are all
 - a. Subatomic particles
2. Which of the following is not properly called an element
 - a. Methane (CH₄)
3. Fe²⁺ and K⁺ are examples of
 - a. Ions
4. Which of the following exhibits atoms with strict and specific interactions between them?
 - a. solid
5. Precipitation naturally has a pH around 5.5. How would this be described?
 - a. Acid
6. If 50 ml of a substance has a mass of 75g, what will happen if it is added to a beaker of water?
 - a. The substance will sink
7. When a substance is heated, it tends to expand. How does this affect the density?
 - a. Density decreases
8. Which of the following is an organic compound?
 - a. C₆H₁₂O₆
9. All of the following statements can be concluded from the law of conservation of matter except
 - a. We'll eventually run out of matter if we keep consuming it at current rates
10. Aluminum cans, gasoline, and coal are examples of
 - a. High quality matter
11. The natural tendency of matter to deteriorate from high quality to low quality is called
 - a. Entropy
12. Which of the following represents the major stumbling block to unlimited, cheap energy, and energy independence
 - a. NOT Law of conservation of energy
13. Which of the following is the best example of low-quality energy
 - a. Heat from your computer monitor
14. In an energy transformation, some of the energy always ends up as
 - a. Heat energy that flows into the environment
15. Matter _____ and energy _____ in the environment.
 - a. Cycles... Flows
16. Photosynthesis converts _____ energy to _____ energy.
 - a. NOT light... kinetic
17. What process releases energy from the food you eat
 - a. Cellular respiration
18. Which of the following is not a potentially renewable resource?
 - a. Crude oil