

Unit 1: The Study of Life

Directions:

This topic begins on page 1. It is a good practice to read the chapter first before attempting to answer the questions in this worksheet. Be aware that not every possible test question is covered by this worksheet. Any material in the chapter may appear on a test. Answer each question as completely as you can.

Key Terms:

1. The following words can be found in BOLD throughout this topic and their definitions will appear in the margin. Write their definitions below.

Atom

Molecule

Cell

Biosphere

Ecosystem

Community

Population

Organ system

Organ

Tissue

Energy

Metabolism

Photosynthesis

Reproduction

Development

Genes

DNA

Mutations

Homeostasis

Adaptations

Natural selection

Evolution

Taxonomy

Systematics

Domains

Prokaryotes

Eukaryotes

Protists

Fungi

Plants

Animal

Scientific method

Observation

Inductive reasoning

Hypothesis

Experiment

Deductive reasoning

Prediction

Experimental design

Experimental variable

Responding variable

Control

Model

Scientific theory

Principle

Law

7. Briefly describe how plants and humans differ in their ways of making food.

8. Do nearly all organisms on Earth need as their source of energy?

9. Describe the chemical cycling and energy flow in an ecosystem.

10. Why are tropical rain forests and coral reefs two of the most biologically diverse ecosystems?

11. Why are not all members of the human species exactly the same?

12. Give three examples of how living organisms respond to stimuli.

13. Behavior of a plant or an animal is usually in _____ to minimizing _____, obtaining _____, and _____.

14. Animals are usually not conscious of some behaviors such as regulation of internal temperatures because _____ is usually controlled by the _____ system.

15. As an environment changes, a species may also need to change or adapt to their new environment. Give an example of how an individual in a species adapts to the new environment.

16. What are the three domains of life?

17. What are the four kingdoms of the domain Eukarya?

18. Archaea can live in _____ environments, such as water that is too _____, too salty, or too _____ for any other organism, whereas _____ are found nearly everywhere.

19. What are thought to be first cells on earth?

20. What is one difference between the Kingdom Protista and the other three kingdoms?

21. Fill in the chart below: Domain Eukarya.

Kingdom	Organization	Type of Nutrition	Examples of organisms
Protista			
Fungi			
Plantae			
Animalia			

22. How can bacteria be both harmful and beneficial?
23. Why do protists need to be split into supergroups?
24. List six other classification categories.
25. Each _____ category is more _____ than the one before it; for example, a _____ is more specific than family, and a family is more specific than an order.
26. Describe the science of systematics. Why is it helpful?
27. Using an example, explain the meaning of the binomial name taxonomists assign each species.
28. If you study biology, you could be studying _____ or what is the study of cytology, studying structure or _____, studying _____ or physiology, studying plants or _____, studying animals or _____, studying _____ or genetics, or studying _____ - relationships between organisms and their environment.
29. How does scientific inquiry differ from other ways of knowing about our natural world?
30. Create a flow chart showing steps of the scientific method.
31. List two ways data or results from experiments can be presented.

32. What is statistical significance?
33. Explain how science and technology differ.
34. There has been estimated to be more than 8.7 million species on earth. How many of those species have been identified in name?
35. It is estimated that as many as _____ all species including primates, _____, and amphibians may be in danger of _____ before the end of the 21st Century. This extinction is due to _____.
36. List two ecosystems that are threatened by human activities and the consequences of the extinction of these ecosystems.
37. _____ cannot function properly unless they remain _____ diverse.
38. List three emerging diseases, where emerging diseases come from, and of what are they the result.
39. Climate change is mostly due to an imbalance in the _____ of carbon. Normally, carbon is cycled with in an _____, but due to human _____ more carbon is being released into the _____ than is being removed. The increase in carbon into the atmosphere is largely due to the burning of _____ and the destruction of the forest. The increased _____ in the atmosphere leads to leads to a _____ in temperature called global warming. The _____ effect occurs because these gases allow the sun's rays to pass through, but they _____ and radiate _____ back to Earth.