

Topic: Ecosystem Ecology Worksheet

Summary: Students are introduced to ecosystem stability and factors that contribute to stability. Students are also introduced to the different types of terrestrial ecosystems.

NGSS Standards:

HS-LS2-2. Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.

HS-LS2-6. Evaluate claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.

Time Length: 20 minutes

Prerequisite Knowledge: ecosystem stability, biodiversity

Materials:

Class notes or textbook or online textbook

- <https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/section/6.9/primary/lesson/terrestrial-biomes-bio/>
- <https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/section/6.1/primary/lesson/ecosystems-bio/>
- <https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/section/6.24/primary/lesson/biodiversity-bio/>
- <https://flexbooks.ck12.org/cbook/ck-12-biology-flexbook-2.0/section/1.7/primary/lesson/organization-of-living-things-bio/>

Procedures:

1. Tell the students which section they are to use in the textbook. Students are then going to read the section and answer the questions on the worksheet.

Accommodations:

Give students with a modification IEP less questions to answer in the matching sections. Students with an IEP can take the handout home if they need extra time.

Editable DOCX File and Answer Key:

Available at www.ngsslifescience.com

Ecosystem Ecology Worksheet

1. What is an ecosystem? _____
2. What does an ecosystem have that is not represented in an ecological community?

3. What does it mean for an ecosystem to be resilient? _____
4. Name at least two concepts that help an ecosystem be stable? _____
5. What happens when the conditions in an ecosystem change? _____

Questions 6-16 are about terrestrial biomes

6. Which biome has frozen topsoil? _____
7. *Circle One:* How much biodiversity is in the above biome? Low Medium High
8. Which biome has low-growing plants and some of the largest herbivores? _____
9. *Circle One:* How much biodiversity is in the above biome? Low Medium High
10. Which biome is made up of a coniferous forest? _____
11. *Circle One:* How much biodiversity is in the above biome? Low Medium High
12. Which biome is made up of a forest of trees that drop their leaves in the winter and re-grow the leaves in the spring? _____
13. *Circle One:* How much biodiversity is in the above biome? Low Medium High
14. Which biome receives fewer than 30 cm of rain per year and is hot? _____
15. *Circle One:* How much biodiversity is in the above biome? Low Medium High
16. Which biome has the highest biodiversity? _____

What are the nine levels of biological organization in order from biggest to smallest?

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|--------------------|---------------------|
| 17. Largest: _____ | 22. _____ |
| 18. _____ | 23. _____ |
| 19. _____ | 24. _____ |
| 20. _____ | 25. Smallest: _____ |
| 21. _____ | |