

## Biodiversity Webquest

Those of us who love nature are awed by the incredible variety of living things that share our planet. From multicolored coral reefs to moss-draped forests, variety is “the spice of life.” But variety in the biosphere gives us more than interesting things to look at. Our well-being is closely tied to the well being of a great number of other organisms. This webquest will define biodiversity, identify the three types of biodiversity, why we value biodiversity and what is threatening it today. Follow directions for each part of the webquest activity.

### Part 1:

Answer the questions below while watching the video.

<https://www.youtube.com/watch?v=aqtdalkxnQo>

1. Define Biodiversity.

2. Name three types of biodiversity and give examples of each type of biodiversity.

3. How many species do scientists estimate that exist on Earth?

4. Fill in the following...

Biodiversity is \_\_\_\_\_ at the equator.

Biodiversity is \_\_\_\_\_ near the poles.

### Part 2:

Click on “A Healthy Biodiversity Offers Many Natural Services”. Read the information and answer the questions.

Follow this link:

<http://www.globalissues.org/article/170/why-is-biodiversity-important-Whois-cares>

5. Name three benefits from each value listed.

Ecosystem Services: \_\_\_\_\_

Biological Resources: \_\_\_\_\_

Social Benefit: \_\_\_\_\_

6. Fill in the blank:

\_\_\_\_\_ need a variety of \_\_\_\_\_ to ensure successful survival.

Part 3:

Read Massive Extinctions From Human Activity and watch the video found on the page.  
Answer the following questions.

Follow this link:

<http://www.globalissues.org/article/171/loss-of-biodiversity-and-extinctions>

7. What is the current estimated extinction rate? What is the predicted extinction rate?

current: \_\_\_\_\_ predicted: \_\_\_\_\_

*Watch the video on the page and answer the following questions.*

8. At threat of extinction are:

- a. \_\_\_ out of 8 \_\_\_\_\_
- b. 1 out of 4 \_\_\_\_\_
- c. \_\_\_ out of 4 conifers
- b. \_\_\_ out of \_\_\_ amphibians
- c. 6 out of \_\_\_\_\_
- c. 75% of genetic diversity of \_\_\_\_\_ have been lost
- d. \_\_\_ % of the world's \_\_\_\_\_ have been over exploited
- d. Up to \_\_\_\_\_% of the world's known species risk extinction if the global temperatures \_\_\_\_\_ by \_\_\_\_\_ degrees Celsius.
- e. \_\_\_ of the reef building corals are threatened with extinction.

f. Over \_\_\_\_\_ million \_\_\_\_\_ suffer from water scarcity

g. 9. What are the five pressures that threaten biodiversity?

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Part 4:

Read and answer the questions below relating to the topic Hotspots.

Follow the link: <http://www.conservation.org/how/pages/hotspots.aspx>

10. List and define the two criteria that a hotspot must meet to be considered a hotspot:

11. How many regions in the world are considered a hotspot?

12. What percentage does hotspots represent of the Earth's land surface?

13. What does endemic mean? How many endemic species are estimated to be found in hotspots?

Part 5:

Read the article on invasive species and answer the following questions.

Follow the link:

<http://www.nwf.org/Wildlife/Threats-to-Wildlife/Invasive-Species.aspx>

14. Define invasive species.

15. Name three ways that invasive species are spread to new ecosystems.

16. Name two invasive species found in the United States.

Part 6:

Read the blog on agricultural innovations and how they can help improve our world's biodiversity. Answer the follow questions below. Follow this link:

<http://blogs.worldwatch.org/nourishingtheplanet/five-agricultural-innovations-to-improve-biodiversity/>

17. List the five innovations and provide a brief example of each innovation in action.

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Part 6:

The Minnesota DNR works on conserving our state's natural resources. Read or listen to the article on Minnesota Public Radio. Follow the link:

<http://www.mprnews.org/story/2014/09/25/sounds-voices-bison>

18. Why was crossing bison with cattle was a bad conservation move?

19. What is the bison role in the prairie ecosystem?

20. What is the Minnesota DNR planning to do with the bison once the herd reaches 500?