



Biodiversity Study

Activity Description:

Find evidence of biodiversity in a plot study.

Materials:

- This activity sheet, pencil, colored pencils/markers (optional)
 - Tape measure (optional)
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Biodiversity is the variety of life.

Areas with a lot of different species (plants, animals, bacteria), ecosystems, and genetics are high in biodiversity. Areas with very little variety in life, with only 1 or 2 species for example, are low in biodiversity.

Places with low biodiversity are at greater risk of catching disease, dying from pests, being devastated by wildfires, and losing species to extinction. This is because in an ecosystem, each species, no matter how small, has an important role to play. If those important species aren't there to play their roles, the ecosystem becomes weaker and has a harder time surviving when there are environmental stressors, such as drought. Biodiversity is very important for keeping Earth's systems healthy!

Watch this video to learn more about biodiversity: <https://bit.ly/biodivimportance>

Circle the image that has more biodiversity.



Corn field



Sonoran desert

Directions:

1. **Take 2 minutes to count up as many different species of plants as you can find in this area.** Make sure you don't count the same species multiple times (for example, you can only count a ponderosa pine once) and be sure that you're keeping count!

How many species did you find?

If you were in an area with a lot of different species, that could mean it's high in biodiversity. If you were in an area with only 1 or 2 species, it would be low in biodiversity. In this activity, we are going to study a small area's biodiversity.

2. **Find a study area with as many different plants as possible.**
3. **Make your study plot.** Form a 10 foot by 10 foot square by taking 10 paces from one corner to the next or measuring the square with a tape measure. Use objects to mark the corners.
4. Draw what's in your plot in the empty square (page 6).
5. In your study plot, **see how many different species of plants you can find.** Look at trees, shrubs, grasses, flowers, and tiny sprouts—they all count! Come up with names (names like curly grass are fine for unknown species) for all the species, and then **count how many of each species there are. Record your findings** in the table and graph (pages 4 & 5).
6. Looking at your data and study plot, answer:
 - a. How many plant species did your plot have? What species did you have the most of?
 - b. Do you think your plot provides food or shelter for any animals? What animals and why?
 - c. How does your plot look different throughout the year? Does it become more or less biodiverse in different seasons? Why?
 - d. Would the species in your plot survive if they were on top of Humphreys Peak (the tallest point in Arizona at 12,633 feet)? Why or why not?

7. **BONUS!** Repeat steps 2-5 by making another study plot in a different area. Compare the plots. Which plot was more biodiverse? Why?

8. **Share your activity sheet with Seeds of Stewardship.** Send us photos of your plot study and completed worksheet:
 - Post your photos to Instagram and tag [@aztsos](#)
 - Or email your photos to
 - julie@aztrail.org for Northern AZ
 - treven@aztrail.org for Southern AZ

Remember that biodiversity keeps our planet healthy! So do what you can to protect the environment and all its life forms, whether you're on the AZT or at home!

Biodiversity Plot Study

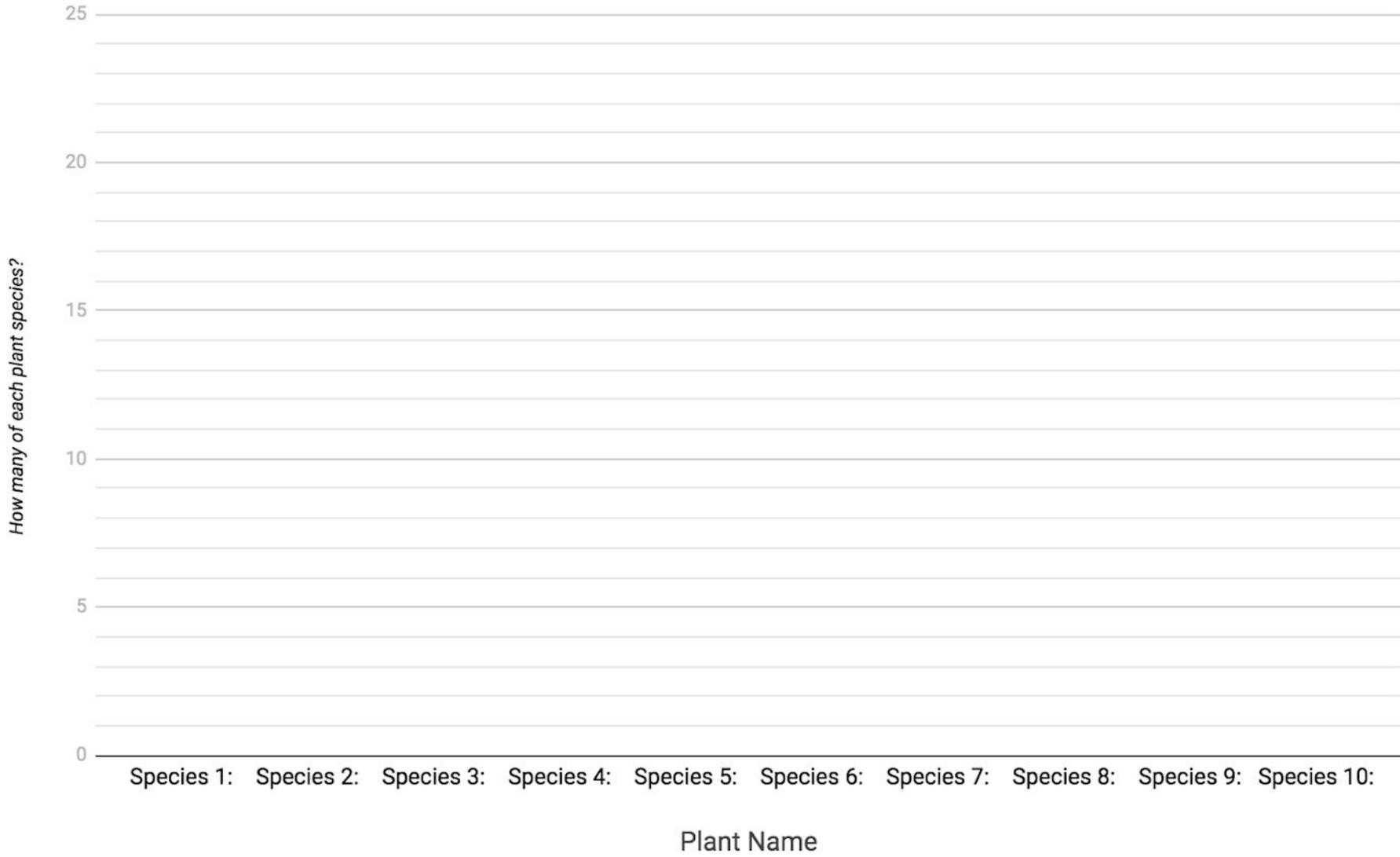
Record Your Data!

Tally up how many of each species you have in your plot.

| | Plant Name | Tally | Total Number |
|------------|------------|-------|--------------|
| Species 1 | | | |
| Species 2 | | | |
| Species 3 | | | |
| Species 4 | | | |
| Species 5 | | | |
| Species 6 | | | |
| Species 7 | | | |
| Species 8 | | | |
| Species 9 | | | |
| Species 10 | | | |

Use your data to create a graph.

Biodiversity Plot Data



Draw your study plot

