

Science Journal: Data Visualization and Analysis

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RECORD YOUR UNDERSTANDING!**
(Go to "File" then "Make a copy")

Engage

- LOOK AT THESE IMAGES AND ANSWER THE ASSOCIATED QUESTIONS TO LEARN MORE ABOUT DATA VISUALIZATION.

PIE CHART

1. Describe what information this pie chart is visually representing.
2. What kind of relationship between the different "slices" can you determine from examining this chart?
3. What percentage of all species on Earth do insects represent? Round your answer to the nearest tenth.

BAR GRAPH

1. This bar graph is from a population study. If each country is a study site, how many study sites are reflected in this visualization?
2. What metric is used on the y-axis?
3. What important data and labels are missing from this graph?

A SCATTERPLOT - RELATIONSHIP BETWEEN PREDATOR AND PREY

1. What variable is plotted on the x-axis? What two variables are plotted on the y-axis?
2. How did the moose population change between 2002 and 2007? What happened to the wolf population from 2003 through 2006?
3. Based on this visualization, how do you think the two y-axis variables are related?

Explore

1. Watch the video and complete the data visualization and analysis activity.

Explain

1. Why did you choose to use the visualization you picked to show relative abundance of ants vs. non-ants? What is the ratio of ants vs. non-ants in this study?
2. Why did you choose to use the visualization you picked to show the abundance of anoles at each site? Was there a difference of anole abundance at perch and open sites? Theorize why there might or might not be a relationship between anole abundance and the type of site.
3. Why did you choose to use the visualization you picked to show the relationship between anole abundance and non-ant arthropod abundance at each site? Describe any relationship you see between anoles and non-ants or anoles and ants.

4. The **carrying capacity** for brown anoles on one acre of land is estimated to be 8000 individuals if space is the only **limiting factor**. Based on the data you explored, what other limiting factors might impact **exotic** brown anole populations?
5. Florida's one **native** anole, the **green anole** eats the same prey as **brown anoles** but prefers areas that are less **urbanized**. What could be a limiting factor for green anoles in areas where brown anoles are established?

Extend

Infographics are a great way to communicate scientific data and messaging while exercising your own creativity. Complete [this activity](#) and create your own infographic about exotic species in Florida.

Evaluate

After you have completed your population count and habitat assessment, share your findings with your classmates, teacher, family, and friends. Note any differences and similarities and discuss what you have learned!