



# DuneVersity

# JOURNAL

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Name

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Date

Trail Group



# Types of Field Investigation Questions

- *Descriptive field investigations* involve describing parts of a natural system. Descriptive questions focus on measurable or observable variables that can be represented as written descriptions, estimations, averages, medians, or ranges.
  - How many \_\_\_\_\_ are there in a given area?
  - How frequently does \_\_\_\_\_ happen in a given period?
  - What is the (temperature, height, dissolved oxygen, etc) of \_\_\_\_\_?
- *Comparative field investigations* collect data from different groups to make a comparison. Comparative questions focus on one measured variable in at least two different variables (locations, times, organisms, or populations).
  - Is there a difference in \_\_\_\_\_ between group A and group B?
  - Is there a difference in \_\_\_\_\_ between different locations?
- *Correlative field investigations* involve measuring or observing two variables and searching for a pattern. These questions focus on two variables to be measured and tested for a relationship.
  - What is the relationship between variable A and variable B?
  - Does \_\_\_\_\_ go up when \_\_\_\_\_ goes down?
  - How does \_\_\_\_\_ change as \_\_\_\_\_ changes?

# Eye Spy Activities

You will be doing a series of activities within your trail group to practice observation skills. Use this space to take notes if needed.

# Observation Hike

Observe your surroundings. What are some things you see that you are interested in learning more about?

Eastern Deciduous Forest	Wetland	Prairie

# Looking Further

Take a look at the previous page. Which 3 topics would you like to learn more?

Topic	Questions we have	How will we find this information

# Narrowing The Topic Down

Pick one topic from the previous page. Write down 2 questions you have about this topic. How are you going to collect data for these questions?

Question 1	Question 2

# Investigation Question

Within your trail group, decide on one investigation question and a hypothesis and write it here.

Research Question:

Hypothesis:

# Research Topic

You will have time within your trail group to research your topic - take notes on these next two pages that you would find useful for your investigation question.



# Research Continued

# Data Table

Create a data page with your trail group that you will use to record the data you collect during your investigation

# **Data Table Continued** (if needed)

# Analyze Data

What does your data mean? How can we use this?

# Analyze Data Continued

What factors affected your data? What scientific error occurred?

# Presentations

Here is what you need to include in your presentation. Remember, you do not need to put everything onto your poster, but be sure to present it in your presentation.

- **Investigation question** - What were you investigating?
- **Hypothesis** - What did you think you would find?
- **Methods/Materials** - How did you collect your data and what tools did you use?
- **Results** - Create a graph, table, etc. for your presentation. Identify any trends you found in your data (means, modes, and medians are easy to analyze in a short period of time)
- **Discussion** - Identify factors in the field that may have affected the outcomes and scientific error. Explain why you think you found the results you found.
- **Conclusion** - Include a clear statement that answers your investigation question and states whether your hypothesis is correct. Use data to support the conclusion. Recommend future action plans (what you would do differently).

# Presentation Notes

Use this space to take notes for your presentation.

# **A few minutes alone...**

Take a few minutes to observe your surroundings. What do you see? How does this make you feel?