

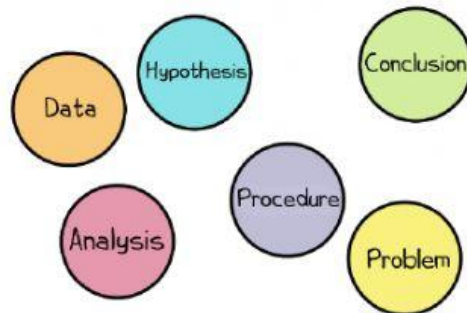


Amoeba Sisters | Video Recap

NAME: _____

Amoeba Sisters Video Recap: Nature of Science

1. What is the scientific method? Is there just one universal scientific method? Why or why not?



Reflect on what was discussed in the video.
How would you complete these general
sentence stems regarding the **nature of science**?



*Note: It's important to remember that this video only mentions
some components of the nature of science! The below sentence
stems can contain more characteristics, which we encourage
you to discuss and consider.*

2. Science has a major goal of:

3. Science can lead to the development of:

4. It's important to know that science is:

5. Why is it important to verify the **credibility** of a source
when researching a topic?



6. What does it mean if a science paper is **peer-reviewed**
and why is this significant?



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7. **Observations** and **inferences** are important in science. How would you explain the difference between the two words?

8. **Constants** ("controlled variables") and a **control** are easily confused by students! How would you explain the difference between the two words?

9. Why is a **control group** generally very important in an experiment?

Data Collection: Pinky's science fair project in junior high focused on an observation that the crickets outside her window chirped less frequently when the temperature was colder.

Fun Fact: There are free "cricket chirp calculators" online you can explore, which didn't exist freely online when Pinky was in junior high.

Consider if data was collected consisting of the **average number of cricket chirps** at different **temperatures** in her backyard.



I don't hear crickets chirping as frequently on colder evenings as I do on warmer evenings...

CHIRP!
...Yea, Dooo.

10. Which variable would be an **independent variable**? _____

11. Which variable would be a **dependent variable**? _____

12. Which variable (#10 or #11) would ideally be plotted on the X-axis of a graph? _____

13. In the collection of data, list at *least* 3 important **constants** (also known as "controlled variables")?

14. Brainstorm and write at *least* 3 potential challenges or important points to consider when conducting the described data collection.

Example: Repeated trials are not mentioned, and this would be important for optimal data collection.

A)

B)

C)



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