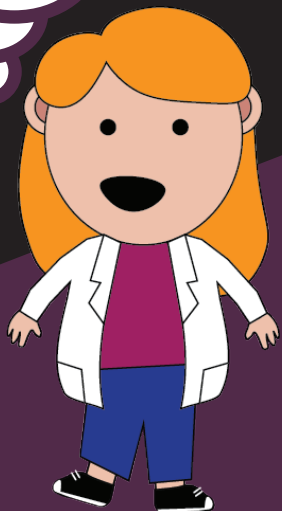


What is a hypothesis?



A hypothesis is a proposed explanation of an observation.

In science, a hypothesis is a testable idea. This is the beginning of the scientific method.

FOR MORE INFORMATION

Please visit our webpage at www.srel.uga.edu or visit us on social media (@ugasrel or #UGASREL).



The University of Georgia's Savannah River Ecology Laboratory pursues basic and applied research at multiple levels of ecological organization, from atoms to ecosystems. The SREL is located near Aiken, South Carolina, on the Savannah River Site, a Department of Energy facility, and the first national environmental research park. The lab's research extends beyond the site to regional and global projects. To date, the lab has more than 3,000 peer-reviewed publications.



Savannah River Ecology Laboratory
UNIVERSITY OF GEORGIA



The Scientific Method

This publication is supported by grants from the Department of Energy. This publication is a part of the Radiological Education Monitoring and Outreach Project (REMOP).

Scientists use the scientific method to guide experimental design and answer questions.

What is the Scientific Method?

The scientific method is the process through which scientists ask and assess questions and hypotheses. This is the most basic part of the scientific research process. Scientists use these steps as a guide to answer questions about the environment, humans, and outer-space.

It is important that the scientific method remain neutral. The conclusions drawn from the scientific method can inform your decision-making processes, as well as policy-makers.

Once a scientist reaches the end of the scientific method, there are often more questions and observations made based on the experiment. The scientific method can never have a true end, there is always another question to answer!

Observation

An observation is something that can be seen, heard, or noticed.

"My refrigerator is warm."

Experiment

An experiment tests the hypothesis through a series of controlled trials and sample collection.

"I'll make sure the refrigerator is plugged in."

Conclusion

Scientists compare the results from the experiment to the original hypothesis. This is what a scientist learns from the experiment.

"My refrigerator must be broken."

Hypothesis

An explanation made on the basis of an observation and acts as a starting point for further investigation.

"My refrigerator is warm because it is broken."

Analysis

The samples and data collected during the experiment need to be examined and measured.

"The refrigerator was plugged in."

Observation

As a scientist draws conclusions, they can begin asking more questions and creating further experiments to answer those.

"Why is the refrigerator broken?"

How do you use the scientific method?

Do you ask questions about the environment you live in? That means you're a scientist too!