starts with a

THE SCIENTIFIC METHOD

QUESTION

The _____ starts when you ask a _____ about something you _____.

_____?
_____?
_____?
_____?

It needs to be a _____ question, not one based upon _____.

RESEARCH

Research what is _____ about your question. _____ from others who may have already conducted _____. Your question may already have been _____!

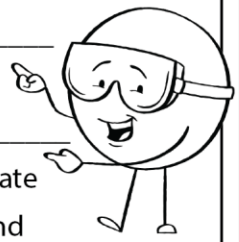
You may go back and ask another _____

HYPOTHESIS

A hypothesis is an educated _____ about the _____ to your question. It is your _____ about the _____ of any experiments you _____. It should be _____ and not _____ based.

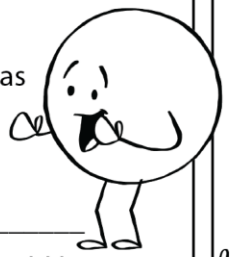
EXPERIMENT

Designed to _____ your hypothesis. It should be a _____ test with appropriate _____ and _____. It should be able to be _____ by you and be able to be repeated by other _____.



REPORT

Regardless if your _____ was _____ or _____, you now have _____ to _____! It could be in a _____ to your classmates, a _____ _____ or even published in a _____ _____. Other scientists want to know what you've found!

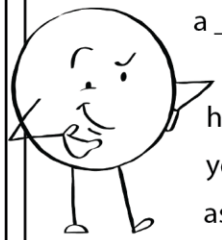


CONCLUSION

Developing a _____ is the point where you reach a _____ about your _____. Was it _____ or _____? If it was wrong, you may go _____ to _____ it and _____ your experiment.

ANALYZE

_____ and analyze your _____. It may help to use a _____ or a _____ to help _____ your data. Always ask yourself if you got any unexpected _____ or _____ that might mean a problem with a your experiment.



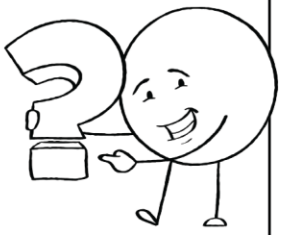
COLLECT DATA

Collect all of your _____ and _____ in a journal. Record it _____ and don't try to make it _____ your _____! Always use correct _____ of _____ and be sure to write down the _____ and date.

THE SCIENTIFIC METHOD

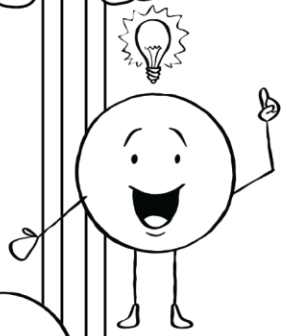
starts with a

QUESTION

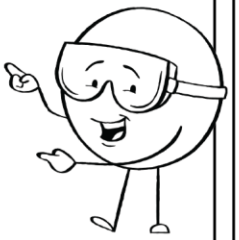


RESEARCH

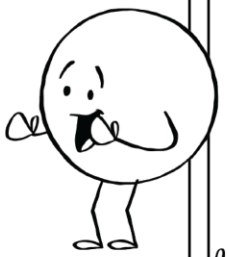
HYPOTHESIS



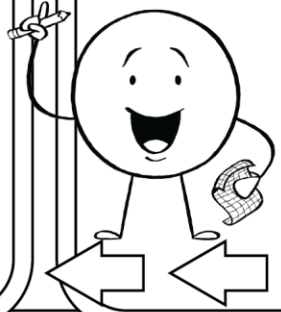
EXPERIMENT



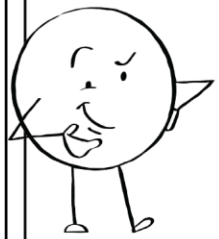
REPORT



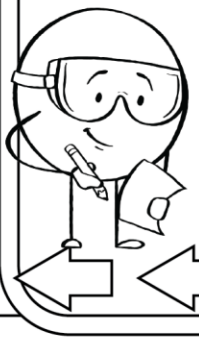
CONCLUSION



ANALYZE



COLLECT DATA



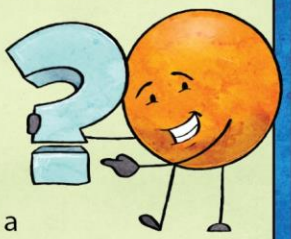
starts with a

THE SCIENTIFIC METHOD

QUESTION

The process starts when you ask a question about something you observe.

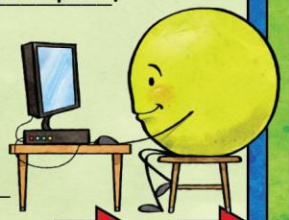
Why?
How?
When?
What?



It needs to be a testable question, not one based upon opinion.

RESEARCH

Research what is known about your question. Learn from others who may have already conducted experiments. Your question may already have been answered!



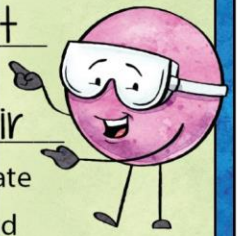
You may go back and ask another question

HYPOTHESIS

A hypothesis is an educated guess about the answer to your question. It is your prediction about the outcome of any experiments you design. It should be measurable and not opinion based.

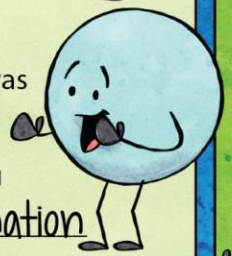
EXPERIMENT

Designed to test your hypothesis. It should be a fair test with appropriate variables and controls. It should be able to be repeated by other scientists.



REPORT

Regardless if your hypothesis was right or wrong, you now have information to share! It could be in a report to your classmates, a science fair or even published in a science journal. Other scientists want to know what you've found!

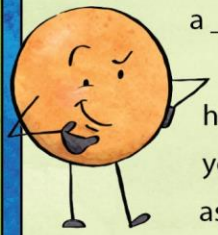


CONCLUSION

Developing a conclusion is the point where you reach a determination about your hypothesis. Was it right or wrong? If it was wrong, you may go back to revise it and redesign your experiment.

ANALYZE

Organize and analyze your data. It may help to use a chart or a graph to help visualize your data. Always ask yourself if you got any unexpected results or errors that might mean a problem with a your experiment.



COLLECT DATA

Collect all of your data and observations in a journal. Record it accurately and don't try to make it fit your hypothesis! Always use correct units of measurement and be sure to write down the time and date.