Quiz on

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STEPS of the SCIENTIFIC METHOD (memorize the order)

1. Identify problem
2. Research the topic
3. Hypothesis
4. Experiment
5. Data
6. Conclusion

Vocabulary

* Problem – write out in question form; MUST be testable
* Research – background information about your experiment
* Hypothesis – prediction as to the possible outcome of the experiment;
  + can be written as an IF…THEN statement
  + can be stated positively or negatively
* Controlled Variable – variable that is constant (the same); does NOT affect the outcome of the experiment
* Independent/Manipulated variable – factor in the experiment which is expected to cause change
* Dependent/Responding variable – factor in the experiment that changes because of the independent/manipulated variable
* Data – scientific information; organized in to tables, charts and graphs

Important to know!!

* Only ONE variable can be investigated at a time
* Some experiments may have a control group and an experimental group

Technological Design Process-

Process by which new technology (such as cell phones and cars) is created.

1. Identifying a problem or need

* Research and gather information on what is already known about the problem or need

1. Designing a solution or a product

* Generate ideas on possible solutions or products
* Evaluate the factors that will limit or restrict the solution or product design
* Determine the trade-offs of the solutions or products (what must be given up in order to create the solution or product)

1. Implementing the design

* Build and test the solution or product
* Identify any problems with the solution or product
* If necessary, redesign the solution or product to eliminate any problems in the design

1. Evaluating the solution or the product

* Determine if the solution or product solved the problem
* Identify the pros and cons of the solution or product

Scientific model

* idea that allows us to create explanations of how the something may work.
* Models can be physical or mental.