Inquiring Minds Want To...GROW!!!

Brought to you by your Park Meadows Science and Technology Team

Tick Tock Tack

Question:
What materials can become oxidized?

Hypothesis:
If different items are placed in water then these items will oxidize and rust.

YOU NEED/Materials:

- 3 or 4 different kinds of thumbtacks or push pins
- Clear jar
- Water
- Several days' time
- Parent/Adult assistance as needed

Overview:
Oxidation is a process that occurs when oxygen combines with various substances. Oxidation can take a long time, like when iron rusts. If you wished to tack up posters or hang decorations outdoors, you might want to use thumbtacks or push pins. But you might want to be sure that the tacks and push pins will hold up well in the weather.

Procedure:

1. Find several kinds of thumbtacks or push pins. Some may be coated or decorative, some may be brass.
2. Place the tacks along with push pins in a clear jar filled with water. A mayonnaise, peanut butter or pickle jar will work well. The jar may be plastic or glass.
3. Draw a diagram on a piece of paper showing the location of each thumbtack and the name of its brand or description.
4. Set the jar in an out-of-the-way place
5. Once a day, look at the objects in the jar in write down your observations. The water and the period of time under test is the constant (variables that stays the same throughout the experiment).
6. After one week, examine your notes on the observations you made. Which one started to rust first? Are there any items that did not rust? Why do you think some did not rust as much as others?

Results and Conclusion:
Write down the results of your experiment. Was your hypothesis correct?

Other Variables to add to the experiment:
Try using other types of metal objects, such as staples, brass fasteners, or paperclips.