Activity: Adjust the Volume

Problem: *How does temperature affect air?*

Hypothesis/Prediction:
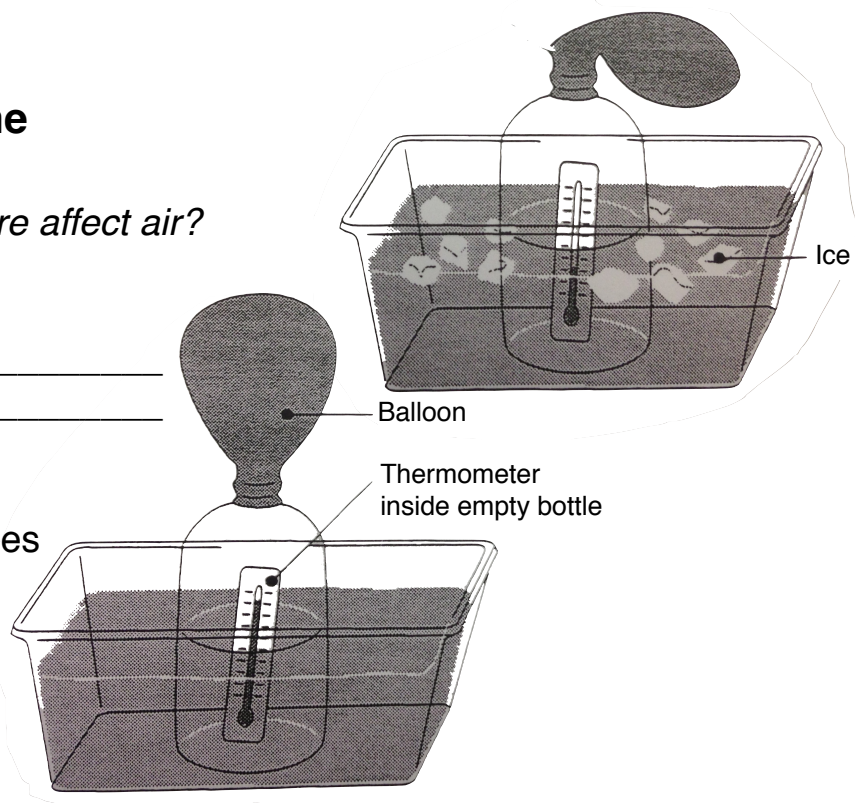
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Materials:
- small balloons   - 2 glass bottles
- two tubs for holding water
- hot water   - bag of ice
- jar lid   - Master #5

Ice

Balloon

Thermometer
inside empty bottle

Variables:
   Controlled: _____
   Independent/Manipulated: _____
   Dependent: _____

   _____

Procedure:
1. Place a thermometer in each of the bottles. Record the temperature on Master #5.
2. Leave the thermometers in the bottles and secure a small balloon over the mouth of each bottle.
3. Predict what the balloons will look like if one bottle is put in hot water and the other in ice water. Record on Master #5.
4. Put a balloon-bottle in each tub and record observations including the temperature inside the bottles.
5. Discuss: (1) If air couldn't get in or out of the bottle, what caused the balloons to change? (2) What will happen if each bottle is switched to the other tub?

Observations:

_____
_____
_____
_____

Inference/Conclusions:

_____
_____
_____
_____