15 minute laboratory exercise: ***The Water Cycle***

Problem: To observe evaporation and condensation in the water cycle.
Skills: Observation and critical thinking
Objectives:

1. To observe the water cycle: evaporation, condesation, precipitation and collection.
2. To assemble a miniature model of the water cycle that occurs on Earth.
3. To determine the effect of pollutants on the water cycle.

Materials: A large clear bowl, plastic wrap, a weight, a smaller container (a cut-down yogurt cup works well), a rubberband or piece of string, a 100-watt lamp.

Pre-questions:

1. How do you think discoloration will affect our water cycle?
2. List the three states (forms) water may form.

Procedure:

1. Place the small container in the middle of the large clear bowl.
2. Fill the bowl with a little water, being careful not to fill the small container inside.
3. Cover the bowl with plastic wrap and fasten the plastic wrap around the rim of the bowl with your rubberband or string.
4. Put a weight on top of the plastic wrap in the center.
5. Place the contraption in front of a 100-watt lamp and observe.
6. Perform two trials, one using clear tap water and one using water that has been tinted with food coloring (representing polluted water).

Post-questions:

1. How long does it take for the water to evaporate and condense on the plastic wrap?
2. Where does the water go after it condenses on the plastic wrap?
3. Does the tinted water evaporate more quickly or more slowly than the clear water?