

MATERIALS:

pond water
rain water
dirty water (mix dirt and water)
four clear plastic cups labeled A, B, C, and D
small can with holes in bottom
paper towel
sand
microscopes
bottle with eye dropper filled with bleach
slides
goggles for each student
student sheet

I. Activity

- A. Get three samples of water from your teacher. Pour some pond water (A), rain water (B), and "dirty" water (C) into clear plastic cups. Label each.
- B. Observe a drop of pond water under the microscope and draw what you see.
- C. Observe a drop of rain water under the microscope and draw what you see.
- D. Observe a drop of dirty water under the microscope and draw what you see.
- E. Pour dirty water into a can with a paper towel and sand and set the can over a clear cup labeled D. Allow this to stand for 30 minutes.
- F. Add several drops of bleach to cup A. Observe what happens to the organisms after bleach is added.
- G. Compare cup A to cups B and C. Even water that appears to be clear must be disinfected with chemicals to make sure it is safe to drink.
- H. Treat the water in cups B and C by putting several drops of bleach in each.
- I. Stir cup A and compare it with the treated water in cups B and C. Look at a sample of each again with a microscope.
- J. Observe a sample of the water in cup D under the microscope.

II. Follow-Up

Name: _____

Answer the following questions:

1. What did you observe?
2. What is the difference between the water in cups A, B, and C?
3. Is this filtered water clean enough to drink? Why or why not?
4. What are possible uses for this water?
5. What do you see in the microscope?
6. What happens to the microorganisms when bleach contacts them?
7. What is potable water?