The Hydrologic Cycle

(20 minute activity without optional projects)

Objective

Students will be able to:

1) Discuss the components of and illustrate the hydrologic cycle (water cycle)

Materials

- ❑ Transparencies of the *Hydrologic Cycle,* Figures 1 and 1A
- ❑ Overhead projector

Background

Water is life. Without it, Earth would be a vast wasteland. Our bodies are approximately 92% water. All living things depend on it. As a result, water is a precious commodity. Wars have been fought over water rights. The water that is here now is the only water earth will ever have. It takes many forms, such as vapor, droplets, and ice. No new water is produced; it is simply recycled again and again. This process is called the hydrologic cycle. Although the surface of the earth is approximately 75% water, only about 3% of it is fresh water. Of that, about 75% is in glaciers and the polar ice caps. This leaves a limited (less than 1%) but constantly moving supply for our use. This movement can be quick and highly visible, or may take a slower path. Some water caught in deeper aquifers may have been there for hundreds of years. If we want clean water available to us and other earth dwellers, we must take care of this system.

Procedure

1. What is the hydrologic or water cycle (see Glossary)? Refer to *The Hydrologic Cycle* illustration (Figure 1). Using an overhead transparency of Figure 1, discuss the terms describing the hydrologic or water cycle.

2. Ask students to complete a research project demonstrating one facet of the cycle. They must be ready to interpret their work to peers. For example, groundwater can be shown by placing layered soil in a glass baking pan, tilting it, and pouring colored water on the higher side. Take time to watch the liquid s movement. Note and compare how it moves through the different soil types.

Assessment

Ask students to:

- ❑ Describe the hydrologic cycle and the dynamics of each component.
- ❑ Place water cycle terms where appropriate using the *Hydrologic Cycle* illustration (Figure 1A).
- ❑ Write a story following the journey of a water droplet that travels through at least four components of the hydrologic cycle.

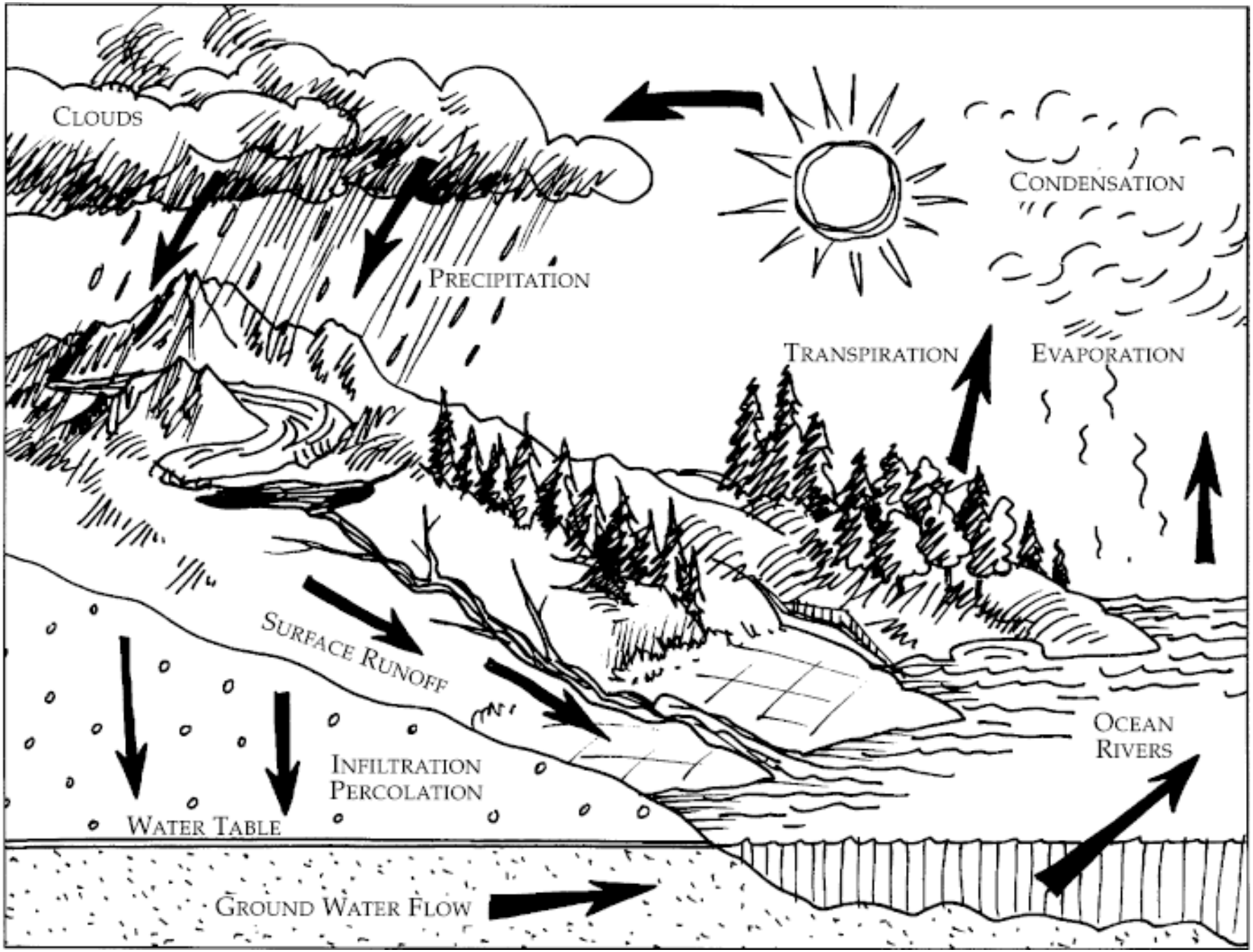

Figure 1. Hydrologic Cycle

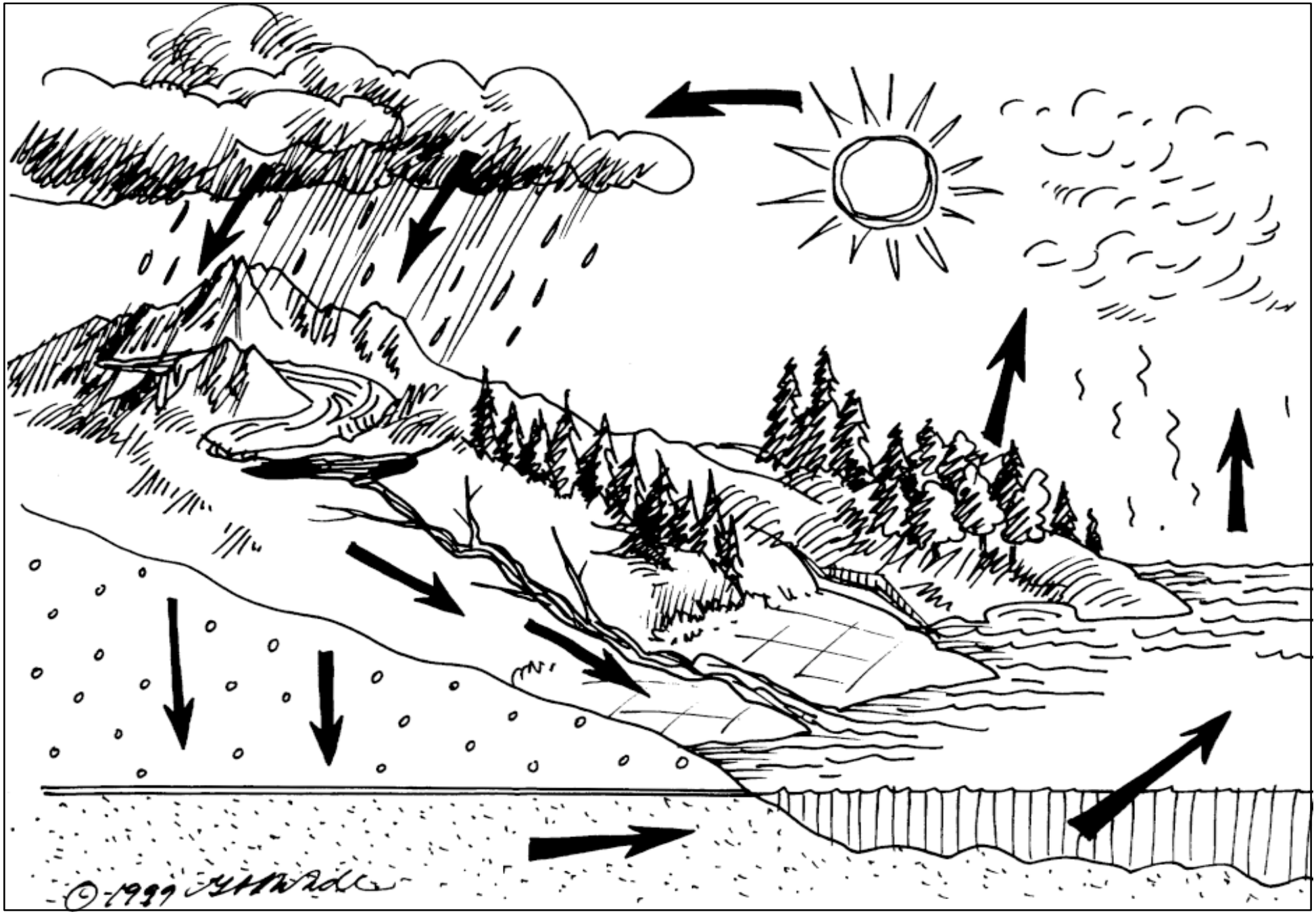

Figure 1A. Hydrologic Cycle