

# Lake Okeechobee, the Everglades, and the Rainy Season in Three Cups

**Subject:** Science

**Duration:** 15 minutes

**Location:** Outdoors

**Key Vocabulary:** Water conservation, water cycle

**Related Activities:** Water Poetry; We're Sponging Off the Everglades; The Water Watch; Who's Killing Our Fish?; Shrimp Scampers

**Florida Sunshine State Standards:** SC.4.L.17, SC.5.L.15, SC.6.L.14



## Materials

- Projection of “Water - Life Blood of South Florida”
- Three cups
- An empty tray or bucket to catch water
- One gallon of water

**Objectives:** The student will be able to: a) describe the water cycle affects on South Florida’s national parks, b) list three ways the water cycle is being influenced by the population growth in South Florida, and c) predict the consequences of altering the natural water flow on the Everglades/South Florida ecosystem.

**Method:** Students will be able to recognize the concern for water flow to Everglades National Park and Florida Bay through a demonstration.

**Background:** Water is the most critical issue facing Everglades National Park and Big Cypress National Preserve. It enters the park directly in the form of rainfall, or indirectly by flowing down from the north. Historically, the rain that fell on the Kissimmee River Basin eventually made its way south into Lake Okeechobee and then the Everglades. Today, much of the water is diverted for other uses before it reaches the park; hence, little is available to evaporate back into the atmosphere. The quality, timing (when the park receives the water), and distribution of the water are as important as the quantity (or amount) of water the park receives. For additional information concerning water issues, see the “Natural History” section.

## Suggested Procedure

1. Have students sit in a circle and show them “Water - Life Blood of the Everglades.”
2. Discuss the water route as it travels south from the Kissimmee River drainage to Lake Okeechobee, through the Everglades, into Florida Bay and the Gulf of Mexico, and finally out to the coral reefs or the Dry Tortugas.
3. Discuss canals, the rainy season, and urban Miami’s wells, flooding, agricultural industry, and various uses of water by humans (tourists, year round residents, heavy industry, etc...)

4. Take three cups, filled with the appropriate amounts of water, and identify each cup with a sign:
  - Cup 1 = Lake Okeechobee (3/4 full)
  - Cup 2 = the Everglades (empty)
  - Cup 3 = the summer rains (full)
5. Label an empty tray or bucket, "Gulf of Mexico."
6. Have a volunteer hold cup 1 above cup 2, tilting slightly.
7. Hold cup 3 above cup 1 and pour its contents into cup 1. Cup 1 (Lake Okeechobee) will overflow into the glades (cup 2). The tray (or bucket) represents the Gulf of Mexico. Place it underneath cup 2 to catch the overflow coming out of the Everglades. The water overflow demonstrates the abundance of water that South Florida receives in the summer rainy season. Now empty the tray.
8. Pass cup 2 (the Everglades) full of water and the empty tray around the class. Each student in the class represents a water user. They should be instructed to name one use of water, pour a small amount of the water from cup 2 into the empty tray and then pass both the cup and tray on to the next student.
9. Once you have gone around the entire class, finish the activity by pouring the water that remains in cup 2 (Everglades) if any, into the Gulf of Mexico (tray or bucket). That amount represents the water left to sustain life in the Everglades during the winter dry season.

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## Evaluation

Discuss the problems of the water flow to Everglades National Park. Include in your discussions problems related to the quality, quantity, timing, and distribution of water. Ask students to brainstorm reasons for these problems. Conclude by discussing what actions they can take to overcome these problems (conserve water at home, help educate others on the importance of the Everglades hydrologic cycle to all of South Florida, etc...)

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## Evaluation

Create posters to show ways to save water. Display in the classroom or around the school.

# Water: Life Blood of South Florida

