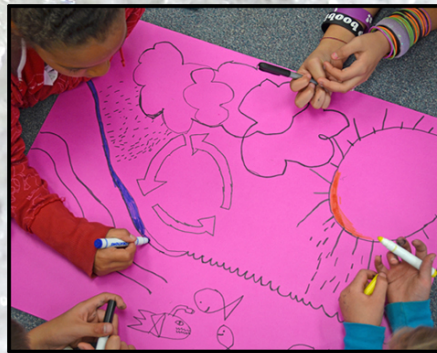




# 4-H Water Wizards

## Student Lab Book



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This Lab Book belongs to:

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(Student Scientist)



**UNIVERSITY OF CALIFORNIA**  
Agriculture and Natural Resources

4-H Youth Development Program

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Cover design: Marianne Bird  
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**Sessions 2, 3, & 9 do not have any corresponding pages**



# 4-H Water Wizards

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### Become a Scientist



Welcome to the 4-H Water Wizards program! You are beginning a 12-week journey where you will have the opportunity to be a scientist as you conduct several hands-on experiments to increase your knowledge and understanding about water and its importance to the planet. In this program, you will learn about water and the environment, water properties, and service learning.

This Lab Book contains the pages you will need to participate in the many experiments you will conduct in the 4-H Water Wizards program, as well as a glossary of terms. Please note that there are no pages for sessions 2, 3, and 9. Check with your adult leader or teacher to find out about getting supplies for each of the experiments.

## Session 1

### Water Evaporation Experiment Data Sheet

#### Procedure:

1. Label the cups Sun, Shade, and Covered.
2. Using a measuring cup, partly fill the plastic cups with water so that there is the same amount of water in each cup.
3. Mark the water level on each cup with a permanent marker.
4. Cover cup labeled Covered with plastic wrap and secure with a rubber band.
5. Place cup labeled Sun and the cup labeled Covered in a place which receives a lot of sun light throughout the day. Place the cup labeled Shade somewhere out of the sun where it won't be disturbed.
6. After a day or two, mark the water level on each cup. Record any observations.

#### Predictions:

What do you think will happen to each of the three cups?

#### Data Collection:

Draw a picture of the three cups at the end of the experiment.

Date	Sun Cup Where placed:	Shade Cup Where placed:	Covered Cup Where placed:
	Beginning measurement:	Beginning measurement:	Beginning measurement:
	Ending measurement:	Ending measurement:	Ending measurement:

**Observations:** (Describe what happened)

#### Conclusion:

## Session 4

### How Much Water Do We Use?

#### Water Usage Chart

<b>Water activity</b>	<b>Average number of gallons used</b>
Brush our teeth	1 gallon
Flush the toilet	3 gallons
Hands and face washing	1 gallon
5 minute shower	25 gallons
10 minute shower	50 gallons
Face and leg shaving	1 gallon
Dishwater per load	15 gallons
Dishwashing by hand	8 gallons
Clothes washing (machine)	25 gallons
Glasses of water drunk	8 oz per glass = 1/16 <sup>th</sup> of a gallon

Information courtesy of USGS – Per Capita Water Use <https://water.usgs.gov/edu/activity-percapita.php>

## Session 4

### How Much Water Do We Use?

#### Student Tally Sheet

Water Use Activity	Put a check mark for each time activity took place.	Fill in number of gallons used each time for this water use.	Total number of gallons used.



## Session 5

### Water Taste Test Score Sheet

#### Individual Scores

Water Sample	Score	Rank	Comments
A			
B			
C			
D			

#### Key

**5 = Excellent**

**4 = Very Good**

**3 = Passable**

**2 = Not Very Good**

**1 = Really Awful**