Name: _____ Date: _____ Period: _____

Water Conservation: Are You A Water Wizard?

Calculate your weekly water use to find out! Estimate the amount of water you use in a typical week by filling in the table below with the number of times you usually do each activity in one week. Multiply your total by the water use (gallons) to determine the total weekly use in gallons.

Water Use Table

Multiply Number of Times Per Week by Water Use (gallons).

Activity	Number of Times Per Week	Water Use (Gallons)	Total Weekly Use (Gallons)
Bath	*Total*	35	
Shower (10 min)	*Total*	50	
Teeth Brushing	*Total*	5	
Hand Washing	*Total*	5	
Washing Machine (clothes)	*Total*	35	
Toilet Flush	*Total*	3	
Dishwasher	*Total*	15	
Washing Dishes by Hand	*Total*	15	
Drinking Water *assuming ½ gallon of water per day*	*Total*	0.5	
Cooking a Meal	*Total*	3	
Watering Small Lawn	*Total*	100	
		Total Weekly Gallons	

Add the total weekly use for each activity.

Design Challenge: *Design a plan to reduce your weekly water use by 25%.*

_____ ***x*** **0.25** = ☐

Total Weekly Gallons — 25% Weekly Use to Conserve

Station – Land Contouring

1. Complete the following table as you explore methods of land contouring to reduce surface runoff and conserve water.

Trial	# Water Beads Total	# of Beads in Run-off (at bottom of tray)
Control (no land contouring)	50	
Berm 'n' Basin OR Boomerang Berms	50	

2. Which method had the lowest amount of surface run-off? (circle one)

Control (no contouring) or Land Contouring (changing the shape)

Station – Rooftop Rainwater Harvesting

1. Prediction: I think the roof will collect _____ % of the rainwater. (circle one)

0 – 25% 26 – 50% 51 – 75% 76 – 100%

2. Complete the following table after you measure the amount of water collected in the cistern.

Amount of Rainwater Harvested (mL)	% of Total Rainwater Harvested (mL harvested ÷ 500) × 100

3. Was your prediction correct? (circle one) yes no

4. Was the actual amount of rainwater harvested higher, lower, or equal to your prediction? (circle one)

Higher Lower Equal

Design Challenge

1. Explain why it is important to practice water conservation methods in a changing climate.

2. **Design Challenge:** *Design a plan to reduce your weekly water use by 25%.*

25% of Weekly Water Use: _____ gallons		
Action	**Water Use Activity** For which activity from your water use survey does this reduce water need?	**Gallons Saved Per Week**
Total Gallons Saved Per Week:		

3. Reflect on the plan you designed above. What challenges could you encounter when trying to implement this plan? What would be the hardest part of the plan? What about the easiest?