

Student Name: _____ Date: _____

How Much Water Do You Use?

You can learn how much water your house uses by reading your home meter, see the Meter Reading Guide to learn how to read a meter. In this activity, we are going to learn how to measure how many minutes of water you are using and find ways that you can conserve.

This activity will take place over the course of two weeks. The first week, you will measure your consumption.

Week 1

A) Tally: Each time you do one of these activities, make a tally mark next to the activity.

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____

B) Time Yourself: Every time you do one of these activities, time how long the water runs. Separate each number by a semicolon.

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____ **All Activities:** _____

Calculations

C) Total #: At the end of the week, add together the number of times you completed each of the different activities and place the total on the appropriate line below. *From A.*

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____

D) Total Minutes: At the end of the week, add together the minutes that the water ran for each activity and place the total on the appropriate line below. *From B.*

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____ **All Activities:** _____



E) Average Use: Divide the total number of minutes by the total number of times you completed that activity to calculate the average length of time the water ran per time you completed the activity.

C divided by D.

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____ **All Activities:** _____

F) Range: Find the lowest number of minutes and the highest number of minutes for each activity that you completed and place them on the appropriate line below in the following format: lowest-highest.

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____

Analysis

Look at the numbers from *E* and *F*. *E* shows the average length of time that water ran for each activity. *F* shows the shortest and longest times the water ran for each activity. How large of a gap is there in the shortest and longest times? See *F*.

The average shows you about how long you run water for any given activity, while the range shows you the shortest time you can complete an activity in. For the following week we will work on conservation. To conserve, try to reduce the number of times you complete an activity if possible, and the length of time it takes you to complete an activity. Ask yourself: *Why did the water run for that long? Can I turn the water off more often, or complete the activity quicker?*

Aim to reduce the average amount of time the water runs for each activity, and try and complete each activity closer to the shortest time you completed it in the previous week. Both your average use, and your range should be reduced.



Week 2

For the second week, you will measure your consumption and compare it to the previous week. Aim to decrease your consumption in Week 2.

G) Tally: Each time you do one of these activities, make a tally mark next to the activity.

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____

H) Time Yourself: Every time you do one of these activities, time how long the water runs. Separate each number by a semicolon.

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____ **All Activities:** _____

Calculations

I) Total #: At the end of the week, add together the number of times you completed each of the different activities and place the total on the appropriate line below. *From G.*

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____

J) Total Minutes: At the end of the week, add together the minutes that the water ran for each activity and place the total on the appropriate line below. *From H.*

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____ **All Activities:** _____

K) Average Use: Divide the total number of minutes by the total number of times you completed that activity to calculate the average length of time the water ran per time you completed the activity. *I divided by J.*

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____ **All Activities:** _____



L) Range: Find the lowest number of minutes and the highest number of minutes for each activity that you completed and place them on the appropriate line below in the following format: lowest-highest.

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____ **All Activities:** _____

ANALYSIS

Look at the numbers from *K* and *L*. *K* shows the average length of time that water ran for each activity. *L* shows the shortest and longest times the water ran for each activity. How large of a gap is there in the shortest and longest times? See *L*.

How do those numbers compare to the previous week? Is your new average lower? Is your range lower than the previous week? By how much? Is the high number in your range for week 2 close to the low from week 1?

MEASURING CHANGE

Calculate The Numbers: Look at the numbers from the first and second weeks for average use and range. Subtract Week 2 from Week 1 and place the totals on the appropriate lines below.

M) Average Use: *K* subtracted from *E*.

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____ **All Activities:** _____

N) Range: *L* subtracted from *F*.

Shower: _____ Brush Your Teeth: _____

Dishes by Hand: _____ Wash Your Hands: _____

Bath: _____

