

## Water Use

### Exemplar #2 – Score: 4

- The work demonstrates a proficient understanding of the situation.
  - water usage is identified and explained
  - all work is shown
- The strategy is effective and comprehensive.
  - calculations are per fixture per week
  - calculations are clear and correct for each appliance/fixture
- The logic references all aspects of the problem.
  - each fixture is mentioned
- The reasoning is clear, detailed, and organized.
  - the total water usage is within the allowable amount
  - communication is clear

Show your work and write your final answer in the space provided.  
Montrez votre travail et écrivez votre réponse finale dans l'espace prévu.

water usage

Know:  
 $\leq 1050L$   
 Have to use everything 1 time

Toilet 5 times a day for the week  
 $6L \times 5 \times 7 = 210L / \text{week}$

Shower 3 times for 10 mins for the week  
 $8L \times 10 \times 3 = 240L$

Tap 6L per min so 3 mins every day  
 $6 \times 3 \times 7 = 126L$


Bath 1 per week  
 $50L \times 1 = 50L$

Dish washer 3 times per week  
 $16L \times 3 = 48L$

Clothes wash 5 times a week  
 $60L \times 5 = 300L$

I will use  
 $974L$  of water with my one week plan

|      |
|------|
| 210+ |
| 240  |
| 126+ |
| 576+ |
| 50   |
| 626+ |
| 48+  |
| 674  |
| 300  |
| 974  |



## Water Use

### Exemplar #3 – Score: 3

- ✓ The work demonstrates an adequate understanding of the situation.
  - water usage is identified
  - work is shown
- ✓ The strategy is sensible but has some inconsistencies.
  - most fixtures are calculated per day x 7 for the week
  - use of dishwasher and bath weekly total is not explained
- ✓ The logic references all aspects of the problem.
  - each fixture is used
- ✓ The reasoning is evident.
  - most supporting calculations are shown
  - water usage is within the allowable amount

$$1W = 7 \times 150 = 1050 \text{ L}$$

↓  
Per week

$$\begin{aligned} 5 \text{ Flushes a day} &= 30 \text{ L} \times 7 = \underline{210 \text{ L}} \\ 10 \text{ min tap a day} &= 60 \times 7 = \underline{420 \text{ L}} \\ 5 \text{ showers 5 min} &= 40 \times 5 = \underline{200 \text{ L}} \\ 1 \text{ load of laundry} &= \underline{60 \text{ L}} \\ \text{Dishwasher per day} &= \underline{112 \text{ L}} \\ \text{Bath} &= \underline{50 \text{ L}} \\ &= 1052 \text{ L} \end{aligned}$$

## Water Use

### Exemplar #5 – Score: 2

- ✓ The work demonstrates a basic understanding of the situation.
  - incomplete mathematical solution
- ✓ The strategy is unclear and/or incomplete.
  - appropriate strategy selected, but not followed through
- ✓ The logic correctly references some aspects of the problem.
  - all fixtures are included, but total use is not calculated
- ✓ The reasoning is clear but incomplete.
  - supporting calculations are not shown
  - the work shown has some structure but no real solution is presented

|                   | Monday          | Tuesday | Wednesday | Thursday | Friday  | Saturday | Sunday  |
|-------------------|-----------------|---------|-----------|----------|---------|----------|---------|
| Showers<br>Bath   | 1 Bath / 80L    | ∅       | 1 Bath    | ∅        | 1 Bath  | ∅        | 1 Bath  |
| Toilet            | 18L / 3 flush   | 3 flush | 3 flush   | 3 flush  | 3 flush | 3 flush  | 3 flush |
| Taps              | 13.6min / 81.6L | 9.3min  | 13.6min   | 9.3min   | 13.6min | 9.3min   | 13.6    |
| Dish-<br>washer   | ∅               | 16L     | ∅         | 16L      | ∅       | 16L      | ∅       |
| Clothes<br>washer | ∅               | 60L     | ∅         | 60L      | ∅       | 60L      | ∅       |

## Water Use

### Exemplar #7 – Score: 1

- The work demonstrates an inadequate understanding of the situation.
  - addresses the concept of reduced water usage
- The strategy is unclear and/or incomplete.
  - while there is a limited attempt at reducing water usage, there are no calculations
- The logic is inadequate.
  - no mathematical calculations at all
  - only three utilities mentioned
- The reasoning is incomplete.
  - no calculations are shown
  - there is no solution

- Don't use bath(s) or shower at the same time
- Don't use dishwasher if you don't have much dishes to wash
- Use clothes washer only if you have the right amount of dirty laundry to wash.

## Water Use

### Exemplar #9 – Score: 0

- The response does not address the purpose of the task.
- there is no explanation of the calculation, and no solution given

$$\begin{array}{l} 11.15 \text{ min} \times 5 \times 7 = \frac{390.25 \text{ min}}{\text{Week}} \\ \times 10 = \frac{3,902.5 \text{ L}}{\text{Week}} \end{array}$$

Btw my hand is broken so that is why my writing is bad