Down the Plughole

You need: a calculator, a computer (optional), a copy of the table

New Zealanders take their water supply for granted, but during dry seasons there is not always enough to go round.

1. Use the following table to estimate how much water your household uses per year. You may not need to fill in all the columns to help you estimate your usage.

Activity	Type	Litres used	Average times per day	Average times per week	Litres per week	Litres per year
Watering garden	Sprinkler (1 hour)	1000	x	x	=	
Washing car	Hose and bucket	100	x	x	=	
	Hose running	250	x	x	=	
Topping up pool	Hose (1 hour)	1500	x	x	=	
Toilet	Full flush	10	x	x	=	
Shower	Regular shower rose (8 min)	120	x	x	=	
	Efficient shower rose (8 min)	80	x	x	=	
Bath	Shallow bath	85	x	x	=	
	Full bath	200	x	x	=	
Washing, shaving	Hands, face	5	x	x	=	
Brushing teeth	Tap turned on briefly	1	x	x	=	
	Tap turned on continuously	5	x	x	=	
Washing dishes	By hand (1 meal)	20	x	x	=	
	Old dishwasher (1 use)	40	x	x	=	
	Modern dishwasher (1 use)	25	x	x	=	
Kitchen	Waste disposal (1 use)	10	x	x	=	
	Cooking, drinking (per person)	10	x	x	=	
Washing clothes	Front loader (1 use)	120	x	x	=	
	Top loader (1 full use)	200	x	x	=	
	Top loader (1 half load)	115	x	x	=	
	Hand wash	40	x	x	=	
Other			x	x	=	
TOTAL						

2. a. Convert all amounts to cubic metres (1 000 litres = 1 cubic metre).
   b. Create a graph that clearly shows the information from the table.
   c. Use the information from the graph and table to write a paragraph that answers the question "Where does the water go?"

3. An Auckland water company charges $1.175 per cubic metre for water supply plus a service charge of $30 per year. If this were the cost in your area, how much would your family pay for water each year?

4. Imagine that your family decides to cut its water use by 25 percent. How much water would it need to save? Suggest how it could do this.

5. Lisa's family discovers that the noise they have been hearing under the house is caused by a leaking pipe. Lisa finds that the water from the leak fills a 10 litre bucket in $3\frac{1}{2}$ minutes. The noise has been going on for at least a week. How much water has been wasted in this time?

Collect accurate information on how long your family members spend under the shower each day and find a way of calculating how much water is being used per week and per year. What is the cost of this water to your family? Can you estimate the cost of heating it?