**Water WebQuest Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Of all the water on Earth, over 97.5% is sea water. Life-supporting to be sure, but unusable in its natural state for humans. Only 2.5% of the available water on Earth is fresh water, for drinking, washing, crops, and industry. Close to 70% of that fresh water is locked up as ice, making it unavailable for conventional use. This means less than 1% of the Earth’s fresh water is available for humans and other living things to use, in the form of soil and atmospheric moisture and surface water. Understanding our personal, national, and global water consumption is an important part of identifying the human ecological impact on Earth.

Go to [www.watercalculator.org](http://www.watercalculator.org) and complete the survey. Be honest.

1. What is your footprint?
2. What are somethings you do that you think you could change to lower that number?
3. Now try to make as high of a footprint as you can. How many gallons/day?
4. What did you change to make it go so high?
5. Now try to make as low of a footprint as you can. How many gallons/day?
6. What did you change to make it go so low?
7. Did anything surprise you?
8. What do you think is your largest source of domestic (home) use? Name three ways you can reduce it.
9. Why should we care about water consumption and conservation?
10. Go to [waterfootprint.org/en/resources/interactive-tools/product-gallery/](file:///C:\Users\bnm18385\Downloads\waterfootprint.org\en\resources\interactive-tools\product-gallery\)  and use the rotating tool to compare the water footprint of various products. Make some notes on things that surprise you and things that fall within “normal” limits.

* *Produce (apples, bananas, oranges, peaches, lettuce, tomatoes, potatoes)*
* *Grains (bread, rice, corn)*
* *Sugar (beet or cane)*
* *Fuel (maize, soy, sugar beet, sugar cane)*
* *Meat (beef, pork, chicken)*
* *Other commodities (chocolate, leather, cotton, alcohol)*

1. Which products tend to use the most water?
2. Which products tend to use the least water?
3. What trends do you notice in the type of water used (blue, green, grey)?
4. Why is the water footprint for beef so high?
5. What environmental effect has cotton harvesting had in Asia?
6. What is the most water-efficient type of biodiesel fuel? What is the least?

**II. Desalinization Search for information on the two main methods**

1. Two main methods for removing salt from seawater. Discuss method and energy requirement.
   1. Evaporation
   2. Reverse osmosis
2. Is there a negative side to large-scale desalination?

<http://www.ehow.com/facts_7498662_pros-cons-desalination-plants.html>

**III. The Bottled Water Debate**

1. **From the Industry**

<http://www.bottledwater.org/education/environmental-impact/environmental-footprint>

1. What is the environmental footprint of bottled water?
2. What does the bottled water industry do to reduce their waste?

1. Are there health risks associated with bottled water?
2. How much does bottled water cost?
3. **The other side of the debate:** <http://healthresearchfunding.org/bottled-water-pros-cons/>. Check out the infographic at the bottom of the page.
4. Three reasons for buying bottled water:
5. Three disadvantages to buying bottled water: