HOW MUCH WATER TO MAKE A CHEESEBURGER???

1. Ask the students to **estimate** how much water they think it takes to make a cheeseburger. Write the estimates on the board.

2. Have one (or more) students **read the labeled parts** of the cheeseburger out loud, announcing how much water is used. (e.g., Bun:11 gallons)

3. **Write on the board** (or have a student write) the parts of the cheeseburger and how much water each requires. Stop to ask students how they think water is used to make the parts of the cheeseburger (beef: cows drink water, the grass they eat needs water; lettuce: needs water to grow...).

4. Take some more estimates on the total amount of water needed to make a cheeseburger. Have one student (or more) **do the math** on the board or in their journals. Compare the total to their estimates. **Total : 698 1/2 gallons**

5. **Discuss** what a large amount of water the total is. Compare with the numbers below.
    - The average person uses 90 gallons of water per day by drinking, washing dishes, clothes, flushing the toilet, showering and more.
    - The average person drinks ½ a gallon a day.
    - The average bath uses 4 gallons of water.

6. **Divide the students** into five groups and give them each a challenge assignment.

   a. How much water would it take to make cheeseburgers for everyone in the class?

   b. How much water would a vegetarian save? Do the math without meat, then without cheese.

   c. If a person orders a hamburger with no vegetables, how much water are they saving? What if they order a cheeseburger with no bun or vegetables?

   d. How much more water does the cheeseburger use than one person per day? (698.5 gallons for a cheeseburger/90 gallons per person per day)

   e. Brainstorm ideas to make a cheeseburger that requires less water. The children must think about how water is used in each process.

   f. What other ingredients do we put on cheeseburgers? How much water do you think those require?

   g. Brainstorm why it is important to conserve (or save) water.

7. Have the **groups present** their findings to the class.