

Make Fresh Water with the Help of the Sun!

Fresh water is vital to our survival. The body needs it every day to stay healthy. What would you do if you were surrounded by salt water without fresh water to drink? How do we make salt water safe to consume? It's easier than you think. This activity will teach your 5th grader how to distill (to purify a liquid by heat and condensation) salt water so that it is safe to drink and more importantly, it will build upon his developing 5th grade science skills.

What You Need:

- Large bowl
- Short glass or cup
- Tape
- Plastic Wrap
- Small rock
- Pitcher of water
- Salt
- Long spoon for stirring



What You Do:

1. First make salt water by adding some salt to your water. Stir until the salt dissolves.
2. Pour about 2 inches of water into your bowl.
3. Take your empty glass and put it into the center of the bowl. The top of the glass should be shorter than the bowl but higher than the salt water.
4. Put plastic wrap over the bowl. You may need to use tape to get the plastic wrap to seal tight.
5. Place your rock over the center of your glass so that it weighs down the plastic wrap a little bit, directly over the center of the glass in the bowl. Now you have made what is called a still.
6. Place your solar still in the sun for a few hours or all day long. Check on it throughout the day. Note how the water is condensing on the plastic wrap and dripping into the glass. The heat from the sun is evaporating the water up into the air in the bowl. The water then condenses on the plastic wrap, collecting and pooling where the rock is weighing the wrap down. When the water turns into vapor it leaves the salt behind. The result is pure water and this is what is collected in the glass.
7. When you want to test your water, take the plastic wrap off and taste your water in the glass. It's no longer salty! This process of salt distilling is called desalination.

Did You Know?

The biggest desalination plant in the world is in the Middle East, where fresh water is very hard to find. The United States also has plants but they operate on a much smaller scale because the process is expensive. A by-product (what's left over) of desalination is table salt.