Can You Make It Rain?

The sun's heat energy creates a water cycle here on earth. This allows us to "clean up" dirty water. In this activity you take some "dirty" water and make it clean using the thermal energy of the sun.

Have you ever accidentally swallowed seawater? Its not very nice is it? We hear a lot about the increase of salt in our environment and as the population grows the amount of good clean drinking water we have available is getting smaller. Is there a way to make dirty water drinkable?

Could you survive in the desert if you only had dirty or salty water to drink? What could you do to make that water clean?

What you will need:

- 1 large rectangular dish at least 10cm deep
- 1 small glass container 5cm high
- clear plastic food wrap
- small metal weight
- dirty or salty water

What you need to do:

1. Fill the large dish with about 2.5cm of dirty or salty water.
2. Place the empty small glass container in the center of the large dish. It may try to float so you mayneed to put a weight in it (make sure it is perfectly clean if you do).
3. Cover the large dish with clear plastic and secure tightly with a rubber band or elastic.
4. Put a small weight on the plastic wrap to make it sag in the middle above the small glass container.
5. Make sure the plastic doesn't touch the glass or the water or tear the plastic wrap.
6. Place the dish in the sun (outside if possible). You may need to keep the experiment running over a number of days.

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Look closely at what you see:

1. What has happened to the plastic?

2. What has happened to the small glass container?

3. After 3-5 days you can drink the water in the small glass. What does it taste like?

4. Look up the word evaporation in the dictionary. What does "evaporation" mean?

5. What happens to rain on the concrete after the sun comes back out?

Does it "disappear"? If not where does it go?

- Water vapour is water that has evaporated. It is pure water.
- When water evaporates, it doesn't take any of the salts or minerals with it - just plain water. The salt or dirt is left behind.

6. Think about how renewable energy has been used in this experiment. Where could you use this "technology" on a big scale?

7. Why does this water taste differently from tap water? What else is in tap water?