

When Water Disappears

A Science Demonstration

Lesson 19

He shall dwell on high: his place of defence
shall be the munitions of rocks: bread shall
be given him; his waters shall be sure.

(Isaiah 33:16)

Items Needed

- ~ A disposable diaper
- ~ Two clear glasses
- ~ Water

In the ten plagues of Egypt and in the seven last plagues, water was, or will be, turned to blood.

But God has promised us that our water will be sure.

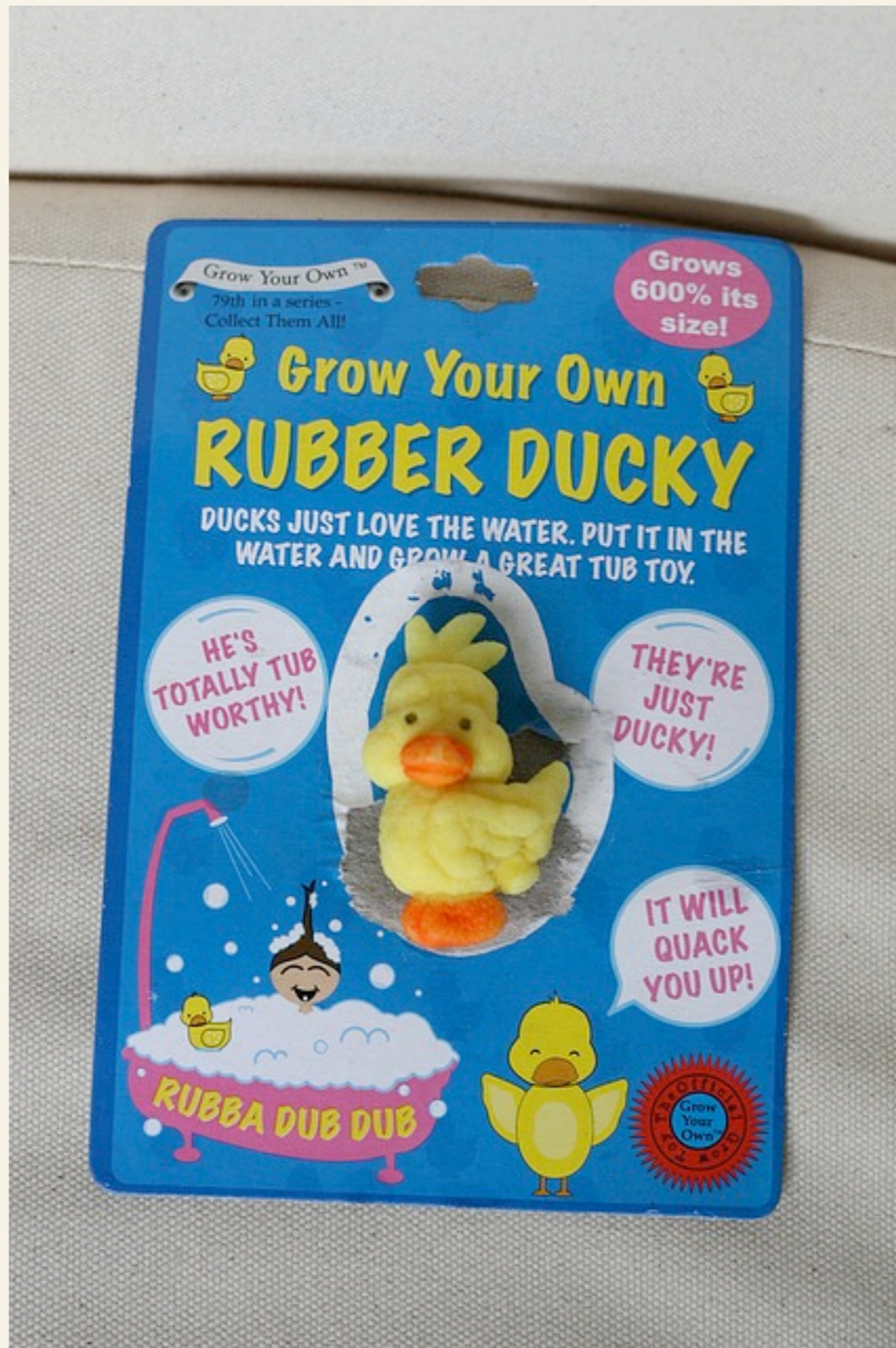
Procedure

- ~ Obtain a teaspoon (or less) of the filler powder of a disposable diaper and place this dry ingredient in the bottom of one glass, just enough to cover the bottom.
- ~ Fill the other glass with water.
- ~ Pour the water back and forth between the glasses.

Explanation

- ~ The water-absorbing powder is a polyacrylate. One of the more common types, sodium polyacrylate, can hold 800 times its weight in water. It is a chain with sodium atoms along its length that attract and hold tightly onto water molecules.

Disposable diapers contain the same chemical as astronaut maximum absorbency garments, fire-control gels, soil conditioners, those toys that grow when you add water, and floral gel. The super-absorbent chemical is sodium polyacrylate, which was invented by scientists at Dow Chemical Company.



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The polyacrylate powder
and gel are biodegradable
and can be disposed of
normally.