GROWING GUMMIES

A fun gummy bear experiment all in the name of science and learning!

INSTRUCTIONS:

STEP 1: In four cups you will have one with water, one with vinegar, one mixed water and salt, and one mixed water and baking soda.

STEP 2: Place one gummy bear in each of the cups.

STEP 3: Now watch and record your results for 24 to 48 hours, documenting what you see.

SUPPLIES

Clear cups
Gummy bears
Water
Vinegar
Baking soda
Salt

THE SCIENCE

Start by asking your child what they will happen to a gummy bear in water. Will it dissolve? Will it shrink or grow? Will it fall apart?

"Osmosis" is the motion of water through a barrier. It's why gummy bears grow when other candies (like peppermints) dissolve. Gummy bears contain gelatin (which doesn't dissolve in water) and sugar (which does). When you place a gummy in plain water, you'll see the bear grow as water flows into the bear. Why? The water moves to balance out the stuff dissolved in it. Outside the gummy bear, you have water with nothing in it. Inside the gummy bear pockets of gelatin you have water and sugar. There's more stuff inside the bear, so the water moves into the bear to try and make the proportion of sugar molecules to water the same in both places.

GROWING GUMMY BEARS LAB

	1 MINUTE	6 HOURS	12 HOURS	24 HOURS	48 HOURS
SALT WATER					
TAP WATER					
DISTILLED WATER					
SUGAR WATER					

Will a gummy bear grow? Using different liquids (distilled water, tap water, salt water, juice, vinegar soda, cooking oil etc.) observe how gummy bears **expand**, or don't, in a variety of **solutions**, and determine why that is. Don't forget to measure and record the size of your gummy bears before and after!

Measure after 6 hours, 12 hours, 24 hours, and even 48 hours!

What's Happening?

Osmosis! Gummy bears will expand in size due to osmosis. Osmosis is the ability of water (or another liquid) to be absorbed through a semi-permeable substance which in this case is the **gelatin**. The gelatin in the gummy bears also keeps them from **dissolving** except for when they are placed in an **acidic** liquid such as vinegar.