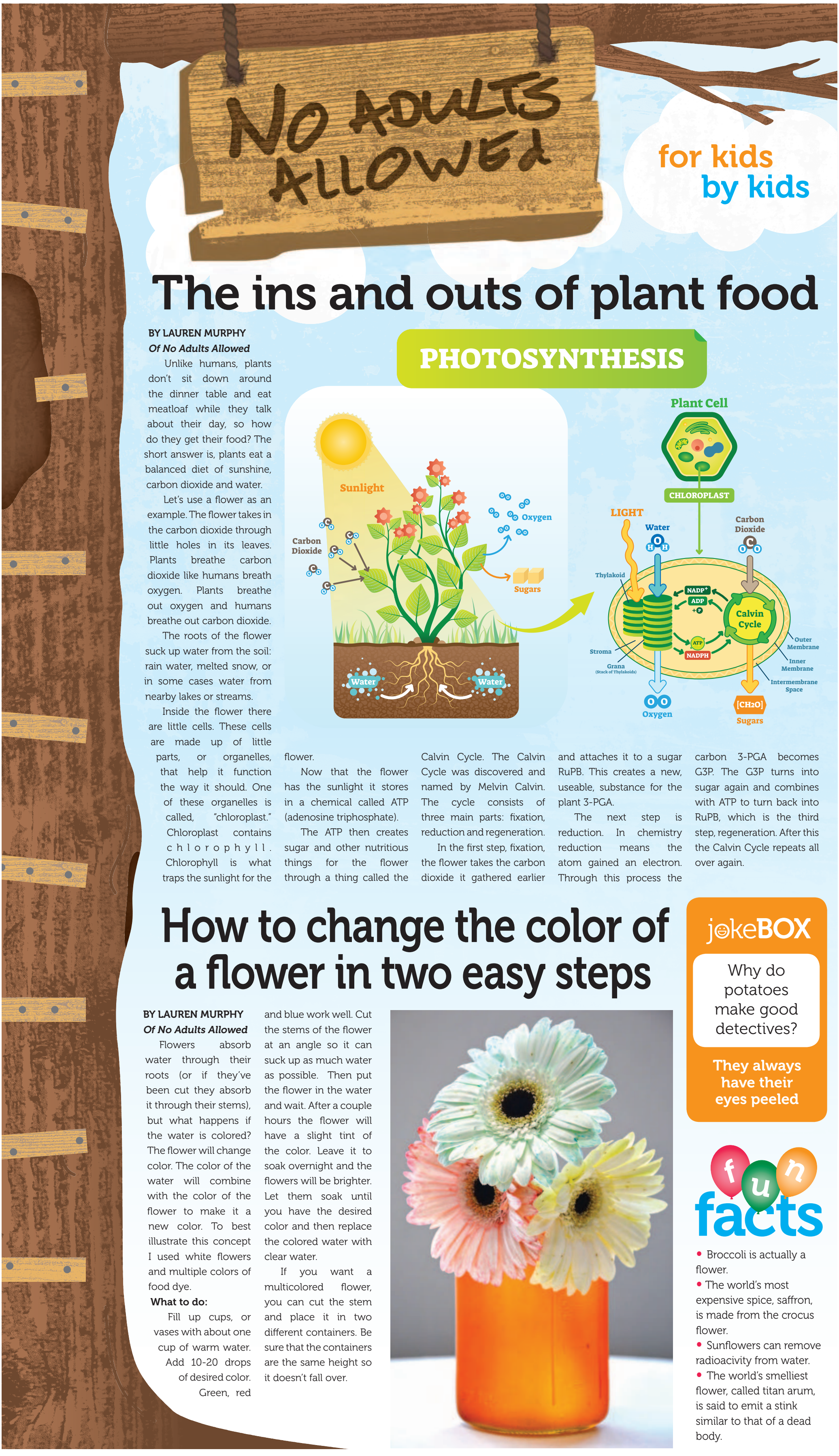


# The ins and outs of plant food

BY LAUREN MURPHY
*Of No Adults Allowed*

Unlike humans, plants don't sit down around the dinner table and eat meatloaf while they talk about their day, so how do they get their food? The short answer is, plants eat a balanced diet of sunshine, carbon dioxide and water.

Let's use a flower as an example. The flower takes in the carbon dioxide through little holes in its leaves. Plants breathe carbon dioxide like humans breath oxygen. Plants breathe out oxygen and humans breathe out carbon dioxide.

The roots of the flower suck up water from the soil: rain water, melted snow, or in some cases water from nearby lakes or streams.

Inside the flower there are little cells. These cells are made up of little parts, or organelles, that help it function the way it should. One of these organelles is called, "chloroplast." Chloroplast contains chlorophyll. Chlorophyll is what traps the sunlight for the flower.

Now that the flower has the sunlight it stores in a chemical called ATP (adenosine triphosphate).

The ATP then creates sugar and other nutritious things for the flower through a thing called the Calvin Cycle. The Calvin Cycle was discovered and named by Melvin Calvin. The cycle consists of three main parts: fixation, reduction and regeneration.

In the first step, fixation, the flower takes the carbon dioxide it gathered earlier and attaches it to a sugar RuPB. This creates a new, useable, substance for the plant 3-PGA.

The next step is reduction. In chemistry reduction means the atom gained an electron. Through this process the carbon 3-PGA becomes G3P. The G3P turns into sugar again and combines with ATP to turn back into RuPB, which is the third step, regeneration. After this the Calvin Cycle repeats all over again.




# How to change the color of a flower in two easy steps

BY LAUREN MURPHY
*Of No Adults Allowed*

Flowers absorb water through their roots (or if they've been cut they absorb it through their stems), but what happens if the water is colored? The flower will change color. The color of the water will combine with the color of the flower to make it a new color. To best illustrate this concept I used white flowers and multiple colors of food dye.

**What to do:**

Fill up cups, or vases with about one cup of warm water. Add 10-20 drops of desired color. Green, red and blue work well. Cut the stems of the flower at an angle so it can suck up as much water as possible. Then put the flower in the water and wait. After a couple hours the flower will have a slight tint of the color. Leave it to soak overnight and the flowers will be brighter. Let them soak until you have the desired color and then replace the colored water with clear water.

If you want a multicolored flower, you can cut the stem and place it in two different containers. Be sure that the containers are the same height so it doesn't fall over.



## jokeBOX

Why do potatoes make good detectives?

**They always have their eyes peeled**

## fun facts

- Broccoli is actually a flower.
- The world's most expensive spice, saffron, is made from the crocus flower.
- Sunflowers can remove radioacivity from water.
- The world's smelliest flower, called titan arum, is said to emit a stink similar to that of a dead body.