



# Photosynthesis & Respiration Activity for Kids

## Observing Photosynthesis DIY

 Duration: **30-45 min**

 Difficulty: **Medium**

 Cost: **\$0-20**

Learn how to observe photosynthesis in your own hands!

### Material List

- 1** Bunch of Spinach Leaves
- 1/4** Teaspoon Baking Soda
- 2** Cups of Water
- 5** Drops of Dish Soap
- 1** Plastic Straw
- 1** Syringe with no needle
- 1** Measuring spoon
- 1** Fork
- 1** Desk lamp

### Instructions

- 1** Add  $\frac{1}{4}$  teaspoon of baking soda and 5 drops of dish soap into 2 cups of water and stir.
- 2** Use the straw to punch ten small discs from a spinach leaf and put them inside the empty syringe.
- 3** Use the syringe to suck up some water then push out almost all of the air.
- 4** Then block off the opening of the syringe with your thumb and gently pull the other end to remove tiny pockets of air from the leaves. Repeat this a few times until all the discs sink in the syringe liquid.
- 5** Lastly, pour the leaf discs into the cup you prepared in step 1 and place it under the light (desk lamp).
- 6** After a few minutes, the leaf discs will start to float.

### How It Works

Plants carry out photosynthesis, the process of using sunlight to make sugar and oxygen from carbon dioxide and water. In this demonstration, the spinach leaf discs are doing exactly that -- combining carbon dioxide with water to make sugar and oxygen gas. The leaf discs float because of the oxygen gas being made. The syringe was used to remove air pockets in the spinach leaves to get them to sink in the first place.

