

# Do Leaves Breathe?



Scientists say that leaves breathe in carbon dioxide and give off oxygen. We can't see it happen on the trees, so try this experiment.

**Step 1: Fill a large glass bowl with lukewarm water.**

**Step 2: Go outside and find a large leaf.**

Remove a leaf from a tree because it is still actively breathing. Do not use one off of from the ground.

**Step 3: Place the leaf in the bowl of water.**

Place a small rock on top of the leaf so the leaf is fully submerged in the water. Next place the bowl in a sunny spot.

**Step 4: WAIT!**

You need to wait a few hours.

**Step 5: Check the bowl a few hours later**

You should see small bubbles that form around the leaf. The bubbles are easy to see with the naked eye. The leaf is still using the sunshine as part of the **photosynthesis** process. The leaf is changing sunlight into energy. Once the leaf has made too much oxygen it will "breathe" it out. This is the opposite of what we do. When we exhale (breathe out) we let go of carbon dioxide. When we inhale (breathe in) we are taking in the oxygen plants and trees have made for us. The bubbles are the oxygen.

Oxygen is what you are seeing -- the leaf is still using the sunlight as part of the **photosynthesis process** (where leaves convert sunlight to energy).

As a leaf creates energy, it needs to get rid of the items it no longer needs. so it will send out both the extra oxygen during photosynthesis along with water.

The process of **photosynthesis** is what allows us to see the bubbles. The leaf releases its' extra oxygen while submerged, the oxygen can be seen as bubbles in the water. Since oxygen is lighter than water, the bubbles will eventually rise to the surface.