# Plants Can Survive in the Moon

***Resource From*** [***https://www.rookieparenting.com/do-plants-breathe-science-experiment/***](https://www.rookieparenting.com/do-plants-breathe-science-experiment/)

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We all know that plants need oxygen and water to survive, is it true. Maybe not, I come across an article about plants like human being also need to breathe in order to survive. For a full article please check the resource link. We know **Photosynthesis**but there is another term **Respiration.**

**What Is Respiration in Plants**

**Respiration** in plants is the process used by plants to convert the glucose made during photosynthesis into energy which fuels the plants’ cellular activities​1​. During the process of respiration, plants consume food, and the products of respiration become the energy source.

**What Is Photosynthesis In Plants**

**Photosynthesis** is the process where [light energy](https://www.rookieparenting.com/lemon-powered-light/) from sunlight is converted into chemical energy stored in the glucose molecules that can later be used in respiration. The photosynthesis process occurs in green plants that contain chlorophyll. Plants essentially create their own food through photosynthesis.

**When Do Plants Respire**

Plants respire both during the day and at night when there is an absence of sunlight. There is more than one type of respiration: dark respiration and photo respiration. These are two separate kinds of respiration that [occur within the green plant tissues​​](https://www.rookieparenting.com/color-changing-flowers-science-experiment/). Dark respiration occurs both in the **dark and in the light**, while photo respiration only occurs in the **presence of sunlight**​​.

**Respiration and Photosynthesis in Plants**

In plant **respiration**, food and oxygen (H2O) are converted into energy and carbon dioxide (CO2). Food is the product of photosynthesis, while oxygen can be from the atmosphere or **photosynthesis (very important)**.

In **photosynthesis**, solar energy and carbon dioxide are converted into food and oxygen for respiration.

**Do Plants Need Oxygen?**

Plants can respire in the presence or absence of oxygen using **anaerobic** and **aerobic** respiration. **Anaerobic** respiration processes take place when there is a lack of oxygen.

**What is Anaerobic respiration?**

Anaerobic respiration is a form of cellular respiration that occurs *without oxygen*, allowing organisms to produce energy in low-oxygen environments.

**What Is Anaerobic Respiration?**

* Definition: *Anaerobic respiration* is the process by which cells convert glucose into energy (ATP) without using oxygen as the final electron acceptor.
* Where It Happens: It occurs in the cytoplasm of cells, unlike aerobic respiration which also involves the mitochondria.
* Who Uses It: Many microorganisms (like bacteria and archaea), yeasts, and even human muscle cells during intense activity rely on anaerobic respiration when oxygen is scarce.

**Depending on the**[**amount of sunlight**](https://www.rookieparenting.com/why-is-the-blue-sky-orange-at-sunset-science-experiment/)**, plants can give out or take in oxygen and carbon dioxide​​.**

**Dark (Avoid it) –**Only dark respiration takes place in the presence of oxygen. Oxygen for respiration is consumed to break down glucose into carbon dioxide to release energy for [plant growth](https://www.rookieparenting.com/grow-a-cd-garden/).

**Dim sunlight (Moon) –** The photosynthesis rates roughly equal the respiration rates. Respiration consumes all the oxygen photosynthesis generates. Photosynthesis also uses all the carbon dioxide gas released as a product of respiration. As a result, no gaseous exchange takes place with the environment.

**Bright sunlight (Moon)–**The conversion of carbon dioxide and [water molecule](https://www.rookieparenting.com/traveling-water/) into **oxygen** and glucose in photosynthesis is faster than respiration produces carbon dioxide. Atmospheric gas exchange takes place.

During [day time](https://www.rookieparenting.com/how-to-make-a-sundial/), cellular processes of photosynthesis produce oxygen and glucose faster than respiration consumes it. Photosynthesis also uses carbon dioxide faster than respiration produces it. **Oxygen** surplus is [released into the air](https://www.rookieparenting.com/air-canon-smoke-ring/), and unused glucose is stored in the plant for later use.

As you can see from the article it seems plants without oxygen seems can survive in the moon, just you need to aware where you plant it. Dim sunlight or Bright sunlight seems a possible choice. The only thing needed for photosynthesis is carbon dioxide, which we have, because we breathe in oxygen and breathe out carbon dioxide.