

Experiment 7: plants convert carbondioxide into oxygen

# 1. INTRODUCTION

Forests are considered the lungs of the planet because plants provide the creation of oxygen gas. During photosynthesis, with the help of light, water and CO<sub>2</sub> are converted into sugars and O<sub>2</sub>. And we need that oxygen to live.

# 2. ORIENTATION

A candle needs  $O_2$  to burn. While burning, the candle produces  $CO_2$ . So if we cover the candle, the  $CO_2$  that is generated will extinguish the candle since there is no  $O_2$  enough. Can a plant, covered together with the candle, help the candle to burn longer?

# 3. PREPARATION

### 3.1. Materials:

- > 2 candles or tealights
- 1 plant
- I fake plant (or something else), about the same volume as the real plan
- > 1 or 2 glass goblets, big enough for the candle and the plant
- > chronometer

#### 3.2. Method:

- > Burn the candle and put it next to the plant.
- > Cover plant and candle with the glass goblet.
- > Make sure that no air can enter the goblet.
- > Chronometre how long it takes for the candle to be extinguished.
- Repeat this with the fake plant instead of the real one (or if you have 2 goblets, you can do it simultaneously to see the difference)

## 4. RESULTS

#### **Observations**:

Compare the time needed for the candle to be extinguished.

Real plant : 7 min 53s

Fake plant : 6min 52s

# REFLECTION

Can you make the connection between this experiment and the need of more

woods combating global warming?

Plants create oxygen gas out of co<sup>2</sup>. If more and more woods disappear, less co<sup>2</sup> can be converted into O<sup>2</sup>.

### 5. e-book

Take several pictures during the experiment. You can also film it.