**Celery Osmosis Experiment**

**Celery is a great vegetable that can be eaten as a crudité, chopped into a salad or blended into a soup. But did you know that it can also be used to show how water travels through a plant?**

Plants are filled with cells and the water moves through the cells and cell walls by the process of *osmosis*. This process of filling the cells also stiffens the stalks, stems, and leaves. This is known as *turgor pressure.* Without water, the cells lose their shape because this pressure is not there without the necessary water. If you see a wilted or droopy looking plant this is what’s happening. Give it some water and observe the results.

We can try this out with some food colouring, water, and celery.

**You will need:**  
  
A tall, clear jar or glass  
Red food colouring  
Water  
Scissors  
Large celery stalk with leaves



**Directions**

1. Half fill the tall glass with water.  
2. Add 4-5 drops of red food colour and mix nicely.  
3. Trim the bottom of the celery stalk neatly.  
4. Place it in the glass and leave it for a few hours/overnight.  
5. Make observations at regular intervals.

**Results**You will see that the leaves get a red tint. When you take the stalk out of the water you can watch small dots of red colour at the trimmed end. You may rip the stalk open to observe a more pronounced colouring effect. If you want, you can mark the initial level of water with a chalk and later you will find that the level has gone down.

**You can also try:**  
  
- Adding a celery stalk in a jar without water and observing what happens  
- Using celery that’s not fresh and comparing the results

*(Experiment adapted from:* [*https://www.scienceprojectideas.org*](https://www.scienceprojectideas.org)[*https://littlebinsforlittlehands.com*](https://littlebinsforlittlehands.com/)*)*