Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Transpiration

**Purpose**

The purpose of this exercise is to evaluate transpiration and osmosis in a geranium leaf.[[1]](#endnote-1)

**Procedure:**

 **Materials**

1. 2 geranium leaves
2. 2 small jars (baby food or Mason jars, or 2 beakers)
3. Cardboard (10cm square with a hole about the size of a hole-punch in center)
4. Clay or petroleum jelly

**Sequence of Steps**

1. Place a geranium leaf in the hole of the cardboard square. (Roll the geranium leaf to fit through the hole). Seal the hole with clay, Silly Putty or petroleum jelly.
2. Fill one small jar with water.
3. Place the cardboard with the leaf over the jar of water. Make sure most of the leaf is in the water, but not so much that the cardboard comes into contact with the water.
4. Cover the leaf with a second jar. Place the leaf in a well-lighted area.
5. ![C:\Users\Angela\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\DRP2N1IJ\MCj04242300000[1].wmf]()Observe the inside of the top jar after 24 hours and record your observations.

**![C:\Users\Angela\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\DRP2N1IJ\MCj04242300000[1].wmf]()**

**Observations**

1. Described what you observed in the top jar after 24 hours:

2. Define equilibrium:

3. What is osmosis?

4. How is this experiment related to osmotic force or turgor?

5. What is transpiration and how was it demonstrated in this lab?

6. How does the cell membrane of plant cells allow it to interact with the environment in this way?

1. Dickson, Chris (2008). Transpiration, Lab. *North High School, Bakersfield Agriculture Department*. [↑](#endnote-ref-1)