

Stomata and Transpiration

Session I—Activity 38

1. Observe microslide image 6 of the underside of a leaf. How many stomata can you find?

2. Observe microslide image 7, a close-up of a stoma. Compare the guard cells—the two cells that open and close the stoma—with the surrounding cells that cover the underside of the leaf. What differences do you notice?

3. Draw the stoma and guard cells. Include and label any other cell parts that you can see.

4. Use masking tape to label one bag *Covered* and the other *Uncovered*. Write your team's name on both bags. Then cover both surfaces of one geranium leaf with petroleum jelly. Be sure to spread the jelly over the entire surface of both sides. Place each leaf into its corresponding bag.

5. Gently press each bag to let most of the air out, and then seal it. Set the bags aside overnight. What do you predict will happen in each bag?

Session II—Activity 39

6. The next day, observe the bags. What do you see?

How does your prediction compare with what actually happened? How can you account for any differences?
