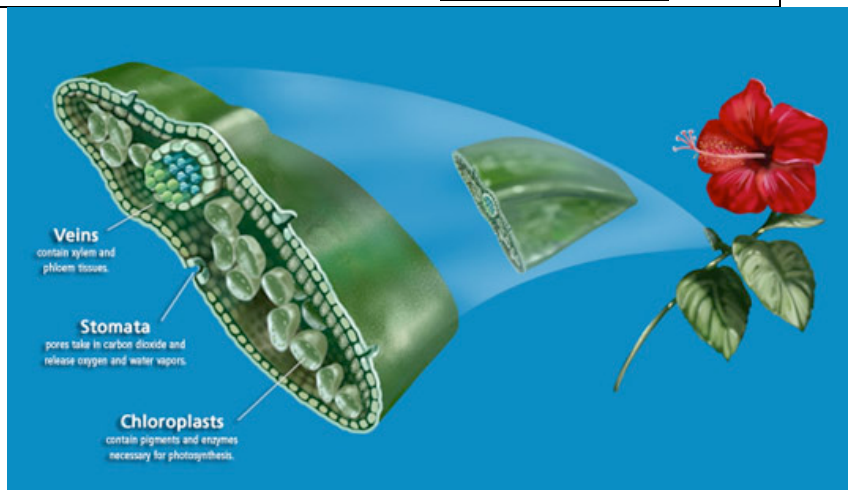
Leaves: Stomata Name_____

 Period_____

1. STOMATA are the pores or holes in the (outer layer) E_____ of leaves. (STOMA is singular.) There is a GUARD CELL on each side of each STOMA. The two GUARD CELLS for each STOMA change shape to open or close the STOMA.

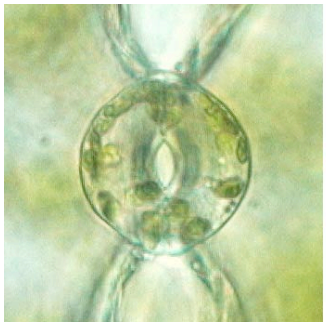


2. STOMATA need to be <u>open</u> for transfer of gases, so they have to be open for:
   a) TRANSPIRATION, the loss of w_____ vapor through leaves.
   b) PHOTOSYNTHESIS, when g_____ plants store light energy as food, using water and _____ _____
   c) RESPIRATION, using food and _____ to release energy.

3. When would STOMATA need to be closed? _____

_____

4. Most of the STOMATA of a leaf are on the lower EPIDERMIS of a leaf. This helps keep _____ out and _____.



FINDING STOMATA:
Do STOMA drawings on Page 2.

5. Use a slide and cover slip to view STOMATA and GUARD CELLS in a COMPOUND MICROSCOPE.
   a) Obtain a small section of lower leaf EPIDERMIS.
   b) Try to keep it from folding as you place it on a slide.
   c) Add a drop of water and coverslip.
   d) Focus on low power, then higher power.
   e) Locate a STOMA.
      f) Draw. Label.
      g) Find the opposite, either closed or open.
   h) Draw. Label.

Have DRAWINGS CHECKED IN FOCUS on PAGE 2.

www.biologie.uni-hamburg.de/b-online/library/webb/BOT410/anatweb/Epiderm/Epidermis- www.karencarr.com 1.htm;www.unlv.edu;
http://faculty.uca.edu/~johnc/Stomata.jpg
http://www.efma.org/Publications/Potassium/Understanding%20K/Pictures/Stomata.jpg

STOMA. OPEN, With GUARD CELLS: Drawing Checked IN FOCUS: 5%

STOMA, CLOSED, with GUARD CELLS: Drawing Checked IN FOCUS: 5%

www.biologie.uni-hamburg.de/b-online/library/webb/BOT410/anatweb/Epiderm/Epidermis- www.karencarr.com 1.htm;www.unlv.edu;
http://faculty.uca.edu/~johnc/Stomata.jpg
http://www.efma.org/Publications/Potassium/Understanding%20K/Pictures/Stomata.jpg