

Kansas City Christian School

4801 W. 79TH St.

Prairie Village, Kansas 66208

PHONE: 913-648-5227

Dear 7th Grade Parents:

All seventh grade students are required to complete a leaf collection as part of the 7th grade science curriculum for this next school year. Many parents have shown an interest in having the collection guidelines over the summer. The exact due date of the leaf collection will be announced after the beginning of the school year, but it will be sometime toward the end of September. A total of collection **twenty-five leaves will be required**. This year, there will be two options for completing the assignment – digital photography of the leaf and tree bark or the actual collection of leaves. Whatever option is chosen by the student, it must be completed in a neat and attractive way. This project should be **completed individually and not with a partner or in a small group**. Students should not collect leaves from bushes or from pine/evergreen type trees as it is too difficult for the student to identify. Also **please refrain from taking your student to an arboretum, nursery, or other places where the required information is obviously stated. Major points will be deducted from the total grade if indication of the above is observed.** I want each child to experience the process of identification on their own and to learn from doing so. It is a great opportunity to enjoy family fun and to be creative. The following information is required on a label for each leaf type collected or photographed.

Collector or Photographer's name:

Date Collected or photographed:

Place collected or Photographed:

Common Name:

Scientific Name:

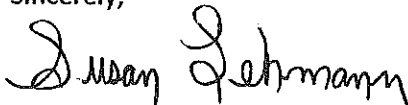
Leaf Type: (Simple or Compound)

Leaf Arrangement: (Alternate, Opposite, or Whorled)

Leaf Margin: (Entire, Lobed, Serrate, Dentate, etc.)

Included is a list of some helpful web sites, books for identification, and preservation tips. It is not required that the leaf collection be started this summer but this information provides an opportunity for those who want to get a head start. It's a great way to observe the world in which we live, to learn about the trees of Kansas, and appreciate God's creation in a new way.

Sincerely,



Susan Lehmann (slehmann@kcchristianschool.org)

Middle School Science Teacher

LEAF COLLECTION OPTIONS:

Option 1

1. Collect and properly identify 25 different leaves and mount them in a photo album or binder.
2. When selecting leaves, avoid damaged leaves by insects, disease, or the environment. Do not use leaves from shrubs, pines or evergreen trees. Make sure that the complete leaf is collected. Handle the leaves carefully. It is also wise to collect two of each leaf in case something happens to ruin the specimen or identification needs to be more distinct.
3. Press the collected leaves in the following way.
 - Select a flat area on the floor, desk, or table top in a room with good air circulation.
 - Place wax paper or foil on the surface that you choose. This is to protect both the leaves and the surface.
 - Prepare the necessary sheets of unfolded newspaper adequate enough for the number of leaves you have collected. You will want several paper thicknesses per paper between each pressing.
 - Place the fresh leaf specimen(s) to be pressed on the flat sheet layers. Be careful not to let the leaves overlap or wrinkle by overcrowding. Then simply use alternate layers of paper between more pressings.
 - Cover the top and final layer of newspaper with stiff cardboard, large catalogs, phone books, plywood, etc.) Make sure that any of the items used do not have glossy pages as this will promote molding and the decay of the leaves.
 - Place sufficient weight (books, bricks, etc. on top of the plywood/cardboard, etc. to press the leaves flat and hold them in position. This process takes between three and five days depending on the thickness and moisture content of the leaves. Remember to change the newspaper when needed. Leaf exhibits become, more attractive as the length of the pressing is extended.
4. The pressed leaves are brittle and do not withstand repeated handling or rough treatment. Keep the leaves in the press until time to mount them. To preserve the beauty or the collection and to add strength to the leaves, a clear plastic or acrylic spray finish may be added to them. Make sure the leaves are completely dry after spraying and before placing in a display. Also be sure to spray both sides of the leaf.
5. Once the leaves are pressed, they need to be exhibited in a photo album or binder. If a photo album is used, find a hard cover album with sticky pages. Do not use a scrapbook. Do not tape leaves if a binder is used. Instead, put a small dot of glue on the back of the leaf and place it in heavy paper and then insert it into a plastic cover sheet before organizing the leaves in the binder. Place one leaf type per page and a complete label according to the example in the cover letter of this packet. Be sure that the collection is neat and well organized.

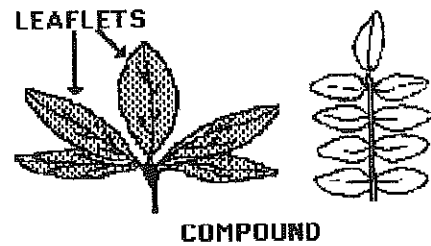
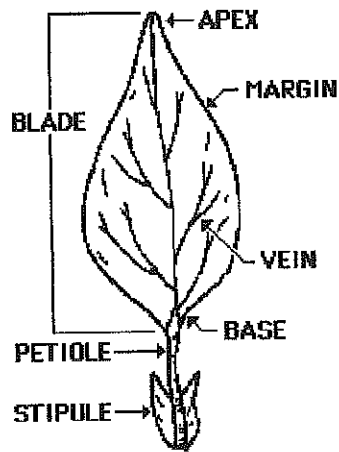
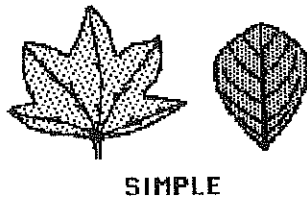
OPTION 2 – DIGITAL PHOTOGRAPHY

1. Using a digital camera take pictures of **25 different leaves**. Take several pictures of each leaf to be sure that the pictures are not blurred and are clear. Take the pictures at different angles. **Also photograph the bark of the trees** as this helps in the leaf identification. **Do not photograph shrubs, pine or evergreen type trees**. Remember that you can delete the pictures that are not good.
2. Identify the leaves by using websites and guide books. Then complete a label for each leaf picture according to the example given in the cover letter of this packet.
3. Display the photographs along with the labels in a scrapbook, binder, or photo album. The collection must be neat and organized. **Place one leaf type per page along with the required label.**

Background Information:

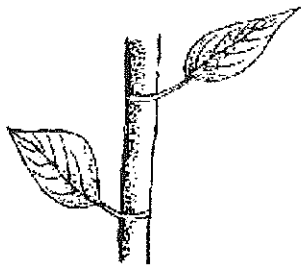


Leaf Anatomy:

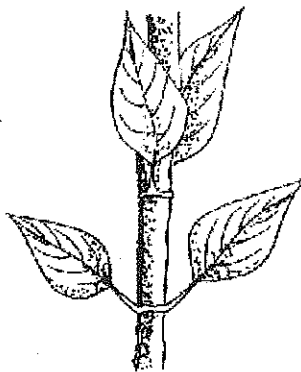


Leaf arrangement

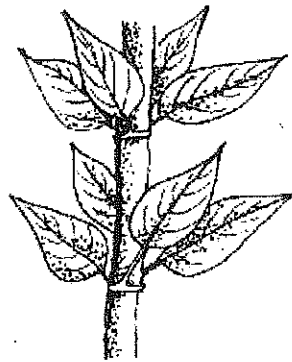
Nodes can have one leaf or many leaves, often in the following arrangements:



Alternate
(one leaf/node)



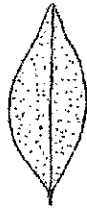
Opposite
(two leaves/node)



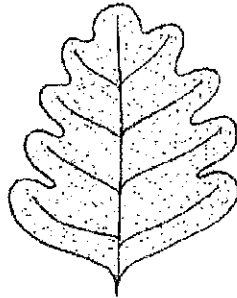
Whorled
(three or more
leaves/node)



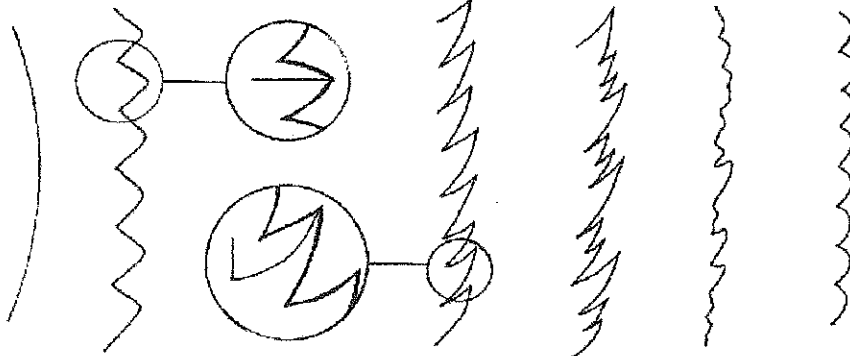
Leaf Margins:



Entire



Lobbed



Entire Dentate

Serrate

Compound serrate

Erosee

Crenate

Helpful Websites for Leaf Identification:

www.fw.vt.edu/dendro/forsite/key/intro.htm

www.oplin.org/tree

www.hort.uconn.edu/Plants

www.ces.ncsu.edu/depts/hort/consumer/factsheets/trees-new/scientific_namesa_e.html

Helpful Identification Guide Books:

Eyewitness Companions Trees

National Audubon Society Field Guide : Trees

Peterson Field Guides

Smithsonian Handbooks: Trees