

Option Three: Leaf Collection

Trees, Shrubs, Woody Vines Found in the Llano Area

Texas has many different climates and terrain types, this in turn allows for diverse populations of trees. As with many societies, one may find not only native species but also introduced species that are able to thrive in the area. The benefits of trees, shrubs and other plants are too numerous to mention but they are needed in many ecosystems.

Leaf collecting is a good way to learn the species that are found in your area both native and introduced. The purpose of this project is to assist you in learning various leaf characteristics, taxonomy, dichotomous keys, and scientific nomenclature.

Materials

- Black pen/ pencil
- Small Collection Notebook (may substitute notes cards) – for collection data
- Glue (i.e. Elmer's or other school glue, NOT super glue)
- Card Stock/Art Paper/Poster Board for mounting (card stock works the best)
- Labels (3x5 index cards work well). Labels may be done NEATLY by hand or by computer
- Leaf Press (you may build one inexpensively using small squares of plywood with cardboard spacers and newspaper with old belts to tighten, or by placing leaves between the pages of a large phonebook will work though it will not work as well)
- Field Guides, Taxonomic Keys (may be found in libraries/bookstores/online)

General Information

- Always get permission before collecting from another's property. Remember "No" means no.
- Collect **at least 2** (more in case of damage or loss) of each leaf. You will need to display both the front and back of each leaf.
- At the time of collection make sure to note: the date collected, location, leaf arrangement, and if possible scientific name (you can come back to this one). Do not try and guess on this information at a later date.
- Leaves take many days to dry properly. Thin leaves may take 5 days. Thicker leaves obviously will take longer.
- DO NOT wait to collect your leaves (see previous note)
- Place leaves into the press as quickly as possible, this should prevent wrinkling. If it is not possible to press immediately, they may be stored in plastic bags within the refrigerator until pressing is an option.
- If the leaf arrangement is compound, you must have the complete arrangement. Not all leaves are simple (single).
- Collection
 - You will need 2 (at least) of each leaf type.
 - Collect the entire leaf, not just a leaflet.
 - When pressing, no part of the leaf should extend past the press. This will not dry properly.
 - Badly damaged or torn leaves will receive no credit. Do not collect them.

- Labeling
 - Glue the label (or use stick on labels, not post-its) to the lower right hand corner of each page.
 - Labels should be done only in black pen. They may be neatly hand written or computer printed (again black ink)
 - Use the taxonomic keys/field guides to identify the leaf. The label should have both the common name and scientific name. Remember that scientific names are underlined and the first name is capitalized.
 - Date and location are required.
 - Arrangement should be recorded as either simple or compound.

Example

Prosopis glandulosa
 mesquite
 I-44 between Wichita Falls and
 Burkburnett
 8/23/13
 compound

Mounting

- Card stock is great for mounting the leaves. You may use poster board or art paper cut down to size. All pages must be uniform in size. The size of the paper will determine the size of your largest leaf.
- Use glue (plain white glue) to mount the two leaves to your page. Remember that you will show the upper and lower sides of the leaf.
- When mounting compound leaves, mount the entire upper side of the arrangement but only the lower side of one leaflet. This leaflet should be from a different leaf or you will not receive credit.
- Laminating the pages will help protect your collection for years. *This is entirely optional.* No extra credit will be given for this. This step is entirely up to you.
- Place your pages in a binder. **Make sure that all glue is dry before this step.** You do not want your hard work to be destroyed because the pages glued together.
- Make sure there is room for the leaves and the label of the page. There should be no overlapping.
- Take pride in your work. Make sure everything looks nice and is neat.
- Page numbers are to be placed in the bottom center of each page.
- Binder
 - The pages are to be placed in a binder. You may choose to build your own binder using a stiff front and cover. Cardboard and wood are good for this though there are other alternatives. Binders should be large enough that the pages are able to turn freely. One inch rings are usually large enough.
 - The first page of the binder is the title page
 - Title
 - Your name
 - Pre-AP Biology
- (In order to achieve full credit, you will collect leaves from at least 15 species (tree, shrub, woody vine) that are native to Llano and the surrounding counties. Do not collect introduced species.