

Biology II - Marking Period 1 Taxonomy Project (Individual)

Purpose of this project:

For many people, all trees look pretty much the same, and any little creepy crawly critter with 6 legs and 3 body segments is an insect (or a bug). In this project you will take a closer look at one group of living things - plants or insects, to look for patterns of relatedness and diversity. You will also practice the skills of classification and identification that are the foundation of biology. You may choose from one of the following options. Either one will count as a 50 point assessment grade for the first marking period.

Option 1 - Leaf collection

- Collect leaves from 5 different **native tree species** from the tree list provided. You will get a higher grade if all the leaves come from one family of trees.
- Press the leaves for a week to 10 days to dry them.
- Glue the leaves to blank white sheets of paper.
- Fill out labels for each specimen, attach to mounted leaves.



Grading Scale: Each leaf will be worth 9 points

- 3 points for correct identification
- 3 points for quality of specimen and mounting
- 3 points for correct labeling

In addition a classification score will be awarded based on the number of tree families in your collection:

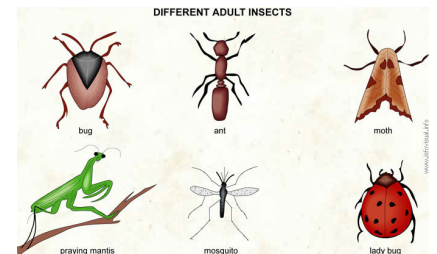
- 1 point - leaves from 5 different families
- 2 points - leaves from 4 different families
- 3 points - leaves from 3 different families
- 4 points - leaves from 2 different families
- 5 points - leaves from 1 family

Option 2 - Insect collection

- Collect 5 different species of insects
- Kill insects in killing jar and pin to drying board to dry.
- Mount dried insects on pins with identifying labels in a box.

Grading Scale: Each insect will be worth 9 points.

- 3 points for correct identification to the level of order
- 3 points for quality of specimen and mounting
- 3 points for correct labeling



In addition, you will receive 1 point for each insect order represented, up to 5 points. The more diverse your collection, the higher your score. See pages 762-763 in your textbook for a table showing 15 of the most common insect orders

List of Acceptable Tree Species by Family

Willow Family

(Salicaceae)

Quaking Aspen
Bigtooth Aspen
Black Willow
Pussy Willow

Beech Family

(Fagaceae)

American Beech
American Chestnut
White Oak
Swamp White Oak
Chestnut Oak
Red Oak
Black Oak
Scarlet Oak
Pin Oak
Burr Oak
Post Oak

Elm Family

(Ulmaceae)

Slippery elm
American Elm
Hackberry

Heath Family

(Ericaceae)

Rhododendron
Mountain Laurel

Linden Family

(Tiliaceae)

Basswood

Witch Hazel Family

(Hamamelidaceae)

Witch Hazel
Sweetgum

Birch Family

(Betulaceae)

Hornbeam
Hophornbeam
Sweet Birch
Yellow Birch
River Birch
Paper Birch
Gray Birch

Maple Family

(Aceraceae)

Striped Maple
Sugar Maple
Silver Maple
Red Maple
Box Elder

Mulberry Family

(Moraceae)

Red Mulberry
Osage Orange

Magnolia Family

(Magnoliaceae)

Cucumbertree
Tuliptree (tulip poplar)

Laurel Family

(Lauraceae)

Sassafras

Bignonia Family

(Bignoneaceae)

Northern Catalpa

Olive Family

(Oleaceae)

Black Ash
White Ash
Green Ash

Walnut Family

(Juglandaceae)

Butternut
Black Walnut
Shagbark Hickory
Shellbark Hickory
Mockernut Hickory
Pignut Hickory
Bitternut Hickory

Pea Family

(Leguminosae)

Redbud
Honey Locust
Kentucky Coffeetree
Black Locust

Custard Apple Family

(Annonaceae)

Pawpaw

Horsechestnut Family

(Hippocastanaceae)

Horsechestnut
Buckeye

Planetree Family

(Platanaceae)

American Sycamore

Dogwood Family

(Cornaceae)

Flowering Dogwood

Ebony Family

(Ebenaceae)

Common Persimmon

Rose Family

(Rosaceae)

Black Cherry
Choke Cherry
Fire Cherry