



# Botany

*Science & Technology Branch – Elective Step 8*

## Purpose

The purpose of 'Botany' is to learn and understand more about trees and plants. Identification can be a great asset while camping or hiking.




1. What is botany and what areas does it consist of?
2. What are some plants in my area?
3. How can you identify these plants?
4. Are these plants dangerous, beneficial, or neither?

## Notes to the Trail Guide //////////////////////////////////////

1. The goal is not for the boys to be experts at these topics, but to gain an increased knowledge and awareness of the Step.
2. Make it relative to your patrol.
3. Remember, these lessons should build from Fox to Hawk and from Hawk to Mountain Lion.
4. See the Leaders Guide for more information on Steps.

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## Skill Progression

	<ol style="list-style-type: none"><li>1. Picture matching</li><li>2. Identification Game</li><li>3. Nomenclature</li><li>4. Simple leaf recognition</li></ol>
	<ol style="list-style-type: none"><li>1. Tree identification</li><li>2. Common dangerous plants</li><li>3. Basic plant identification</li></ol>
	<ol style="list-style-type: none"><li>1. Dangerous plants recognition</li><li>2. Poison identification/First aid (simple)</li></ol>

# Helps

1. What is botany and what areas does it consist of?
  - a. **Goal:** To understand that botany is a vast area of study.
  - b. **Lesson:** Learn what a few branches of botany are called.
  - c. **Examples:**
    - i. Paleobotany – Study of fossil plants and plant evolution.
    - ii. Palynology – Pollen and spores.
    - iii. Phytogeography – Plant Biogeography, the study of plant distributions.
    - iv. Plant anatomy – Structure of plant cells and tissues.
    - v. Plant ecology – Role and function of plants in the environment.
    - vi. Plant evolutionary developmental biology – Plant development from an evolutionary perspective.
    - vii. Plant genetics – Genetic inheritance in plants.
    - viii. Plant morphology – Structure of plants.
    - ix. Plant physiology – Life functions of plants.
    - x. Plant reproduction – Processes of plant reproduction.
    - xi. Plant taxonomy – Classification and naming of plants.
2. What are some plants in my area?
  - a. **Goal:** To understand that not all varieties of plants are in your area.
  - b. **Lesson:** Learn a few types of plants that live around your area.
  - c. **Examples**
    - i. Trees
      1. American Beech
      2. Sugar Maple
      3. Eastern Hemlock
      4. Yellow Birch
      5. Eastern White Pine
      6. Red Maple
      7. Black Cherry
      8. Bitternut Hickory
    - ii. Flowers
      1. Rose
      2. Iris
      3. Tulip
      4. Sunflower
      5. Daisy
3. How can you identify these plants?
  - a. **Goal:** To understand that each plant has attributes that allow you to distinguish one from the other.
  - b. **Lesson:** Learn how to identify a few plants or trees.

- c. **Examples:**
  - i. Methods
    1. By leaf
    2. By bark
    3. By fruit
    4. By seed
    5. By flower
4. Are these plants dangerous, beneficial, or neither?
  - a. **Goal:** To understand that plants can be beneficial and/or harmful.
  - b. **Lesson:** Learn to recognize a few harmful or beneficial plants.
  - c. **Examples:**
    - i. Poisonous
      1. Hyacinth, Narcissus, Daffodil (Bulbs).
        - a. Nausea, vomiting, diarrhea. May be fatal.
      2. Oleander (Leaves, branches).
        - a. Extremely poisonous. Affects the heart, produces severe digestive upset and has caused death.
      3. Dieffenbachia (Dumb Cane), Elephant Ear (All parts).
        - a. Intense burning and irritation of the mouth and tongue. Death can occur if base of the tongue swells enough to block the air passage of the throat.
        - b. Rosary Pea, Castor Bean (Seeds).
          - i. Fatal. A single Rosary Pea seed has caused death. One or two Castor Bean seeds are near the lethal dose for adults.

## Scripture Ideas

### Genesis 1:11-12

- Fox – God created all plant life.
- Hawk – God created a great diversity of plant life for us to learn and live from.
- Mt Lion – **We must learn and care for God’s great creation.**

### Isaiah 61:11

- Fox – **Many of God’s plants produce good things for us.**
- Hawk – It is important for us to know what God has created for us.
- Mt Lion – God designed this world to produce fruits and He has also done so with us.

## Activity Ideas

- See the relevant patrol and branch section of the activities
- Or, create your own activity relevant to your troop and region
- Go around your facility and identify trees and plants.

## Game Ideas

- Check the games section online for game ideas
- Or, create a game that works for your patrol
- Trees recognition quiz show.

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