

"Carnivorous Plants: Believe It or Not!" Activity

Objectives:

- Students will analyze multiple ways in which carnivorous plants have adapted to **attract** prey.
- Students will be able to explain three different ways carnivorous plants have adapted to **trap** prey.

Estimated time: 10 minutes

Background:

Descriptions of nine carnivorous plants follow. Each of these plants is also depicted in a drawing on the worksheet. These carnivorous plants may appear to be something out of science fiction, but as unbelievable as it may seem, five of the nine plants described are real carnivorous plants which actually grow around Wilmington! However, four of the plants are imaginary.

Read the nine highlighted plant descriptions while you look at the attached picture and decide which are real and which are imaginary! If needed, ask for help reading the descriptions with a parent or guardian. The answers are revealed in the video on our website, *Carnivorous Plants Pt. 2*.

Plant Descriptions:

1. **Butterwort:** The yellowish-green leaves of this insect-eating plant glisten in the sunlight as they lay low to the ground. The leaves have a finely pebbled texture and a greasy feel due to the presence of many glands which produce an oily, sticky substance. Small prey are attracted by the plant's musty smell and become mired down by the sticky secretions on its leaves. The edges of the leaf roll inward, causing the secretions to pool, and form a shallow cup around the prey. The prey suffocates and is digested in the fluid.

2. **Hummer Plant:** This low-growing plant prefers to grow in very open areas. The leaves grow tightly together, the bottom fusing into a cup with two small openings. The leaves separate and flare out at the top to become narrow and needle-like. As the wind blows, air is circulated through the small openings causing the narrow leaves inside the cup to move. This movement creates a low, vibrating sound as the stems rub together. This humming sound attracts small crawling insects. Thinking the sound is another insect in distress, they crawl up to the plant to investigate. As they reach the top of the cup the swirling air flow causes them to lose their footing and to be swept into the cup. They fall down into the bottom where digestive enzymes absorb their soft body parts into the plant.

3. **Angler Plant:** A red or pinkish lure on the end of a slender stalk is located in the center of the plant. Light breezes move the lure slightly and make it twist and shimmer in the sunlight. This attracts insects to investigate the enticing bait. When touched, part of the leaf clamps down, pushing the stunned prey into a narrow tube containing digestive enzymes where soft body parts are absorbed into the plant.

4. **Venus Flytrap:** Attracted by the brilliant colors of its captor, the prey is lured into the trap. Trigger hairs, aroused by the movement of the prey, activate the trap which snaps shut in less than a second. The guard hairs along the edge of the trap mesh, snaring the unwary victim and the captive is devoured. Satisfied, the trap reopens in about three days, readying itself for yet another unsuspecting visitor.

5. **Glider Plant:** A light breeze loosens this plant from its perch and sends it gliding in the wind in search of prey. Several leaves are fused together to form wing-like

appendages which are able to take advantage of light winds and carry the plant aloft. Any unsuspecting insect in its path is scooped into a widely gaping mouth-like opening from which it cannot escape. Upon contact with the ground, the mouth snaps shut sealing the victim's fate. Digestion begins when enzymes are secreted by the plant.

6. **Bladderwort:** This plant lives in a boggy or wet habitat. The plant has many balloon-like traps on its branching stems. These buoyant traps suck in unsuspecting prey, such as mosquito larvae, when the feather-like triggers on one of the bladders are touched. The prey is digested with the help of digestive enzymes, which are secreted by the plant.

7. **Sundew:** The numerous hair-like glands on the red, club-shaped leaves are tipped with a glistening, sticky mucus. Unlucky prey become stuck in the sticky glands of the leaves as they brush against them. The extraordinary digestive system of the plant consumes its struggling prey by absorbing it directly into the leaf within a couple of hours.

8. **Pitcher Plant:** The plant's leaves form a funnel-like opening to a long narrow cylinder containing digestive enzymes at the bottom. A portion of the leaf appears to be a lid covering the funnel. The funnel lip contains nectar-producing glands which entice insects to investigate the cylinder. Upon entry the insects discover downward pointing hairs and a slippery surface which prevents escape from the trap. The insects slip and fall to the bottom where they are absorbed into the plant.

9. **Checkmate:** An insect smells sweet nectar coming from glands in the stem of a leaf. The insect crawls towards the nectar, continuing further as the nectar becomes more concentrated. The insect finds itself surrounded by the leaf in a pattern of light and dark green. In the sunlight, the lighter parts of the leaf appear to be an open window. As the insect crawls towards the light expecting to exit, it finds that the leaf is solid. The insect crawls to another light part, again finding no exit. As the insect crawls further it finds itself in a one-way maze which ends in a narrow chamber filled with digestive juices. Here the insect drowns and its soft body parts are absorbed by the plant.

Believe It or Not!

