

Ecosystem Services Charade Cards

Instructions: Teacher should copy on regular paper and cut apart one set of these cards.

Wild Edible Plants

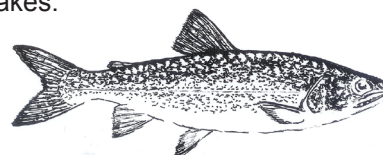
Have you ever tasted the sweetness of a wild raspberry? In Michigan and throughout the world, many wild plants are collected for use as food by people. Some examples of wild edible foods collected in Michigan include: berries (thimbleberries, blueberries, strawberries, and raspberries), wild rice, asparagus, and certain species of mushrooms.



product

Fish

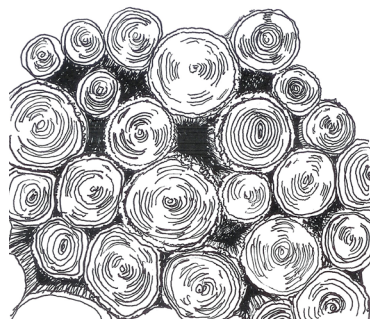
People around the world and in Michigan catch fish for food. Sometimes people just fish for fun and then let the fish go instead of eating them. With so many lakes, rivers, and streams, fishing in Michigan is a popular activity. Some of the fish that people enjoy catching include perch, walleye, bass, pike, and trout. Commercial fishermen use large nets to catch fish like whitefish, chubs, perch, and lake trout in the Great Lakes.



product

Wood Products (lumber, firewood, paper, etc.)

People cut down trees to use the wood for things like building houses and furniture, making paper, and firewood.



product

Medicine

Wild plants sometimes have medicinal uses. For example, the active ingredient in aspirin originally came from a chemical found in a willow plant.



product

Wild Game Animals

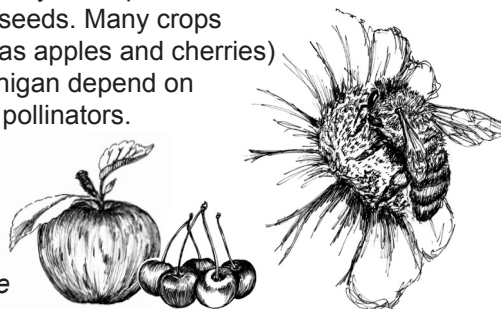
People all around the world hunt animals for their meat. In Michigan, around 1 million people participate in hunting activities every year. An additional 16,000 people have licenses to harvest animals for fur. Popular game animals include deer, waterfowl (ducks and geese), bear, wild turkey, elk, pheasant, quail, grouse, woodcock, and fox.



product

Pollination

When birds, bats, bees, and other insects visit flowers to sip their nectar, the small animals get dusted with pollen. As they visit other flowers, they spread around pollen, which is needed by other plants of the same kind to make seeds. Many crops (such as apples and cherries) in Michigan depend on insect pollinators.



service

Pest and Disease Control Services

Some species are considered pests when they cause problems for people by eating farmers' crops or spreading disease to people. These pests are often controlled by their natural enemies, such as birds, spiders, wasps, ladybugs, and flies.

Examples of pests that can spread diseases include ticks (which can spread Lyme disease) and mosquitoes (which can spread malaria or West Nile Virus).



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Seed Dispersal

Many plants depend on animals for their dispersal. Some seeds are packaged in tasty fruits, which are eaten by animals and are passed through their digestive tracts and often transported to a new location. Other seeds are stored away or buried by animals such as squirrels. Seeds that are forgotten by the animal have a chance to grow. Other seeds stick to animal fur and travel with the animal until they fall off in a new location. Seed dispersal is important to the survival of many plant species.



service

The Decomposition and Recycling of Nutrients

Dead things (and the wastes of living things) are recycled back into the soil through the work of scavengers and microscopic decomposers. Some examples of scavengers include centipedes, pillbugs, catfish, and vultures. Examples of decomposers include fungus, bacteria, and other microorganisms.



service

Nature Appreciation and Recreation

People value natural ecosystems as places to visit for recreation and vacations. For example, millions of people visit state and national parks every year to participate in activities such as hiking, camping, wildlife watching and photography, boating, fishing, and hunting. Many people gain artistic, spiritual, and aesthetic inspiration from being in natural surroundings.



service

Air Purification

In a delicate balance of nature, the Earth's plants, animals, and microorganisms work together to exchange gases needed for their survival. During photosynthesis, plants purify our air by taking in carbon dioxide and releasing oxygen. Animals then use oxygen from the air, and release carbon dioxide.



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Water Purification

Plants, especially in wetlands, work together with microorganisms in the soil to filter out sediments and toxins from water. Some organisms, such as aquatic snails and clams, pump water through their bodies to filter out food, and end up helping to clean the water at the same time.



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Climate Control

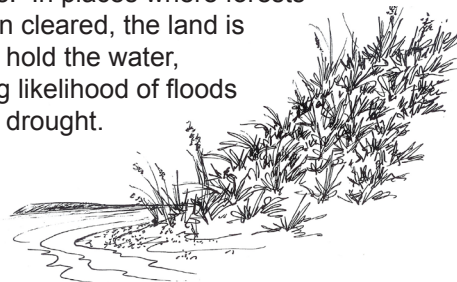
Have you ever visited a forest on a hot day, and been surprised to find it was much cooler than in town or even the parking lot? Forests help control local climate by providing shade that is beneficial to all kinds of animals, including people. Trees and other plants also help to counteract global warming by taking in and storing carbon dioxide, the gas that is most responsible for global warming. In winter, vegetation cover is important protection for some animals, as it helps to insulate some microhabitats from the cold.



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Erosion and Flood Control

Enough rain falls onto the Earth's land surface every year to cover the land to an average depth of 1 meter. Much of this water is soaked up by plants, which hold the soil in place, reducing the likelihood of erosion and mudslides. In places where forests have been cleared, the land is unable to hold the water, increasing likelihood of floods and even drought.



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