

# Topic 10: Invasive Exotic Species



## Day 1 Native vs Exotic

All plants and animals can be sorted into two categories: native species and exotic species. Organisms that have grown overtime in Michigan without the movement of humans are called native species. Organisms that were brought to Michigan by humans are called exotic species. Head outside with an adult and use this [scavenger hunt](#) to look for exotic species near you.

## Day 2 Chemicals

Some plants have special chemicals they use to kill the plants around them. These chemicals, called allelochemicals, are leaked into the soil from the roots of the plant and then absorbed by the surrounding species. Some exotic plants such as Spotted Knapweed and Buckthorn use these kinds of chemicals to make more room for their own species. Head outside with an adult and look for patches of plants that look the same; some plants create patches called communities by growing new plants from their roots and some use allelochemicals.

## Day 3 Strategies

Some invasive plants and animals have unique strategies to outcompete native species. To spread its seeds more quickly, Buckthorn has fruit that causes diarrhea in animals that eat them. To increase its population at a fast rate, Zebra mussels grow through their lifecycles quickly. These unique strategies make it hard to control the populations of invasive exotics. Conduct research on the strategies of an invasive species near you and see how people help to control their populations.

## Day 4 Food Chain

When exotic invasive species move into an area they can change the flow of energy in the food web. Plants are producers and make their own food from the sun's energy which makes them the first link in most food chains. If an invasive plant crowds out native plants there are fewer food choices for herbivores. Go outside and draw a food chain that you can see in your yard or local green space. Cross out the plant in your food chain. Can you find a different plant that would fit? How does removing a link in your food chain change the flow of energy?

## Day 5 Data Collection

Invasive exotic species are found in every kind of ecosystem. Create a plot for data collection with a hula hoop or a string connected end to end in your yard or local green space. Count the different numbers of plants and animals that you find. Create a data collection plot in another space. Did you find a variety of plant and animal species or were your plots dominated by just a few species?

## Kindergarten

Buckthorn is a common invasive exotic species that uses many strategies to outcompete native plants. These shrubs grow close together and crowd out other plants as well as use chemicals to kill plants close by. How do these two strategies change the habitat to meet Buckthorn's needs?

## 1st Grade

Look in your yard or local green space for patches of plants that are made up of a single species. How can you tell that the patch is made up of one species? Are the leaves the same shape and size? Are all of the plants the same color?

## 2nd Grade

Visit a pond, field and forest. Did you notice plants that the ecosystems had in common? While in each ecosystem did you find patches of plants containing the same species?

## 3rd Grade

When invasive exotic plants and animals move in to a new space they often outcompete native species. How could a decrease in native species change an ecosystem? Talk with someone about humans and how they can help control the invasive species.

## 4th Grade

Conduct research on some of the invasive exotic species near you. What sorts of internal and external structures do these species use to survive?

## 5th Grade

Head outside and draw multiple food chains from your yard or local green space. Combine these food chains into a food web. Cross out one of the plants in your food web; how many food chains does that affect? How are invasive exotic species related to the removal of a native plant species?