Native Species vs. Invasive Species

Whether you know it or not, there's a competition going on in nature, right in front of your eyes. There are no gold medals in this competition, but there are winners and losers. The contestants? Plants and animals that have been here living happily for centuries versus plants and animals that are new in town and are growing out of control. Who will win?

Natives

The species that have been here for centuries are called "native." If you go to a different continent, you might see totally different animals, like polar bears in the arctic and camels in the deserts. Plants in California are not the same as plants in New York, or France, or Japan. While the plants might have similarities, with flowers of similar colors or leaves of similar shapes, if you look closely you can see differences. They have different shapes, sizes, and colors because they have grown to fit in or "adapt" to that particular environment. Animals and plants have their special places in nature where they feel comfortable. This is what makes a plant or animal *native* to that place: they've grown up there and their species has been there for a really long time. It's their home.

Non-Natives

But what happens when those plants or animals move to a different place? If you've ever had to move to a new home in a new town, you know that change can be difficult. You leave your old friends behind and meet new people, and then eventually you feel comfortable and settled into your new place. People also move plants and animals to new homes. Sometimes they move them because they like seeing exotic flowers in their garden, or maybe they released their exotic pet snake into the wild, or maybe plants or animals got moved accidentally- like if they got stuck on a ship or in wooden crates. Sometimes the new homes they find themselves in are really far away from their old homes. And the new homes are nothing like the native homes that they came from. They may even be on a new continent!

This is kind of like bringing a polar bear to Florida. The polar bear has only ever known cold temperatures and lots of ice; it isn't going to do well on a hot beach. The same thing goes for plants; a lot of plants from tropical areas, like palm trees, aren't going to grow well in the cold winters of New York or New England. Many of the plants and animals that move far from their native homes don't do very well.

Invasives

But there are other plants and animals that are moved by people to a new place and they do *really, really* well – actually, *too* well. They love it! Maybe they had predators (things that ate them) back in their old home, and the new home doesn't have any predators. Or maybe the new home has more light for them to grow, or more new foods for them to eat. Because they like this new home so much, they grow, reproduce, spread, and claim the new land as their own. However, there's a big downside to this takeover. This non-native plant or animal upsets the "balance of nature" so to speak. When these animals and plants take over and cause harm to the environment, they are called "invasive." This species that isn't meant to be there actually can do great harm and it can actually make a big difference in the environment. One thing that makes the environment healthy is having a lot of different kinds of plants and animals in it. This is known as "biodiversity". Biodiversity is important not only because it's nice to have a variety of species, but because having a lot of different species helps the environment recover if a natural disaster happens. Invasive plants and animals harm biodiversity. In a lot of places, the plants and animals who are native- who have been there for ages and call the place their home- are being crowded out by invasives, and it's harder and harder to find them.

Examples

You've definitely seen some invasive animals before. One example is earthworms: there are no native earthworms to most of the U.S. All the earthworms that we see here were brought from other places for farming, or they tagged along in the soil with plants that came from places like Asia. Earthworms change the soil wherever they are, and while one little earthworm doesn't make a big difference, a lot of earthworms can make big changes to the soil, and that changes what kinds of plants will grow well there. And you've probably seen some invasive plants, but maybe you didn't know it. There's this invasive vine called "Kudzu" that is a big problem in the southern U.S. They call it "the vine that ate the south," because that's exactly what it looks like it's doing: it's like a blanket of tangled leaves the size of a house, covering all the bushes and trees in sight. There are other crazy invasive plants like Japanese Knotweed, that are so strong that they can grow through concrete, and are hard to control.

So native species are in a competition with invasive species all over the world, and most of the time, invasive species are winning. But there are things people can do to help the native "team" win. People that try to save native species and control invasive species talk about it like it's a battle. That's because these invasive species are hard to control- they grow really fast, or spread really fast- sometimes faster than humans can handle. But more and more people are helping because protecting the biodiversity of the environment is important. One big way to help is to plant native plants for your area, and to prevent invasions from happening in the first place. You can do this by making sure you're not transporting invasive seeds or plants without meaning to, and by not releasing exotic pets like turtles and goldfish into the wild. Learning about how everything in nature is connected and the things you can do to help can make a big difference.

Links in Module

Native

Non Native
- Exotic Flowers
- Exotic Pet Snake
- Stuck on a Ship
- Wooden Crates

Invasives
- They grow, reproduce, spread
- Biodiversity

Examples
- No native earthworms
- Kudzu
- Knotweed

Conclusion
- Hard to control
- Releasing exotic pets

Links for Kids

Native Species
DEC sheet
Biodiversity - definition
Biodiversity facts and games
Kudzu