

Oodles of Boodles



Next Generation Science Standards Disciplinary Core Idea: LS2.A: Interdependent Relationships in Ecosystems

The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as “decomposers.” Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem.

Science and Engineering

Practice: Obtaining, evaluating, and communicating information

Crosscutting Concept:

Cause and effect

Common Core State Standards

CCSS.ELA-Literacy.SL.5.3: Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g. how characters interact)

ACTIVITY DESCRIPTION

Students will read a fictional story about the introduction of invasive species to a natural environment. They will explore the impacts of these invasive species and what can be done to restore balance in an ecosystem by analyzing and discussing the story events and possible solutions to such a problem.

GUIDING QUESTIONS

- How do invasive species impact the biodiversity of an ecosystem?
- What can be done to minimize the impacts of invasive plants?

OBJECTIVE

Students will demonstrate their understanding of the impacts of invasive species on the balance of an ecosystem by reading, analyzing, and discussing the fictional case study of *Oodles of Boodles*.

VOCABULARY

Invasive species – a species that has been moved or introduced by human activity to an area where it does not naturally occur and diminishes the biodiversity of the region by taking resources from natural organisms

Natural community – an association of plants and animals that occur naturally in a particular area

Competition – an interaction in which one organism prevents or seeks to prevent another from obtaining a resource they both need to survive

MATERIALS

PER GROUP:

- Copy of the article *Oodles of Boodles* from *Ranger Rick*
- Crayons, markers, or other coloring materials
- Plain white paper
- Tape

PER CLASS:

- Four sheets of large chart paper

PREPARATION

- Make one copy of *Oodles of Boodles* for each group.
- Write one of the following questions on each sheet of chart paper and post around the classroom:
 - How did the new species introduced to Here impact the organisms and community?
 - Could the problems that Here faced have been prevented? How?
 - What did the people of Here do in response to the new species?
 - Can you think of a real-life situation similar to what happened in *Oodles of Boodles*?

Oodles of Boodles by Ranger Rick

Once upon a time there was a village named Here. Most of the people in the village were farmers. They liked working the land, and they managed to grow enough food for everyone. One farmer in the village wasn't happy with his farm. His name was Jag. Jag wanted to plant new kinds of vegetables and fruits. He was tired of eating the same old things. He was tired of seeing the same old animals. He was even tired of his pet dog, Rugger.

One day a stranger came to the village. The stranger was very old and had been walking a long time. He talked about a town that was far away. It was called There. He told Jag about all the strange animals and plants of There. He said the people of There had a favorite flower called a boodle. Boodles were bright red and grew on beautiful vines. Then he described the colorful insects. He said there were huge flying ones bigger than butterflies—with spots on each wing. He also told about the field chippets, small mammals that lived in tall grasses. Chippets had blue fur and long legs and ears. "How do I get to There?" asked Jag excitedly. "I'd really like to have boodles and chippets on my farm!"

"Well, the stranger said slowly, "I don't know if their animals and plants would fit in around Here. You see, the town of There is way over on the other side of the mountain. And things in There are a lot different from things in Here." "Oh, I know they'll fit in, stranger," said Jag. "Please tell me how to get to There!" The old man pointed toward the mountain. "Take that road until it ends. Then follow the path along the stream until it reaches the village. Remember, it's a long, long way, young fellow."

The very next day, Jag set out for There. He took bags and boxes so that he could bring back all kinds of new things from the village. He took plenty of food and a nice warm blanket. After four days of travel, Jag finally reached There.

Just as the old man had said, there were all kinds of wonderful things he'd never seen before. Different crops grew in the fields. Strange birds flew in the sky.

And the insects and flowers were unlike anything he knew. Jag knocked on the first farmer's door. He noticed the house was made of stone, not wood like his. A woman came to the door.

"Hello, ma'am. My name is Jag and I'm from the village of Here. I've come to take some of your wonderful plants and animals back to my village." "Come in," said the woman. "My name is Mera and this is my farm. We're always happy to have visitors in our village. You're welcome to look around and take whatever you'd like."

That afternoon Mera showed Jag around. As they crossed a field, Jag noticed some large insects with colorful spots on their wings. They were just as the old man had described. "What are those, Mera?" he asked, pointing.

"They are motflies," she answered.

Just as she said that, a large orange bird swooped down from a branch and snatched a motfly right out of the air.

"And that bird is called a gallow," said Mera. "They're always diving around the fields catching motflies."

"Look over there," said Jag. "What are those beasts?" He pointed to two large animals standing in the field. Each one had a pair of long tusks sticking out of its upper jaw. And their legs were striped with bands of gold and brown. "Those are rondles, Jag. They eat chippets and other small mammals." "They sure are funny-looking!" Jag exclaimed. "But they're much too big for me to carry back to Here."

By the end of the afternoon Mera had given Jag several boodle plants to take home. She also put in two chippets, four motflies, and two pet pips into one of his boxes. Pips were furry creatures with long, slender, spotted tails. Everyone in There had at least two pips. "Oh, I can't wait until I get home!" cried Jag. "All my neighbors will be jealous. I'll be the only one with boodle vines growing on my fence! And you know, I probably could sell boodles and pips and make lots of money." Mera smiled and waved as Jag started his long journey home.

Oodles of Boodles by Ranger Rick (continued)

The first thing Jag did when he returned was plant the boodles along his fence. Their bright red flowers would make the yard look very pretty. Then he let the chippets and motflies loose in the field. He was sure they would be happy there. But Jag noticed that his two pet pips weren't moving around very much. Jag was worried. He'd forgotten to ask Mera what they ate. "Oh, well," he said, "I'll feed them fruit—they're sure to like that. The pips are probably just tired after the long journey."

The next day Jag went out to work in his fields. He noticed that one row of his cornfield has been eaten up. Probably the neighbor's goat again, he thought. As the days passed, things got worse for Jag. The boodle vines were growing everywhere. They wrapped around trees and shrubs and blocked out the sunlight. Without light, the trees and shrubs shriveled and died.

Then Jag noticed that there were a lot more chippets than the two he'd brought from There. He counted over fifteen. "I guess they have a lot of babies!" he said. He couldn't believe how fast the chippets had spread. Then he remembered there were no rondles around to keep their numbers under control. He also noticed that more and more of his corn was being eaten.

One day Jag watched one of the spotted motflies land on his apple tree. Then he saw it stick its long beak into one of the fruits. It looked as if the insect were sucking out the juice. After a few minutes on one apple, it flew to another. "Well," said Jag with a troubled look, "at least there are only a few of them." Most of the other animals seemed to be doing well in Here, except for the pips. They just lay around and ate hardly anything. Jag knew they were sick, but he didn't know what to do for them.

Jag wasn't the only one having problems. His neighbor, Mrs. Piper, was upset because all her apples were being ruined by some kind of flying insect, and Mr. Murphy's corn was being eaten by strange, furry creatures. That same day, Jag noticed a small yellow beetle chewing on the shingles of his roof. Then he saw another. When he climbed up for a closer look, Jag realized that there were

hundreds of the beetles gnawing away at the wooden planks. He'd never seen anything like them before. "But how did they get here from There?" he wondered. "I didn't bring any with me. Maybe they were hiding among the boodle plants I brought. No wonder the people in There have houses made of stone!"

The village council finally decided they had to do something. They knew the whole mess was caused by Jag and his new animals and plants. They called Jag before them and said, "We have to get rid of all those weird plants and animals you brought to Here. They just don't fit in." Jag knew the council was right. He wished he had never brought anything back.

Jag and everyone else in the village began to dig up all the boodle plants they could find. But by now the plants seemed to be everywhere! Day after day they trapped the chippets. But the animals seemed to multiply faster than the people could catch them. The villagers also caught toads in the woods and let them go in their yards and houses. They hoped the toads would eat all those pesky yellow beetles. The people also tried to poison the motflies, but many of the insects survived.

After a few weeks the villagers' luck began to change. The two pips died from not eating and were buried before they spread any new diseases. The motflies began to die off as soon as all the apples were gone. Foxes discovered the chippets and began to keep their numbers under control. The villagers made a special paint that they painted on their houses. It killed all the yellow beetles. And every boodle plant finally was dug up and destroyed.

Jag knew he had been very foolish. But he and the villagers had learned a lesson the hard way.

Here was a lot different from There. Animals and plants that belonged in There did not belong in Here. And that's the way things would stay.