

## Focus on: Consumers – Invasive Species

This lesson is meant to support the unit on Structures & Functions of Living Organisms. It can be done before the unit to build background knowledge, during the unit to reinforce lessons or as a follow up to the unit to increase the retention of information. How you guide your students will depend on the information you have already taught and the information you want to introduce. Please remember that many gardens run on a yearly cycle and it will be easier to find more components of that ecosystem when it is at its peak season. You can, of course, utilize the garden at different times of the year, but the components of the ecosystem will be most evident during the peak growing season.

### Clarifying Objectives:

5.L.2.2 Classify the organisms within an ecosystem according to the function they serve: producers, consumers, or decomposers (biotic factors)

5.L.2.3 Infer the effects that may result from the interconnected relationship of plants and animals to their ecosystem.

### Focus Question:

What impact can an invasive species have on an ecosystem?

### Key Vocabulary:

Definitions can be found at <http://learnersdictionary.com>

- Biotic Factor
- Organism
- Ecosystem
- Function
- Producers
- Consumers
- Decomposers
- Infer
- Interconnected Relationship

### Materials:

School Garden

Science Notebooks

Garden Gloves to wear while exploring the garden especially if touching plants, lifting pots, etc.

### Activities:

1. Define Invasive Species: any nonnative species that significantly modifies or disrupts the ecosystem
2. Watch the following video of an invasive species found in a Wake County school garden:  
<https://www.youtube.com/watch?v=D7iAFe-VGJI>
3. Have students read the article about this invasive species either independently or with a partner. The article can be found at the bottom of this lesson or online at: [http://www.dirtdoctor.com/Land-Planarian-flatworm\\_vq389.htm](http://www.dirtdoctor.com/Land-Planarian-flatworm_vq389.htm)
4. As they read, encourage students to infer if this species is a producer, consumer or decomposer? Omnivore,

herbivore or carnivore? Why do you think that?

5. After reading the article, have groups of students discuss the questions from step 4. Then have them discuss the following questions:

- What impact could the hammerhead worm (land planarian) have on a garden ecosystem?
- How could the garden ecosystem be disrupted or destroyed because of this organism?
- Since finding this worm in their school garden, what steps should the caretakers of this garden put into place to prevent the destruction of their garden ecosystem?
- Why is it important to know what creatures are inhabiting your garden ecosystem?
- Consider: If you find an organism in a garden and you do not know what it is, should you kill it? (NO! There are so many beneficial organisms in garden ecosystems. You may contain an organism while identifying it, but you should not kill it. You do not want to destroy beneficial organisms!!)

6. Visit your school garden. Photograph or video tape organisms that are found. If you find any that you cannot identify, research them to be certain they are a part of the natural garden ecosystem.

## Land Planarian (flatworm)



*Photo by Nadine Haefs.*

An unusual worm may be in your garden that you need to know about. You also need to kill it. It's the land planarian, a slimy iridescent flatworm with a hammer head. I once thought that it was a neutral animal in the garden – eating some beneficials and some pests, but that is wrong.

Rather than helping control termite larvae, grubs and other pests, etc. it seems that it is only a destructive pest that needs to be gotten rid of. It only eats earthworms.

The predatory land planarian is no friend of earthworms. In fact, they are parasites that eat earthworms and can wipe out entire populations.

It can stretch out up to 20 inches long, gliding along on a layer of mucus secreted from glands along its underside. This gruesome worm feeds by extending its throat out of its mouth and into the earthworm. Small bits of the earthworm is swallowed a little at a time.

Land planarians are native to Indo-China, but are have been transported to many other parts of the world in the soil of greenhouse plants. They can survive in freezing climates but don't do well in dry climates. They are primarily nocturnal, but can often be found out and about early in the morning especially on wet surfaces. They can also be found on the trunks of trees.