

Dr. Julia Stevens, Microbial Ecologist

North Carolina Museum of Natural Science

Podcast length: 15:41



LESSON PLAN

SYNOPSIS

The Walking Classroom's Laura Fenn talks with Dr. Julia Stevens, a Post-Doc Research Associate in the Genomics and Microbiology Lab at the [North Carolina Museum of Natural Science](#). Julia explains what she does as a Post-Doc Research Associate and about the impact of invasive species.

VOCABULARY

Review key vocabulary (included definitions are limited to the context of today's podcast)

- **invasive species:** (noun) an organism that is introduced into an area where it shouldn't be and is harmful to the environment
- **pathogen:** (noun) bacteria or virus that can cause disease
- **food chain:** (noun) how each living thing in an ecosystem gets food and how nutrients are passed from one organism to another

QUESTIONS FOR THOUGHT & DISCUSSION

Questions for Thought and Discussion

1. Dr. Stevens explained that the lionfish is an invasive species that ordinary citizens once kept as pets and then later released into the wild, unknowingly causing severe problems in several ecosystems. What are some lessons that can be learned from this situation?
2. Dr. Stevens shared that as a Post-Doc she is finished with school, but will work for 3-5 more years with other, more experienced scientists before she runs her own lab. What are some benefits of Dr. Stevens working for several years before she runs a lab on her own?
3. Dr. Stevens said, "There are no bad results – just results. It may not be what we expected, but there is something to learn and gain." What do you think about this quote? Do you agree or disagree with Dr. Stevens?

BOOK SUGGESTIONS

Consider reading aloud or making some of these titles available to students to reinforce and extend some of the concepts covered in today's podcast.

[Pass the Energy, Please!](#) by Barbara Shaw McKinney

A fantastic book about food chains that begins with the tiniest zooplankton and traces how energy is passed from one organism to the next.

[Micro Mania](#) by Jordan D. Brown

Not only are there millions of creatures crawling on your skin, but there are even more hanging out on the inside. Read about and be blown away by incredible images of world we can barely see.

[What if There Were No Sea Otters?](#) by Suzanne Slade

This books gets readers thinking about the far-reaching impact of removing just one species from an ecosystem.

EXTENSION ACTIVITIES

The following activities are ways to build on and extend some of the topics discussed in the podcast. We strongly encourage you to always preview videos prior to showing them to your students.

[Close Knit Neighbors](#) <http://bit.ly/1UGgYjp>

Brainpop.com

In this game, students must think through different aspects of an ecosystem to create a sustainable environment for its inhabitants.

[Invasion!!](#) <http://bit.ly/1eKfnIo>

Brainpop.com

Students work through a simulation to try and prevent an invasive species from entering Lake Michigan.

[The Lionfish Invasion](#) <http://1.usa.gov/1CseAXP>

NOAA.gov

The National Oceanic and Atmospheric Administration has put together some printable materials, lesson plans and ideas for the classroom focused on the invasion of the lionfish.

[Lionfish on the Loose](#) <http://bit.ly/1LUzK2F>

Video from The Smithsonian (2:55)

A brief video that shows describes the invasion and impact of the lionfish.