



Invasive Investigators

Class Game



Lesson Name: Give Invasive Species the Boot (Brush)

Outcome: Identify their own and their family's impact on natural resources by identifying how easy it is to transfer invasive species to new places on their shoes. They will learn about play clean go, an important behavioral program to play responsibly in natural systems.

Preparations:

- Be ready to show this YouTube video to your class:
Video: [What Can I Do About Invasive Species?](#)
- Gather a spray bottle, boot brush (if you don't have an official invasive boot brush and old tooth brush, horse hoof brush, vegetable brush would do), low rise tote (one long enough that would allow students to take a few steps in it), soil (you will need to fill the totes half-way with soil)
- Gather materials for fake seeds: rice crispies, sunflower seeds, sesame seeds, nyjer seed, rice, dried peas, popcorn kernels and pepper grains (or other inexpensive materials).
- Mix the "seeds" together in a bag so it is an assorted bag when your arrive for your lesson.

- Use the video to recap previous biosecurity lessons and to introduce the saying "Play. Clean. Go".
- Create a biosecurity station set up with your boot brush, spray bottle and a few chairs
- Set out the two trays of soil near this station. Hold up the bags of "seeds" and tell your students this bag of stuff represents plant seeds that are out in the soil in nature. Then dump the contents of the bag in the top layer of the soil and mix in just enough that some "seeds" are covered.
- Have students walk across the soil.
- As a student finishes their walk, have them sit at the boot brush station and examine how much mud their shoes have collected. Some shoes will have more, some treads pick up more seeds! Some seeds are more likely to be picked up.
 - Shareable fact: One garlic mustard plant can produced thousands of tiny black seeds, these seeds can live in the soil for over 10 years!

- Shareable fact: Small-flowered jewelweed is a small plant that makes around 2,000 seeds in a year. These seeds are in a capsule that explodes outwards 3.4 meters from the parent, this makes them spread fast! One seed on your shoe could start a whole population.
- Shareable fact: We all know that plants can spread by seed but did you know some plants can also spread if you take a small piece of their root and put it in soil? The part of a root system that can do this is called a rhizome, sometimes even a small piece of a rhizome (smaller than a dime) can start a new plant! The invasive vine, Asiatic bittersweet, is an example of a plant than can spread when you break its rhizomes. This means if you left pieces of the root behind after digging it up you could actually create more plants!
- Have students use a boot brush to clean their footwear.
- Put the boot brush and spray bottle in a little field trip bag and hang it by the door, talk to students about the importance of taking one of these bags with you in the woods. If they have dog, a dog brush too could be a good idea! Invasive alien seeds like to hitch a ride on animal fur too!
- Next time students are out in their families, remember to play, then clean your boots and clothing and then go home!

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Materials adapted from the [Scottish Invasive Species Initiative's Alien Detectives site](#). Their "No Seeds Please" lesson has been adapted to feature local availability of supplies, local invasive species concerns and Canadian behaviour programs.