

GRADE 7

Train

Legacy Park Shoreline Protection



Curriculum Links

Science

Drama

Visual Art

Before You Visit:

Every plant and animal species has a native habitat. On occasion, humans relocate a species, either through carelessness or with the intent of benefiting human beings, the species itself, and/or a new environment. For example, the concern expressed over recent years regarding pythons in Florida or the presence of snakehead fish in the Washington, D.C. area waters. The activities in this lesson will require students to research several relocated or “invasive” species, evaluate the effect their relocation has had on new environments, and become familiar with arguments for and against human relocation of animal species. Begin in the computer lab and have students investigate ivy at <http://www.invasive.org/>. Specifically, have them investigate different types of ivy, and see how many they can come up with and where they are located on the maps. How many can they find that are local?

An example of the English ivy that is invading the Train sculpture down at the River:

<http://www.invasive.org/browse/subinfo.cfm?sub=3027>

Development: In the Classroom

Drama:

Narrative Pantomime is a creative drama technique in which a teacher or leader narrates a story and the students improvise or “act-out” the story and action of the main character, each in their own space. The teacher will guide students through the narrative pantomime: **“Invasive Species”** (*see attachment below*).

BROKEN LINK?

Search the Net:

Keywords:

- “Center for Invasive Species”
- “Ecosystem Health”
- “Invasive Species Distribution Maps”



Materials:

- Clip boards
- Paper
- Pencils
- Charcoal



Development: In the Sculpture Park

Visual Arts:

Step 1: Use clip boards, paper, pencil or charcoal, and gestural sketching to document the train and its state of invasion by the environment around it. Have students incorporate the structure of the train using Geometric Line as well as the Organic Line of the foliage invading it.

Step 2: When back in the classroom use these raw sketches to create a two-dimensional abstract piece about the nature of the “invasion.”

Teacher prompts:

- *Did the use of steel in the sculpture imply strength, or intend for the sculpture to be invaded?*
- *How do the weeds affect the overall aesthetic? Did the artist intend this?*
- *What is the deeper meaning to this piece? How can we express the feeling invoked during the invasion exercise using colour, movement, and form in two dimensions?*
- *Does the placement of the sculpture in the Park lend itself to this invasion?*

Closure:

Step 1: Research other invasive species rampant in this area of the Great Lakes (examples Phragmite, Green Algae, English ivy, Purple Loose Strife, Asian Carp).

Step 2: Working in pairs or small groups create a narrative pantomime that the whole class can participate in, and that describes the type of invasive species indigenous to our area. Act these out for the other students and have the class guess whether they are plant, animal, insect, or amphibian.

Step 3: Divide students into two groups, and have them debate the wisdom of relocating species. They can debate informally in a group setting, or they can set up a formal debate, with two students participating in the actual arguments and the others providing research and support for them. Ask another class to participate as an audience and recruit other teachers to score the debate.



Extensions: In the Park

Science:

Explore the connections between the man-made structure of the Train sculpture and the man-made ecosystem in the river, the *Legacy Park Shoreline Protection Project*. Apply critical thinking methods to discuss the different motives for both and decide which is most valuable, as well as the efficacy of both Projects.



Invasive Species

This exercise is a **Narrative Pantomime** about space and the visualization of three-dimensional space. It is also metaphorically about developing communities and connections between people or matter, both invasive and non-invasive with space.

Narrative Pantomime is a creative drama technique in which a teacher or leader narrates a story and the students improvisationally act out the story, each in their own space, the actions of the main character. In this exercise, the student eventually come together to improvise as teams and then as a whole class, but it begins with solo improvisation. What follows is the narration as it would be read during the lesson. The exact words are not important—it is the developing story that makes the lesson. Following the narration is a description of a processing conversation for after the story is through.

Story

Everyone find your own personal space in the room. Be sure you have enough room around you to turn all the way around with your arms outstretched and not touch your neighbour. Begin the story now:

Everyone crouch down and make yourself as small as you can in your space.

Imagine you are inside a hard, transparent, spherical shell. The shell is only just big enough for you to fit, so you can barely move.

The shell is hard, but you discover that by pushing against the wall of the shell you can make a “dent.” You can push one small part of the wall out away from you, and when you let it go, it doesn’t spring back. Keep making more “dents” until you have actually made the whole shell bigger.

Keep pushing the walls out around you, smoothing out the dents as you go so you keep your shell smooth and round. It is hard work pushing the walls out.

Keep enlarging your shell until it is just big enough to stand up in. Remember that your shell is a sphere—it is as wide as it is tall.

Have you ever seen a hamster in one of those clear plastic balls? It can roll the ball all around the room by “walking” inside it. You discover that you can do this in your own clear sphere. But remember how big your sphere is! You can’t walk right up to a wall or other obstacle, because of the roundness of your sphere. Even more important—you can’t possibly get near another person, because long before you can touch them, your invisible sphere will bump into his/her sphere. If you stretch out your arm, you should just be able to touch the place where your sphere touches another person’s—that is all.

Explore the room inside your sphere, taking care to remember where and how big it is, and to visualize your sphere.

Now you see someone—one of your classmates—and roll your sphere towards theirs. (Each person must pick a partner and do this. If there is an odd number you the instructor can either make your own bubble to partner with one student or make one threesome).

When your spheres touch, you notice that they join, leaving a tiny opening between them that you can just get your hands through. Reach through and shake the hand of your partner.

Invasive Species Continued

Now, working together, start making the hole between your spheres bigger by pushing its walls out. Keep going until you have made a single, smooth sphere big enough for two.

Explore the room a little in your new, larger sphere. You'll have to work together to control the way it rolls.

Now you see another pair of your classmates and roll towards them. When your spheres touch, once again there is a tiny hole. Reach through and shake hands. Then once again, gradually enlarge the hole until you have made one four-person sphere. (*Repeat this as many times as necessary until the whole class has made one huge sphere.*)

Now, working together, shove the walls of your sphere out until it fills every inch of the room.

Explanation

A metaphor is a word or a story that can represent or stand for something else—like when you say your Mom blew her top, you don't mean she actually lost the top of her skull.

This story can be a metaphor for the way we move from being totally involved with ourselves, to joining with friends and becoming part of the larger society. You start out life as a tiny baby, not knowing or caring about anyone but you. You live inside your own shell. But pretty soon you meet a few other people, and your world gets bigger. These people are your family, and they can help you to make your world even bigger by meeting other families or other people. Eventually you form communities. Even then, your world is pretty small. But today communities can come together to form larger communities. States form countries, and countries form even larger alliances. Maybe someday even the earth will be just part of a larger community.

Think about the border between your sphere and your neighbour's. At first it is easy to see where one sphere ends and the other begins. But you kept pushing out and smoothing until you had one big sphere. ***What happened to the border? Could you even remember where it was?*** At first you were totally separate, but you came together so completely that you couldn't even remember what kept you apart. ***What does that say to you? Can you relate that to your everyday life? To your friendships? To your communities?***

Closure

Discuss some of the ways this might interfere with communities and how different this narrative would be had we acted out invading instead of combining spheres. Conflict, suffocating, smothering, battles. Imagine the silent overtaking of parts of structures and the environment in the same way.

Teacher Prompts

- *Was it easy to imagine your shell/sphere as a real, three-dimensional thing?*
- *How does your shell/sphere relate to the idea of personal space?*
- *What happens when your spheres overlap and there is not enough room to expand?*
- *What happens when someone tries to invade us and we have no force in our sphere to stop them?*
- *What is a metaphor?*