

## Sample Lesson: Our Community as an Ecosystem

**Teaching Artist:** Ally Tufenkjian

**Grade Level:** 3rd

**Lesson Theme:** Natural and Community Ecosystems

### **Inquiry Questions:**

- What is an ecosystem in the context of the natural environment?
- How can we use a class simulation of a food web to better understand ecosystems?
- How can we use a natural ecosystem to consider our responsibility in our community?

### **Objectives:**

- Students will learn what a natural ecosystem is and how it functions.
- Using natural ecosystems as a framework, students will make connections about ecosystems in their community.
- They will understand that in any kind of ecosystem, all organisms share social responsibility.

### **Materials:**

- String/yarn (cut into individual 4-foot long pieces)
  - Blue painters tape (to make X's on the floor for food web)
  - Organism signs
  - Projector (to show graphics)
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### **1) Intro (5-7 min):**

- Has anyone ever heard of the word "ecosystem" before?
- Break apart "eco" and "system"- what does each word mean?
- Show pictures of different kinds of ecosystems (rainforest, forest, school, house) and have students identify:
  - a) Where the ecosystem is.
  - b) Elements they see in the ecosystem (ie trees, flowers, animals, people).
- Introduce food web concept originated by ecologist Charles Elton. Show graphic example of a rainforest food web and briefly discuss how elements of the web connect.

### **2) Main activity (30 min):**

#### Part One: The Natural Ecosystem (15 min)

##### **Activity:**

- Students form pairs and use blue painters tape to form X's throughout the space.
- Each pair stands on their X.

-Pairs receive a piece of paper with a picture of a different member of a rainforest ecosystem (ie tree, insect, frog, panther). One student holds the picture, while the other holds a long piece of string.

-One at a time, each pair identifies which member of the ecosystem they eat. Then they give that person the other end of their string so the string stretches across the circle.

-Students may notice that they eat more than one organism in the circle; more string will be on hand so they can make more connections. By the time the whole class is done, strings will be stretching in many different directions across the circle and we will have created a simulated food web!

***Class reflection:*** What do you notice? Is anyone holding more than one string? Why?

***Final processing:*** Have one member of the circle leave and take their string(s) away. Ask the class: What happens? More and more students leave as the ecosystem “collapses.” This shows we all must work together so that the ecosystem runs smoothly.

## Part Two: The Bronx Community Ecosystem (15 min)

### ***Activity:***

-Each pair is given a new set of signs from a different ecosystem: their neighborhood in the Bronx. They repeat the activity with different roles (ie child, parent, police officer, shop owner), identifying which member in the circle they help (ie if they are a parent, they might give the other end of their string to a child).

***Class reflection:*** What do you notice about this web? Are you holding more than one string? Are you holding more strings than the last time we did this? Based on the web we have created, we can see that our community is an ecosystem that we are directly a part of.

***Final processing:*** Have one member of the circle leave and take their string(s) away. Ask the class: What happens? More and more students leave as the ecosystem “collapses.” What do you think this means? We all have a part to play in our community.

### **3) Final Reflections (5 min):**

What are ways you give back or can give back to your community? Write ideas on a large piece of chart paper.

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**Key Vocabulary/Concepts:** Ecosystem, Charles Elton, food web, community, social responsibility

**Intelligences Addressed:** Logical-mathematical, Spatial, Linguistic, Bodily-kinesthetic, Interpersonal, Intrapersonal, Naturalistic, Existential

**Indicators:**

- Logical-mathematical:** Students use logic to identify which member(s) of the ecosystem they connect with.
  - Spatial:** Students stand on X's a certain distance apart from each other and connect with others in space by holding string.
  - Linguistic:** Students break down the meaning of the word "ecosystem."
  - Bodily-kinesthetic:** Students use their bodies in space to form a live simulation.
  - Interpersonal:** Students reflect on their role in the ecosystem.
  - Intrapersonal:** Students make literal connections and interact with each other in the group.
  - Naturalistic:** Students learn an innate process in their natural world.
  - Existential:** Students learn that they each have a social responsibility in their ecosystem.
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**Common Core Anchor Standards:**

*See New York State Common Core Anchor Standards for ELA/Literacy. Identify at least two anchor standards this lesson engages. Provide code for each anchor standard identified.*

Speaking & Listening    SL.3.1; SL.3.2; SL.3.3; SL.3.4, SL.3.6  
Language            L.3.1; L.3.3; L.3.4