

**LESSON 8: CITY LIVING AND THE ENVIRONMENT**

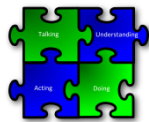
**OVERVIEW:**

*In this activity, students will return to the initial list of words they brainstormed about cities during the first lesson. After discussing the negative descriptors that were presented with regards to cities, students will view a PowerPoint presentation which highlights the essential role that cities play in creating a healthier and more sustainable environment. Students will then compare cities to organizational, social structures used by other organisms.*

**SUB-QUESTION:**

Why are cities necessary and beneficial?

**Ways of Knowing Urban Ecology:**



Students will...

**Understand**

- Understand that cities are organized in a way that allows for efficient use of resources. (*ecosystem services*)
- Recognize that members of urban areas have different roles to play in order for the system to function well. (*ecosystem services, ecosystem state and structure*)
- Understand that other species have organized systems of living that allow them to survive. (*ecosystem state and structure*)

**Talk**

- Discuss the nature of benefits and trade-offs for choices and actions as time progresses.

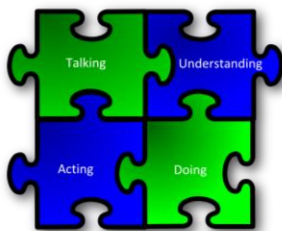
**Do**

- Predict the benefits and trade-offs of their actions – as embodied in their action plans – for future generations of members of the ecological community, human and non-human.
- Complete a timeline to chart the benefits and trade-offs of their action plans over seven generations.

**Act**

- Consider the consequences of an action plan over time.

**WAYS OF KNOWING URBAN ECOLOGY:**



**Understanding**

Students will understand that ...

- Cities are organized in a way that allows for efficient use of resources.
- Members of urban areas have different roles to play in order for the system to function well.
- Other species have organized systems of living that allow them to survive.

**Talking**

*No specific goals connected with talking about urban ecology in this lesson.*

**Doing**

Students will be able to...

- Research information about the organizational and social structures of other species.

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- Compare and contrast the way in which other species live to how humans live in cities.

**Acting**

*No specific goals connected with acting on urban ecology in this lesson.*

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### **SAFETY GUIDELINES**

Safety precautions associated with field visits.

### **PREPARATION:**

***Time:*** 1 class period

### **MATERIALS:**

#### **Activity 8.1:**

PowerPoint: What do we think about our cities?

Computer

LCD projector

#### **Activity 8.2:**

Internet Access or Access to materials that describe organizational-social structures of various species (i.e., termites, beavers, ants, lions, etc)

Student Worksheet: How unique are human cities?

Butcher Paper for the Venn Diagram

### **INSTRUCTIONAL SEQUENCE:**

#### **Activity 8.1: PowerPoint – What do we think about our cities?**

1. Begin class by reviewing the descriptors of cities that were initially given by students on the first day of class. It is especially important to focus on the negative words that were given by students.
  - Ask students if they think the benefits of cities outweigh those negative aspects of cities.
  - Ask how many students would prefer to live outside of a city and why?
  - Ask students if you think there is a better way for humans to live besides in cities? If so, what is it?
2. Begin the PowerPoint Presentation. Have students discuss the answers to questions as they are presented on the slides.
  - The presentation will include some facts about cities that will give reasons for why cities play an important role in creating a sustainable world.
  - The presentation also introduces the idea of urban sprawl. This topic will be explored more thoroughly in module 2. Urban sprawl is associated with suburban areas that develop around cities in which the density of people per area decreases substantially.

**Activity 8.2: How is city living similar to and different from the way other organisms live?**

1. Distribute the Student Worksheet “How unique are human cities?”. Group students into teams of 2-3 individuals and assign them a species to research.
  - Possible species – termites, beavers, ants, lions, elephants, monkeys, bees, and meerkats
2. Students should research their species and complete worksheet and then work together to compare and contrast those organizational structures to human cities.
3. After the groups have completed their sheets, they can complete a Venn diagram on butcher paper and report their findings to the class.
4. Finish the activity by having the class establish some general statements comparing cities to the organizational and social structures used by other species.

**Concluding the Lesson**

1. Return to the word splash that was created during the first lesson and ask students if there are new words that could be added to the list that may have been missing given the new information that was learned throughout the module.