

## Lesson 5: Selecting and Synthesizing

### OVERVIEW:

*In this lesson, students examine all of the action plans they have created in the previous seven modules. They will analyze the goals and locations of those plans and look for common themes. Students will agree upon a new idea for an action plan that synthesizes the work they have already done, and reflects the scientific concepts they have learned over the course. As a class, you will create a new action plan that can realistically be implemented.*

### SUB-QUESTION:

What action plan should we implement to improve our urban environment?

## **WAYS OF KNOWING URBAN ECOLOGY:**



*Students will...*

### Understand

- Recognize the similarities and differences across a range of action plans.

### Talk

- Express and negotiate the strengths and weaknesses of aspects of different plans.

### Do

- Analyze their previous action plans, connecting goals for improvement across different science concepts.

### Act

- Collaborate to create a class action plan; identifying science knowledge, site possibilities, stakeholders, resources, and actionable steps.

### SAFETY GUIDELINES

No specific safety issues are associated with this lesson.

### PREPARATION:

#### Time:

2 class periods

Day 1: Activity 5.1

Activity 5.2

Day 2: Activity 5.3

#### Materials:

##### **Activity 5.1**

Blackboard/ White board

(Optional) Any visuals from previous action plans

##### **Activity 5.2**

Blackboard/ White board

##### **Activity 5.3**

Butcher paper or poster board

**INSTRUCTIONAL SEQUENCE****Activity 5.1: Brainstorm Action Plan Possibilities**

1. Remind your students of the action planning framework (Understand Urban Ecology, Investigate Site and Envision Possibilities, Identify Stakeholders, Seek Resources, Construct Actionable Steps, Implement the Plan)
2. Brainstorm the purpose of creating an action plan
  - Students should get at the idea of improving certain aspects of a site so it can positively impact the environment and its inhabitants
3. Brainstorm some ideas for action plans for your study site or for your school. You may encourage your students to revisit action plans from previous modules, either ones they analyzed or they themselves developed. For each of the action plans:
  - Discuss the goal of the action plan.
    - What was it trying to improve? Why?
    - Is this an action plan we can complete? If not, how can we change it so that we can complete it?
4. Write each of the ideas on the board, along with a few details.
5. Ask students to identify any common themes among the action plan ideas.
  - Similar goals?
  - Similar location?
  - Similar improvements?

**Teaching Tip:**

If time permits you may want to break students into groups and have each group review an action plan. Then share as a class.

**Activity 5.2: Selecting an action plan to work on together**

1. Select an idea for the last action plan
  - Draw from common themes to synthesize the action plan ideas
  - Have students suggest what to focus this action plan on
    - If one area of content or scientific theme from one of the modules stands out over the others capitalize on that idea, but try to incorporate other themes in as well. For instance, by improving waste production how might this help reduce climate change?
2. Have the class vote on an idea to create a new action plan
  - Remind students that this action plan is something that they will be actually doing, so they will need realistic and concrete goals
3. Once you have decided on a specific idea, begin to brainstorm specific scientific concepts they may need to research further and actions to meet their goal.
  - For instance if the goal is to reduce energy use at the school, actions might be: To install more efficient lighting or make sure electronics are unplugged

- Note: you can have more than one action as long as there is a common goal, but you want to make sure that the actions are doable by the class size and during your timeline.

### **Activity 5.3: Creating the action plan**

1. As a class, walk through the action planning steps:
  - Understand Urban Ecology (What do I need to know?)
  - Investigate Site and Envision Possibilities (What is the site like now? How can the site be in the future?)
  - Identify Stakeholders (Who is involved?)
  - Seek Resources (What do I need?)
  - If you do not want to do this as an entire class you could break students into 4 groups and have each group brainstorm for one step.
    - If you choose to do this in groups make sure you share ideas as a class before you move on to actionable steps
  - Note: if you have more than one action you will want to cover all of the stakeholders and resources for each action.
2. Create actionable steps for the new action plan. Students should be familiar with the action(s) they are going to take. Now they need to decide what is the best way to make their goal happen
  - Divide students into groups of 3-4 people. Each group should get a large piece of paper (butcher paper, poster board, etc.) to write and display their ideas.
  - Each group should come up with several actionable steps to take, in order to accomplish their goal. Remind students, again, this is something they want to actually be able to do.
    - Steps should include informing stakeholders and gathering resources.
  - When students are finished, display student's ideas around the room. Have students walk around the room to look at the other ideas.
  - Come together as a class. Ask students if other groups came up with some good ideas that they didn't think of? What were some reoccurring steps?
  - As a class, either on the board or on a piece of paper, decide on one final version of the actionable steps. Have students suggest steps and then ask for any objections. Refer to the student's different plans to make sure that each group contributes to the final version.
3. As a class create a visual such as a poster or PowerPoint presentation, summarizing each section of the action plan
  - Discuss and review each section and make changes as students see necessary.

### **Concluding the Lesson**

1. Have students think about the class action plan. Students should write down any particular aspects that they wish to be involved with. Each student needs to write down at least one step from the final list.