

# Lesson 1: Nature Deficit Disorder and Urbanization

## Grade 7 Social Studies

**LESSON DESCRIPTION:** Middle school students need opportunities to learn about global issues. In this lesson, students learn about urbanization and begin to make connections between urbanization and nature deficit disorder. Through readings and graphic organizers, students practice note taking methods to gather information for advocacy.

**FOCUS QUESTIONS:** How is green urbanism easing the problems addressed by urbanization? How is green urbanism a solution to nature deficit disorder?

**OBJECTIVES:** Students will:

- learn about the global issue of urbanization and some of its consequences for the world's population.
- gather information about one aspect of a global issue

## COMMON CORE STATE STANDARDS

- **READING STANDARDS FOR LITERACY IN HISTORY/SOCIAL STUDIES 6–12**
  - \* **CCSS.6-8.RH.1** Cite specific textual evidence to support analysis of primary and secondary sources.
  - CCSS.6-8.RH.2** Determine the central ideas or information of a primary or secondary source; provide a summary of the source distinct from prior knowledge or opinions.
  - \* **CCSS.6-8.RH.4** Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies
- **WRITING STANDARDS FOR LITERACY IN HISTORY/SOCIAL STUDIES, SCIENCE, AND TECHNICAL SUBJECTS 6–12**
  - \* **CCSS.6-8.WHST.9** Draw evidence from informational texts to support analysis, reflection, and research.

**LENGTH OF LESSON:** 2 days

## MATERIALS NEEDED:

- Copies of article on urbanization, one per student (adapted from Wikipedia)
- Copies of urbanization graphic organizer, one per group of three students
- Overhead projector and fine tip water soluble markers
- Cornell note taking instructions – transparency or one per student
- Green urbanism: Western European Examples Cornell notes teacher key
- Green urbanism: Western European Examples Cornell notes blank – transparency and one paper copy per student plus a few extras
- Green urbanism: U.S. Examples Cornell notes blank – one per student plus a few extras
- The Healing Power of Green Spaces – one per student
- *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder* by Richard Louv
- From English Teacher: sample of student nature-deficit disorder notes for background
- Student blank word map and teacher key: green urbanism
- Green map of your city or county, if one is available

## INTERNET RESOURCES

Richard Louv's website: [www.richardlouv.com](http://www.richardlouv.com) Browse around on this to get an understanding that nature deficit disorder is not just one person's idea. It is an international movement.

## VOCABULARY:

urbanization	Cornell notes
model	green urbanism
word map	

## PROCEDURES

Teacher's Note: To prepare, teachers should be familiar with the book *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*, by Richard Louv. It would be great to read the entire book; or to read the pages from which the selections were taken. A third method is read the selections below and practice reading them aloud. The English Language Arts teacher will begin the interdisciplinary unit by having students complete a note taking format on four aspects of nature deficit disorder. Be familiar with the problem, causes, consequences and solutions that students will learn about in English Language Arts.

For the Social Studies component, you will be helping students learn about how some cities and countries have addressed nature deficit disorder. The lessons set nature deficit disorder within the larger problem of urbanization. These national and global solutions, combined with information about existing and potential natural areas in their own community, will be the basis of advocacy for solving the problem of nature deficit disorder locally.

### **Activity 1: Students will learn how some cities and countries are addressing nature deficit disorder.**

1. **Anticipatory Set:** Familiarize yourself with student understanding of nature-deficit disorder by reading a student sample of the tree note-taking organizer done in English class.

**Ask Students:** Tell me what you have learned in your English class about nature deficit disorder. Be sure to get information from them about the problem, the causes, the consequences, and possible solutions.

2. **Tell Students:** There is a growing issue in the world called urbanization. On one day in 2007, for the first time in history, more people lived in cities and towns than lived in rural areas. That day marked the beginning of the Urban Millennium. There are pros and cons to urbanization, and we need to understand those. We're going to learn about urbanization and then think about Nature Deficit Disorder as part of the issue of globalization.
3. Hand out a copy of the Wikipedia article on urbanization to each student and a copy of the cause/effects urbanization graphic organizer. Students should read the article, highlighting definitions, pros, and cons. Then, in groups of three or four, students should complete the graphic organizer.

4. Hand out the Cornell note taking instructions or show it as a transparency.

**Tell Students:** We are now going to think about the connections between nature deficit disorder and urbanization by learning about how the issue is being addressed. An important study skill when learning new information is to take good notes. In the 1950's, an education professor at Cornell University developed the Cornell note taking system to help college students learn better. You are going to learn how to take Cornell notes. Explain the different sections of Cornell notes.

Teacher's Note: Some students will have difficulty writing in the space allowed. Encourage them to write small and neatly and have extra blanks available if they need more space. Cornell notes are a way of summarizing information, however, and they should not be more than two pages. The readings have been given in chunks, one per Cornell note blank.

Teacher's Note: There are two sets of readings and corresponding Cornell notes provided: Green Urbanism: The Western European Example and Green Urbanism: U.S. Examples. For the purposes of teaching how to take Cornell notes, it is important to model with the first set of readings and then have students practice on the second set of readings.

5. Hand out the Green Urbanism: Western European Examples Cornell notes form. Explain that you are going to model how to take Cornell notes on a transparency. (An example for the teacher has been provided.) Students should follow along on their own blank. Fill out the middle column as you read the selection, from pages 245 – 248 of Louv's book.

Morra Park is an ecovillage in the city of Drachten, in the Netherlands. In Morra Park's closed-loop canal system, storm-water runoff is moved by the power of an on-site windmill, and circulated through a manufactured wetlands where reeds and other vegetation filter the water naturally – making it clean enough for residents to swim in.

In a book called *Green Urbanism: Learning from European Cities*, Timothy Beatley Describes an astonishing array of European green-city designs, including cities with Half the land areas devoted to forest, green space, and agriculture.

"Greenroofs" are increasingly common. Covered by vegetation – native grass or even trees – such roofs provide protection from UV rays, clean the air, control storm-water runoff, aid birds and butterflies, and cool homes in summer and insulate them in the winter. The higher initial cost of such a roof is outweighed by its longevity.

A web of bikeways and lanes connects all neighborhoods and major destinations in the city of Delft, Netherlands.

Another trend is the creation or purchase of urban farms. The city of Göteborg, Sweden, owns sixty farms at its fringes, some open to the public – including pick your own berry and vegetable farms, a visiting or petting farm for children, and another offering a riding stable for people with disabilities.

Zürich, Switzerland, is redesigning its schools, breaking up concrete surfaces, and the buildings and planting trees and grass....children and adults in these more natural settings concentrate better and are more productive.

Next, fill out the third column, talking as you go to model the process, and then the first column and the summary.

6. Repeat Cornell notetaking so that students do it on their own by using Green Urbanism: U.S. Examples with the following readings. This will flesh out student's understanding of this growing movement in urban planning. As you read, they should take notes in the center column. Then, allow 15 minutes for them to draw pictures, and 10 minutes for them to talk with a partner and fill in key words. Assign the Summary as homework.

Teacher's Note: Some students will have difficulty writing in the space allowed. Encourage them to write small and neatly and have extra blanks available if they need more space. Cornell notes are a way of summarizing information, however, and they should not be more than two pages. The readings have been given in chunks, one per Cornell note blank.

Green Urbanism: U.S. Examples – Read selections from pages 250 – 251 of Louv's book.

Timothy Beatley, author of *Green Urbanism: Learning from European Cities*, reports an array of U.S. experiments in green urbanism. The city of Davis, California, now requires new developments to be connected to a greenway/bikeway system that extends through the city. "An important objective is that elementary schoolchildren be able to travel by bike from their homes to schools and parks without having to cross major roads," according to Beatley.

Numerous studies have shown the economic benefits of green space; for example, some show how adjacent housing benefits from small neighborhood parks. If the green space is well designed, the public gains a higher return on their property tax, adding value to the neighborhood and increasing the net return to the tax rolls. These economic incentives should encourage us to move away from the flat, green parks (which are underused by children, who prefer the rough edges to the flat green) toward a more natural pocket-park design.

A good example is Oregon's famous trail system, known as the Loop, which encircles the Portland metro area. A century ago, when the system was conceived, the plan was for a 40 mile series of trails. Today, the system is 140 miles long and still growing. The Loop connects parks, open spaces, and neighborhoods. From it, other trails radiate out and connect to county, state, and federal recreation areas.

7. **Closure Activity:** Hand out the green urbanism word map. Have students write a definition in their own words of green urbanism. For homework or in class, students should write four reasons it is important and draw four examples. The next day, post the student work on a bulletin board.
8. **Additional optional closure activity:** Hand out *The Healing Power of Green Spaces*, which includes an image of the World Trade Center Memorial.

## URBANIZATION – Defined and explained

Adapted from Wikipedia

**Urbanization** is the removal of rural characteristics, like fields and woods, from a town. It happens when people move from rural to urban areas.

A 2005 report described the 20<sup>th</sup> century as witnessing “the rapid urbanization of the world’s population.” In 1900, 13% of the world’s population was urban, but that had risen to 29% in 1950 and 49% in 2005. By 2030, it is predicted that 60% of the world population, or 4.9 billion people, will live in cities. May 23, 2007, was the first day in the history of the world that more people lived in urban areas than in rural areas. That day marked the beginning of the Urban Millennium.

Urbanization has been a trend in the United States, too. From 1890 to 2000, the urban population rose from 39% to 80%.

### **Rates of urbanization vary**

Urbanization is not occurring very rapidly in the U.S. and the United Kingdom because much of those populations already live in the city. The rate is very high, however, in China, India, and Swaziland because many, many rural people are moving to the city.

Within the U.S., urbanization is high in some places, like areas of Colorado, the coast of Florida, and the barrier islands of North Carolina. The rate of urbanization is low in other areas, like South Dakota and the Upper Peninsula of Michigan. These places are rural and are losing population.

### **Economic reasons for urbanization**

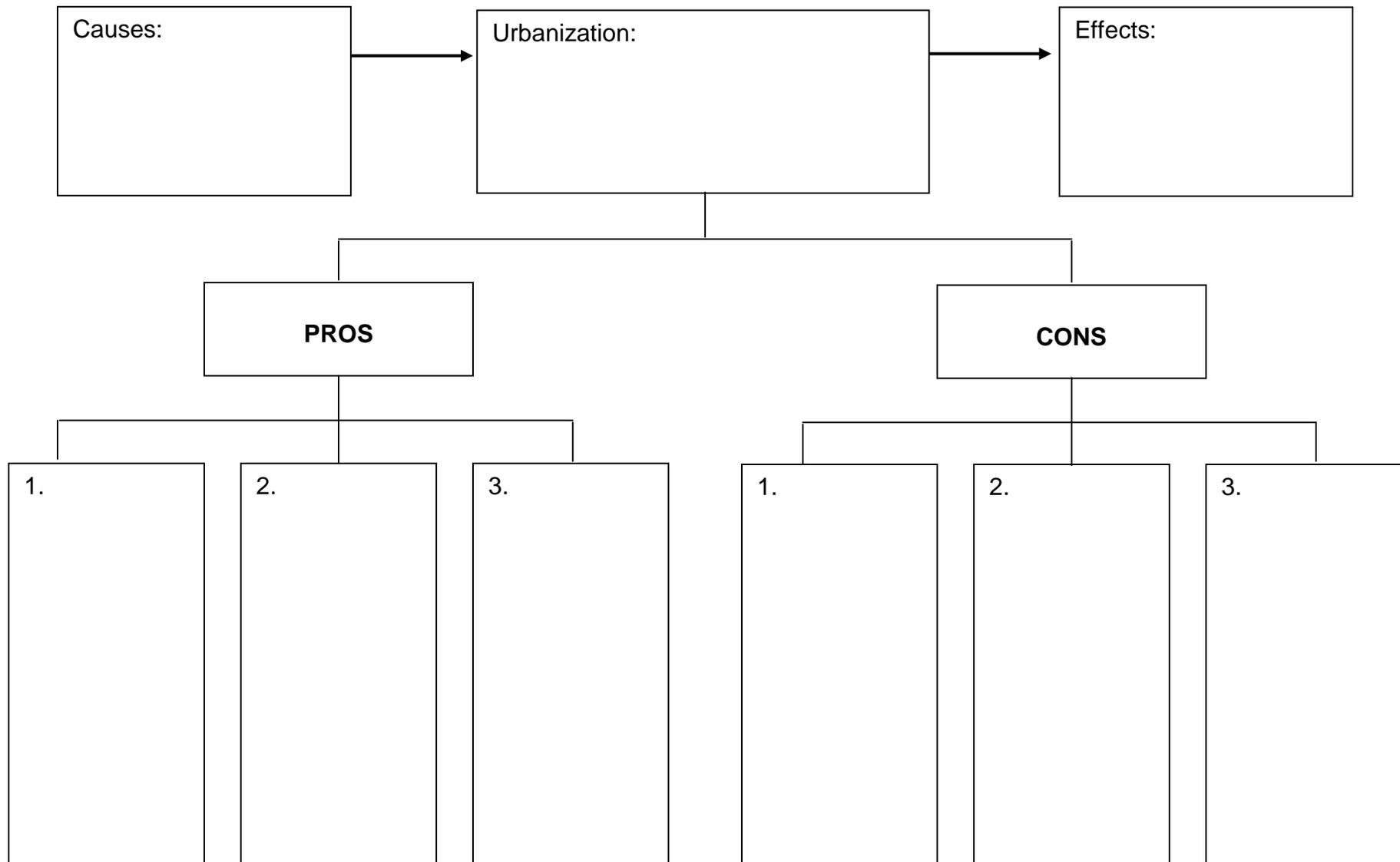
When corporations build factories and offices, they tend to build in places where workers already live. Workers want to live near work to save money when commuting. Businesses that provide goods and services to workers start up where the workers are – and soon a new city starts, or an area of a city develops. People save money when home, work, schools, recreation, and shopping are close together.

Often, some areas in a city develop and are more desirable to live in than other places. The local working class cannot afford to live in these nicer areas and are forced to move into less expensive areas. This is a negative effect of urbanization.

### **Planning for urbanization**

Unplanned cities are the oldest form of urbanization. They grew around a well or a market or paths. Many ancient unplanned cities were redeveloped for military or economic purposes; for example, a road might be built straight through. Some cities, like Washington, D.C., are planned before being built. Landscape planners are responsible for things like public parks, urban drainage systems, and greenways. Ideally, landscape planners do their work before a city is built. However, landscape planners often have to change existing cities to revitalize and area and create greater livability.

NAME: \_\_\_\_\_



**How do you think urbanization has contributed to nature deficit disorder? Write three (3) ways on the back.**

## *Reading and taking notes*

*using the Cornell notes method*

You will use a blank chart.

<b>Terms</b>	<b>Definitions, Explanations, Information</b>	<b>Picture</b>
<p>Step 3: With a partner or a parent, first share and explain your pictures from the right hand column. Then, decide on words or phrases that are cues for the key ideas. Write them next to the key ideas in the middle column.</p>	<p>Step 1: As you read or listen, take notes in the center column. If reading, you may wish to skim the article first, underlining key ideas. Notes can be an outline or bullet points. You will have to write small and neatly. Use a second page if necessary.</p>	<p>Step 2: After taking notes, draw pictures of the key ideas. You may use a few words, lines, and arrows to help explain your drawings.</p>
<p>Summary: Step 4: For homework, write three or four sentences that summarize the information.</p>		

Name: \_\_\_\_\_



## Green Urbanism: Western European Examples

Terms	Definitions, Explanations, Information	Pictures
Summary:		

Name: Teacher

**Green Urbanism: Western European Examples – teacher key**

Terms	Definitions, Explanations, Information	Pictures
Storm water Canal	Morra Park (Netherlands) canal system for storm water with windmill pump + wetlands filter	
1/2 natural	Cities that are half forest green space + agriculture with inner city woods meadows, streams	
greenroofs	greenroofs on buildings that clean the air, cool + insulate homes, provide habitat, covered by native grass or trees	
paths for biking + walking	bikeways and lanes to connect neighborhoods and key places in Delft, the Netherlands	
urban farms	urban farms for fruits + vegetables, petting farms	
schoolyards natural	schools with green schoolyards for children to play in and see	

Summary: ~~the~~ Cities in western Europe are doing a number of creative things to promote green urbanism. Each city has methods unique to its situation and needs.

Name: \_\_\_\_\_

## Green Urbanism: U.S. Examples

Terms	Definitions, Explanations, Information	Pictures
Summary:		

Name: \_\_\_\_\_



## Benefits of Green Urbanism

Terms	Definitions, Explanations, Information	Pictures
Summary:		

Name: \_\_\_\_\_

Word Map: Green Urbanism

**What is it?**

Explain in your own words.

**Why is it important?**

**Green Urbanism**

**What are some examples? Draw pictures!**

Name: \_\_\_\_\_

## The Healing Power of Green Spaces



### ***Reflecting Absence***

This is the design that was chosen for the World Trade Center Memorial at Ground Zero. Like several other proposals, this one included green space as a way “to transform a scarred and haunted space” according to the *New York Times*. The two squares, one for each of the towers, are pools surrounded by waterfalls.

**What is one reason that having nature as part of the memorial is a good idea? Write at least four sentences.**