

CHANGES IN THE LAND GRADES 5-8

OBJECTIVES:

- Students will define urban sprawl.
- Students will investigate the reasons for and effects of urban sprawl.
- Students will demonstrate an understanding of the reasons for urban sprawl by creating advertisements geared toward people interested in moving to Florida.
- Students will demonstrate an understanding of the problems caused by urban sprawl by writing a letter convincing their legislator to limit urban sprawl.

FCAT STRANDS ADDRESSED:

Reading Exam: Main idea / Research and Reference

Writing Exam: Persuasive writing

Science Exam: Processes that Shape the Earth / How Living Things Interact with the Environment

SUNSHINE STATE STANDARDS / BENCHMARKS:

SOCIAL STUDIES – Grade 5

Strand A: *Time, Continuity, and Change*

Standard 5: *The student understands U.S. history from 1880 to the present day.*

Benchmark SS.A.5.2.3 The student knows the social and political consequences of industrialization and urbanization in the United States after 1880.

Strand A: *Time, Continuity, and Change*

Standard 6: *The student understands the history of Florida and its people.*

Benchmark SS.A.6.2.5 The student knows how various cultures contributed to the unique social, cultural, economic, and political features of Florida.

LANGUAGE ARTS – Grade 5

Strand A: *Reading*

Standard 2: *The student constructs meaning from a wide variety of texts.*

Benchmark LA.A.2.2.1 The student determines the main idea or essential message in a text and identifies relevant supporting details and facts, and arranges events in chronological order.

Benchmark LA.A.2.2.5 The student reads and organizes information for a variety of purposes, including making a report, conducting interviews, taking a test, and performing an authentic task.

Strand B: *Writing*

Standard 2: *The student writes to communicate ideas and information effectively.*

Benchmark LA.B.2.2.3 The student writes for a variety of occasions, audiences, and purposes.

SCIENCE – Grade 5

Strand D: *Processes that Shape the Earth*

Standard 2: *The student understands the need for protection of the natural systems on Earth.*

Benchmark SC.D.2.2.1 The student knows that using, recycling, and reducing the use of natural resources improve and protect the quality of life.

Strand G: *How Living Things Interact with their Environment*

Standard 2: *The student understands the consequences of using limited natural resources.*

Benchmark SC.G. 2.2.3 The student understands that changes in the habitat of an organism may be beneficial or harmful.

SOCIAL STUDIES – Grades 6-8

Strand A: *Time, Continuity, and Change*

Standard 4: *The student understands U.S. history to 1880.*

Benchmark SS.A.4.3.1 The student knows the factors involved in the development of cities and industries.

Strand A: *Time, Continuity, and Change*

Standard 5: *The student understands U.S. history from 1880 to the present day.*

Benchmark SS.A.5.3.3 The student knows the causes and consequences of urbanization that occurred in the United States after 1880.

Strand A: *Time, Continuity, and Change*

Standard 6: *The student understands the history of Florida and its people.*

Benchmark SS.A.6.3.3 The student knows how the environment of Florida has been modified by the values, traditions, and actions of various groups who have inhabited the state.

Benchmark SS.A.6.3.5 The student understands how Florida has allocated and used resources and the consequences of those economic decisions.

Strand B: *People, Places, and Environments (Geography)*

Standard 1: *The student understands the world in spatial terms.*

Benchmark SS.B. 1.3.5 The student knows ways in which the spatial organization of a society changes over time.

Strand B: *People, Places, and Environments (Geography)*

Standard 2: *The student understands the interaction of people and the physical environment.*

Benchmark SS.B. 2.3.2 The student knows the human and physical characteristics of different places in the world and how these characteristics change over time.

Benchmark SS.B. 2.3.6 The student understands the environmental consequences of people changing the physical environment in various world locations.

Strand C: *Government and the Citizen*

Standard 2: *The student understands the role of the citizen in American democracy.*

Benchmark SS.C.2.3.5 The student understands how he or she can contact his or her representatives and why it is important to do so and knows which level of government he or she should contact to express his or her opinions or to get help on a specific problem.

LANGUAGE ARTS – Grades 6-8

Strand A: *Reading*

Standard 2: *The student constructs meaning from a wide variety of texts.*

Benchmark LA.A.2.3.1 The student determines the main idea or essential message in a text and identifies relevant details and facts and patterns of organization.

Benchmark LA.A.2.3.5 The student locates, organizes, and interprets written information for a variety of purposes, including classroom research, collaborative decision making, and performing a school or real-world task.

Strand B: *Writing*

Standard 2: *The student writes to communicate ideas and information effectively.*

Benchmark LA.B.2.3.3 The student selects and uses appropriate formats for writing, including narrative, persuasive, and expository formats, according to the intended audience, purpose, and occasion.

SCIENCE – Grades 6-8

Strand D: *Processes that Shape the Earth*

Standard 2: *The student understands the need for protection of the natural systems on Earth.*

Benchmark SC.D.2.3.2 The student knows the positive and negative consequences of human action on the Earth's systems.

Strand G: *How Living Things Interact with their Environment*

Standard 2: *The student understands the consequences of using limited natural resources.*

Benchmark SC.G. 2.3.4 The student understands that humans are a part of an ecosystem and their activities may deliberately or inadvertently alter the equilibrium in ecosystems.

MATERIALS:

Chart paper / markers or white board / white board markers

Demonstration materials

- Rectangular cake pan or Tupperware container
- Paper towels (several rolls)
- Water
- Spray bottle
- Pepper
- Teaspoon
- Colored pencils
- Handout – Urban Sprawl Demonstration Sheet

Handouts:

- Urban Sprawl in Central Florida
- Media Awareness
- Ideas for an Advertising Rubric
- Tips for Contacting Your Legislators
- Sample Letter to Legislators

PRE-VISIT ACTIVITIES:

1. Vocabulary Building

Ask students what they think the term “urban sprawl” means. List their ideas on chart paper or the board. If your students are unfamiliar with this term, then you can start by providing them with the dictionary definitions of the words “urban” and “sprawl” given below and discuss the meaning of each word. Work together to develop a class definition of the term “urban sprawl.” Help students understand that urban sprawl refers to the haphazard, unplanned scattering of homes and businesses across the landscape, beyond already developed areas, far from cities and towns.

Urban – of, in, constituting, or comprising a city or town; characteristic of the city as distinguished from the country; opposed to rural

Sprawl – to spread awkwardly or without a regular pattern; to take up more space than necessary

2. Discussion – The Reasons for and the Effects of Urban Sprawl

Discuss the following questions with students:

- Why do you feel urban sprawl occurs? (ie. Why do people want to move to Orlando?)
- What changes in Orange County have you noticed in your life? (i.e. Were there woods they once visited that are now gone? What is there now?)
- What are some of the negative effects that could result from urban sprawl?
- How do you think urban sprawl affects the environment? Can you give some examples?

3. Demonstration – The Effects of Urban Sprawl on the Environment

This activity is set up as a whole class demonstration; however, it could easily be modified to be given to students to complete as a mini-lab in small groups.

- a) Give students the “Urban Sprawl Demonstration Sheet.”
- b) If you are conducting a whole-class demonstration, ask students to write their responses to your questions on the “Urban Sprawl Demonstration Sheet.” If the students are working in groups, go over the lab sheet with them and then circulate through the room, helping students as needed.

Demonstration Steps:

Step 1 - In the container use damp paper towels to sculpt a landscape, leaving an open space at one end to represent Lake Apopka. Let it sit for a few minutes and then pour out any extra water.

Step 2 – Ask students to answer question #1 on their handouts. (If we make it “rain” over our model, where do you think the water will go?) After students have recorded their answers, use a spray bottle and let it “rain.”

Watch the water run off. Have them note how many sprays it takes before they notice water building up in the lake. While students answer question #2 on their worksheets, drain off any excess water. (What actually happened when it “rained?”)

Step 3 - Make a stream in your landscape, leading down to the water. Ask students to answer question #3 on their lab sheets. (Now where do you think the water will go if we make it “rain” over our model?) Use the spray bottle again to make it “rain” and have students note how many sprays it takes before they notice water building up in the lake. While students answer question #4 on their worksheets, drain excess water. (What happened?)

Step 4 - Place a sheet of aluminum foil that is half the size of the landscape on the landscape. This represents a shopping mall. Ask students to answer question #5 on their worksheets. (How do you think the shopping mall will affect the rate at which the lake fills?) Let it rain. Ask them to answer question #6. (What happened?) If water accumulated on the aluminum foil, adjust it so that the water runs off. Remind students that the mall owner would not want a flooded parking lot or building. Drain the excess water.

Step 5- Remove the shopping mall. To find out what happens when air pollutants enter the systems settling down into the ground, sprinkle one to two teaspoons of pepper onto the landscape and let it rain again. Ask students to answer question #7. (How much pepper ended up in the lake?) Drain the excess water.

Step 6- Put the shopping mall back on the model. Sprinkle one to two teaspoons of pepper over the landscape, including the shopping mall. Ask students to answer question #8 (Do you think more pepper or less pepper will end up in the lake due to the addition of the “shopping mall” to the landscape?) Let it rain. Ask students to answer question #9. (What happened? Is the amount of air pollution that ends up in the lake more or less? Did air pollutants end up in the stream sooner?)

Step 7- Drain the excess water. Have students answer question #10 while you remove the shopping mall and replace it with smaller pieces and strips of foil representing the houses and streets of a housing development. (What changes to you expect to see in the water flow and pollution if we replace the mall with a housing development? Explain your answer.) Make it rain and have students respond to question #11. (What happened?)

Step 8- Have students complete the worksheet on their own. You may choose to have them share their responses with the class.

(Adapted from Planet Neighborhood)

4. Show students a copy of the “Urban Sprawl in Central Florida” handout. Explain to students that they should look for the following as they go through the history center exhibits: examples of urban sprawl, the reasons for urban sprawl, and the effects of urban sprawl.

AT THE HISTORY CENTER:

Give each student a copy of the “Urban Sprawl in Central Florida” handout. Have them complete the handout as they go through the exhibits. You may want to draw their attention to the following areas:

- At the Natural Environment exhibit, have students look for the causes of the pollution of Lake Apopka and what’s being done to reverse the damage.
- Have students examine what aspects of life were being sold in the Selling Central Florida exhibit.
- Have students focus on maps and pictures showing the changes in Central Florida’s landscape over time.
- Have students look for reasons to come to Orlando in the Aviation and Day We Changed exhibits.

POST-VISIT ACTIVITIES:

1. Go over the students’ responses to the “Urban Sprawl in Central Florida” handout as a class.
2. To reinforce the students’ understanding of why urban sprawl has occurred in Central Florida, have them create ad campaigns to sell Central Florida today. Compare the students’ campaigns to the Selling of Central Florida exhibit at the History Center. Use the students’ ads to discuss how society’s interests and needs have changed in the past 80 years. To help students create their ads, begin by going over the “Media Awareness” information with them using ads from magazines or newspapers or pages from the web sites of local developers. You can get a lot of information on advertising and media literacy from the Media Literacy section of the Henrico County Public Schools web site at:
<http://teachers.henrico.k12.va.us/Specialist/franceslively/media.htm>.

Grade the students' ads using a rubric. Some ideas for the rubric are provided in the "Ideas for an Advertising Rubric" page.

3. To reinforce the students' understanding of the negative impact of urban sprawl on the environment, have them write a letter to a local or state legislator convincing them to support legislation designed to limit urban sprawl. To find the most recent list of names and addresses of our state legislators, go to the Online Sunshine site – the Official Internet Site of the Florida Legislature at <http://www.leg.state.fl.us/>. For local officials, go to <http://www.orangecountyfl.net/>. You can use the "Tips for Contacting Your Legislators" sheet and "Sample Letter to Legislators" to help students learn how to write an effective letter.

Urban Sprawl Demonstration Sheet

Name: _____

1. If we make it “rain” over our model, where do you think the water will go?
2. What actually happened when it “rained?”
3. Now where do you think the water will go if we make it “rain” over our model?
4. What happened?
5. How do you think the shopping mall will affect the rate at which the lake fills?
6. What happened?
7. How much pepper ended up in the lake?
8. Do you think more pepper or less pepper will end up in the lake due to the addition of the “shopping mall” to the landscape?

9. What happened? Is the amount of air pollution that ended up in the lake more or less? Did air pollutants end up in the stream sooner?

10. What changes do you expect to see in the water flow and pollution if we replace the mall with a housing development? Explain your answer.

11. What happened?

12. Write a paragraph in which you explain how urban sprawl can impact the environment based on your observations from this demonstration.

13. In the space provided below, draw a picture to represent your understanding of the term “urban sprawl.”

Urban Sprawl in Central Florida

Name: _____

Directions: As you walk through the exhibits, write notes or draw pictures representing the topics listed below. You should try to find at least 3 – 5 pieces of information for each section.

Section 1: Examples of Urban Sprawl

Section 2: Reasons for Urban Sprawl

Section 3: The Impact of Urban Sprawl

Media Awareness

Companies appeal to consumers in many different ways to persuade them to buy their products. As individuals, or in small groups, list television, magazine or newspaper advertisements that use each of the techniques described below. Make a list of specific products and describe how they use the techniques.

Advertising Techniques

avant-garde	the suggestion that using this product puts the user ahead of the times <i>e.g. a toy manufacturer encourages kids to be the first on their block to have a new toy</i>
bandwagon	the suggestion that everybody is using the product and that you should too in order to be part of the group <i>e.g. a credit card company quotes the number of millions of people who use their card</i>
facts and figures	statistics and objective factual information is used to prove the superiority of the product <i>e.g. a car manufacturer quotes the amount of time it takes their car to get from 0 to 100 k.p.h.</i>
glittering generalities	"weasel words" are used to suggest a positive meaning without actually really making any guarantee <i>e.g. a famous sports personality says that a diet product might help you to lose weight the way it helped him to lose weight</i>
hidden fears	the suggestion that this product will protect the user from some danger <i>e.g. a laundry detergent manufacturer suggests that you will be embarrassed when strangers see "ring around the collar" of your shirts or blouses</i>
magic ingredients	the suggestion that some almost miraculous discovery makes the product exceptionally effective <i>e.g. a pharmaceutical manufacturer describes a special coating that makes their pain reliever less irritating to the stomach than a competitor's</i>
patriotism	the suggestion that purchasing this product shows your love of your country <i>e.g. a company brags about its product being made in Canada and employing Canadian workers</i>
plain folks	the suggestion that the product is a practical product of good value for ordinary people <i>e.g. a cereal manufacturer shows an ordinary family sitting down to breakfast and enjoying their product</i>
snob appeal	the suggestion that the use of the product makes the customer part of an elite group with a luxurious and glamorous life style <i>e.g. a coffee manufacturer shows people dressed in formal gowns and tuxedos drinking their brand at an art gallery</i>
transfer	words and ideas with positive connotations are used to suggest that the positive qualities should be associated with the product and the user <i>e.g. a textile manufacturer wanting people to wear their product to stay cool during the summer shows people wearing fashions made from their cloth at a sunny seaside setting where there is a cool breeze</i>
testimonial	a famous personality is used to endorse the product <i>e.g. a famous hockey</i>

	<i>player recommends a particular brand of skates</i>
wit and humor	customers are attracted to products that divert the audience by giving viewers a reason to laugh or to be entertained by clever use of visuals or language

(based on Tressler and Lewis, *Mastering Effective English (Third Edition)*, pp.470-472)

Ideas for an Advertising Rubric

Obviously this rubric can be adjusted to any point scale, but the suggested criteria are as follows:

Eye Catcher/Headliner – Look for some kind of bold lettering and words that catch the reader’s eye.

Drawn Picture w/color – Look for an attempt at drawing the product or area in a colorful, attractive manner.

Company Name/Price – Look for an original name, even if it’s a parody. Also look for a price for each product.

Slogan – Look for a catchy phrase that rhymes or uses a poetic device to make it memorable.

Description – Look for description of the product that is relevant and informative.

Copt - Look for spelling and grammar errors.

Advertising technique – If desired, look for the use of one of the advertising techniques discussed in class.

Tips for Contacting Your Legislators

Letters can be particularly effective in influencing legislator's views. To write an effective letter:

- **Keep it brief** – Keep letters to one page. Try to discuss only one bill or issue in a letter.
- **Identify yourself** – Begin with an introduction of yourself or the organization on whose behalf you are writing. Use a simple statement, such as “I am a third-grade teacher at __ elementary school” or “As a university student (or faculty member) at” “On behalf of the members of the ...”
- **Be sure to include your address and zip code** in all correspondence with your legislators (to show that you live or work in their state or district).
- **Explain why you are writing** in the first sentence (i.e., "I am writing to tell you about the impact the National Writing Project is having on teachers and students in your state/district and to ask you to support continued federal funding for this program.")
- **Get to the point** – Follow your introduction with a brief statement of your issue of concern, such as “We urge your support of H.R.____, which will ____.” If you are writing in reference to a specific bill, include the bill number. Follow your opening paragraph with a concise explanation of why you support or oppose the particular bill or issue. A few, strong, well-thought-out arguments are much more effective than a “laundry list” of reasons to support or oppose a bill. Whenever possible, use bullet points to outline your arguments. If you are writing about a more general concern such as tax reform to support funding for education be specific about your concerns as they relate to you as a student, faculty member or administrator.
- **Relate it to home** – Help the legislator understand why your position is important to his or her constituents. Include specific facts about how a bill will impact educators, students, or schools in the legislator's district. If possible, include a local anecdote illustrating the problem you are seeking to address. Avoid the use of form letters or generic postcards – use your own knowledge and experience to inform the legislator.
- **Use your own words.**
- **Do not threaten.** Hate mail creates only negative reactions. However, the recipient should be made aware of inequalities and injustices.
- **Be courteous** - thank the legislator for votes on your side of an issue.

- **Allow for follow-up** – Include specific contact information and offer to act as a resource should the legislator or staff have questions or need additional information. Where appropriate, state in the letter that you will follow-up with a telephone call.

Sample Letter to Legislators

Following is a sample letter you can modify for use with your legislators. Personalize it according to your interests and the needs of your community.

Date August 26, 2003

Appropriate Heading Senator / Representative _____
2300 N. Lincoln Blvd.
_____ State Capitol Bldg.
Oklahoma City, OK 73501

Appropriate Salutation Dear Senator / Representative _____:

State your purpose in the first paragraph I am writing to urge you to vote in favor of children’s issues, especially early childhood issues.

In the second paragraph, express your concerns. Tell why you are concerned and give any personal information or statistics you have on the issue. Learning does not begin in kindergarten. It begins at birth and even before. In the last few decades, new technologies have allowed scientists to map the human brain. They have discovered that children’s brains grow tremendously in the first few years after birth. Although heredity plays a role, the “wiring” of a child’s brain is not completely determine before birth. Fortunately, our understanding of human development can help guide state and community actions to ensure the success of all children.

In the final paragraph, repeat your request and thank the legislator for his or her time. The future of America depends on what we do for our children today. Therefore, we need for you to support this issue. I look forward to hearing from you on your views on this issue. Thank you for your time and consideration.

Sincerely,

Your name and address so they can easily contact you. Name
Address (use the school’s address)
Phone number or e-mail (use the school’s number / e-mail)