

GROWING SMARTER

introduction

The world is an increasingly urban place. As the human footprint moves outward from dense city centers, suburbs, highways, and strip malls are being quickly built around city edges to accommodate the needs of a growing population. This **urban sprawl**, which surrounds many city fringes, is often accompanied by increases in traffic, pollution, and the development of open spaces and wildlife habitat.

However, there are development plans that can alleviate negative effects of sprawl and aid in making city areas physically attractive as well as environmentally friendly for its citizens. Many cities have started using **smart growth** concepts, which revitalize city centers by including mixed housing and businesses, and preserving natural open spaces. These changes reorient cities to become more transit and pedestrian-friendly, thereby lessening the congestion and environmental effects of sprawl.

Vocabulary: smart growth, urban sprawl

materials

For each group:

- Blank paper
- Assignment Sheet (provided)

procedure

1. Divide the class into groups of four and distribute a sheet of blank paper to each group. The paper should be folded it into four equal sections and each section labeled with one of the following headings: Social, Political, Economic, and Environmental.
2. Ask that each group discuss some of the characteristics of urban sprawl. These might include: traffic, subdivisions/suburbs, highways, shopping centers, low density housing (large houses with yards), pollution, “brown fields” (unkempt and undeveloped areas), dependency on individual cars, decreased countryside and wildlife, etc. You may want students to write these characteristics on a sheet of scratch paper.

EARTH matters

Studies For Our Global Future

concept

As the world’s urban population increases, smart growth initiatives can help cities avoid congestion and environmental problems that often accompany urban sprawl.

objectives

Students will be able to:

- Identify characteristics of urban sprawl.
- Categorize the effects of urban sprawl as social, political, economic, or environmental.
- Create a plan to develop a plot of land within a growing city that considers short and long term impacts on residents and the surrounding area.
- Effectively communicate their city plan and justify their choices.

subjects

AP Human Geography, Geography, Environmental Science (General and AP), Economics, Government

skills

Collaborating, public speaking, conflict resolution, interpreting and analyzing maps

method

In small groups, students analyze a map of an undeveloped area within a city in order to create and present a growth plan that incorporates smart growth concepts.

3. Students now consider the possible effects of these urban sprawl characteristics – what might happen to the area and its inhabitants as a result of sprawl. On their sheet of quartered paper, they should list these effects within the appropriate category. Some characteristics might have effects within multiple categories and can be double listed.
4. As a class, brainstorm what physical features or systems within an urban area could alleviate any of the negative effects. List these on the board.
Answers may include: pedestrian-friendly sidewalks, mixed-use housing and shops (different types of housing with retail/businesses mixed in), public transportation, trees, protected parks and green areas, a revitalized downtown so people don't want to move out of the city center, etc.

These are characteristics of smart growth.

5. Distribute the Assignment Sheet, one to each group. Go over the information and instructions provided on the handout, pointing out the different plot areas and what they represent.
6. Allow time for groups to work collaboratively on their city plan and prepare to present it to the class.

Additional options:

- Have the students take the economics of their city plan into consideration. They might consider the overall cost, time, and resources needed to implement the plan. The more features they include in their plan, the more costly it will be.
- Have the students determine who would be in charge of putting their proposed city plan into effect. Would the citizens be able to have a say in the changes?

7. Each group presents their city plan.

alternate procedure

Use this lesson following either the lesson “In Search of Sustainable Life” or “Growing Pains in TX Hill Country.” Because either of these lessons will have introduced your students to the challenges of city growth, start this lesson with Step #5 – students completing the map and creating a development plan.

discussion questions

1. Are there any similarities between the groups' plans? What are the differences?

Answers will vary.

2. What challenges did you face while creating your city plan?

Answers will vary.

3. How does implementing smart growth features benefit a community?

Smart growth designs can revitalize city centers by including mixed housing and businesses, and preserving natural open spaces. These changes reorient cities to become more transit and pedestrian-friendly, thereby lessening the congestion and environmental effects of sprawl.

4. Are there any negative aspects of smart growth? What are they?

Answers may include: infrastructure costs – installing sidewalks, bike lanes, etc., individuals might have less space of their own and privacy, easements to put in bike lanes or public transit lanes may take land away from homeowners, etc.

5. Do you think smart growth is the best way to manage urban sprawl? What are alternatives?

Answers will vary. Some students might suggest laws be put in place to limit where people can live and developers can build. Others might suggest market forces could pull people from sprawling areas if there was a monetary benefit to living in more dense locations.

6. Are there any positive aspects of urban sprawl? What are they?

Answers may include: affordability – land outside of the city center may cost less, residents have their own yard for gardening and recreation, etc.

7. Do you think any of the presented city plans would slow or stop urban sprawl? Why or why not?

Answers will vary.

8. Aside from smart growth, can you think of anything else that would slow or stop urban sprawl?

Answers will vary. Students might point out that if the population of a community stopped increasing, urban sprawl might slow or stop. Others might contend that a shift in mindset – changing the image of a two-car garage and large house – could stop people from moving into suburbs.

assessment

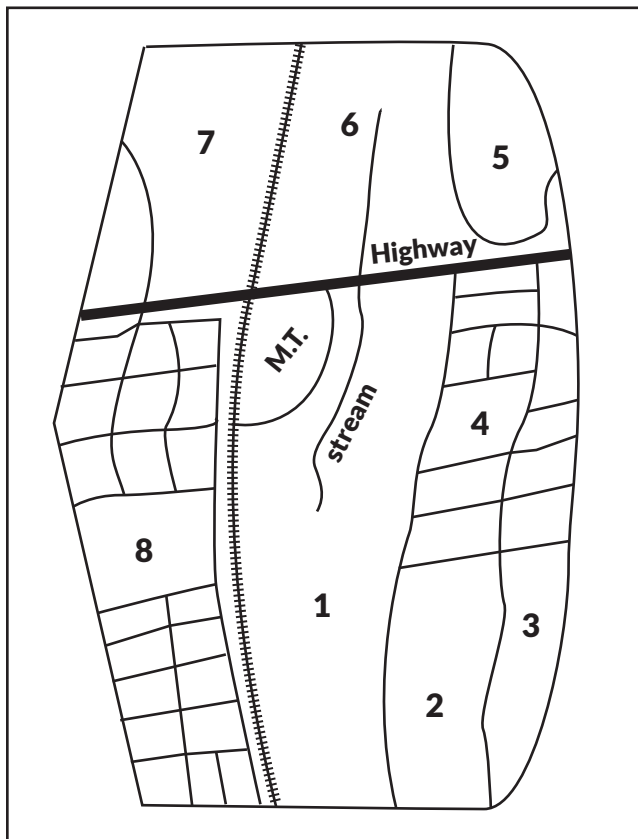
Evaluate each group's presentation to ascertain their understanding of the challenges and opportunities of urban sprawl.

follow-up activity

Students select an element of urban sprawl and investigate its presence in your community. If the element is common, they should come up with suggestions for what the city can do to improve land use. If the element is not common, they should determine what the city has done to use their land differently, and what the results were.

Activity adapted from lessons in "Where Do We Grow From Here? A Teacher's Resource Guide on Growth and its Impacts in Maryland," produced by the State of Maryland.

GROWING SMARTER | assignment sheet



The numbered plots on the map represent the following:

1. Undeveloped Area
2. Shopping Mall
3. School
4. Apartment Complex
5. Office & Light Commercial
6. Federal Property
7. Light Industry
8. Single Family residential with some small business

Map symbols:

- M.T. - Mass Transit
- - Roads
- +++ - Multiple Rail Lines

The map above shows a parcel of land on the edge of a city that has seen significant population growth in recent years. In order to meet the demands of the city's current and future residents, changes need to be made. You have been asked to develop a plan for the undeveloped area Plot 1.

Keep in mind that your plan will impact the city, its current and future residents, and the physical (both man-made and natural) surroundings.

1. Organize a city plan for future use of Plot 1 to present to your classmates (fellow citizens). You can draw on your map.
2. Decide which features should be included in the area and provide justification for each. You might choose from the list below, or think of others. Consider the type of feature, how many, and location.
 - Businesses: retail stores, offices
 - Transportation: roads/interchanges, sidewalks, biking trails
 - Housing: high or low rise apartments, senior citizen complexes, other
 - Open spaces: parks, recreation areas
3. Determine the short term and long term effects of your plan. What social, political, economic, and environmental effects will it have?
4. Organize a short presentation to share your city plan and its effects with the class. Choose a group member to present the plan and be prepared to justify your choices.