Using Google Maps to Apply Urban Models

OVERVIEW & OBJECTIVES	GRADES
	9th
This lesson follows an introduction to Urban Models. It asks students to apply the urban models of Concentric Zone, Sector, and Multi-Nuclei to U.S. cities. Students use the online tool of Google maps to draw an urban model that they think best fits the city they are assigned. *Students will be able to...* Create a custom map using Google Maps Apply one of three urban models to a U.S. city or urban area.	**TIME**
	2 days
	REQUIRED MATERIALS
	✓ Computer Internet access with projector ✓ Computer Internet access for students ✓ Access to Google Maps ✓ Handouts: "Using Google Maps to Apply Urban Models"; "Rubric for Applying Urban Models"

MINNESOTA SOCIAL STUDIES STANDARDS & BENCHMARKS

Standard 1. People use geographic representations and geospatial technologies to acquire, process and report information within a spatial context.

9.3.1.1.2 Apply geographic information from a variety of print and electronic sources to interpret the past and present and plan for the future; provide rationale for using specific technologies for each application.

For example: Technologies—aerial photographs, satellite-produced imagery, and geographic information systems (GIS). Applications—determine obstacles that needed to be overcome in building the Suez and Panama Canals; gauge the extent of water pollution in a harbor complex in South Africa.

Standard 6. Geographic factors influence the distribution, functions, growth and patterns of cities and human settlements.

9.3.3.6.1 Use generally accepted models to explain the internal spatial structure of cities in regions of the United States and other regions in the world.

For example: Models—Concentric Zone, Sector, Multiple Nuclei, Western European city, Latin American city, Southeast Asian city, African city. Regions of the United States—eastern United States, western United States. Regions of the world—Europe, Latin America, Southeast Asia, Africa South of the Sahara, Southwest Asia/ North Africa.

SUGGESTED PROCEDURE

DAY 1
Opening:
A quick formative assessment should be used to assess students' understanding of the three Urban Models: Concentric Zone, Multi-Nuclei, and Sector. (Information on the urban models should have been assigned or lectured the previous day.) I usually find images of urban models applied to actual cities and ask students to identify them. You will have to do an image search for these or use the ones in your textbook. Use the think-pair-share strategy to get students discussing which models they think are being applied. Finally, have students share their thoughts on the models.

Development

Explain to students that they are going to work in groups to identify the urban model that most closely resembles actual U.S. cities. Place students in groups of 4-5 and hand out the instruction sheet, "Using Google Maps to Apply Urban Models". Review the instructions with students, taking time to note changing Google maps from the current mode to classic. (You might want to examine an exemplar with the students and describe what they are looking at.)

Have students begin working. (It is at this point that the hour usually ends—after completing Setting up Your Shared Google Map steps #1 through #7.) Demonstrate to students how they should zoom in on the map and discuss what they see and what indicates industrial or suburban homes, for example. Also explain that cities will not fit urban models exactly, but students should focus on applying the model that fits best.

DAY 2

Students should work on Editing Your Map and Applying the Models steps #1 through #6 with the handout, "Using Google Maps to Apply Urban Models". Share the rubric, "Rubric for Applying Urban Models". (If students finish early I have them do additional research on the city they mapped, such as find data on housing prices, net income, ethnic make-up, etc. that would better help them identify which model fits the city best. For enrichment you can have kmz files ready for students.)

Closing

Students present their maps to the class; classmates and the teacher ask questions.

Assessment

Urban Models Map Activity

Resources

Google Maps
http://www.maps.google.com

Using Google Maps to Apply Urban Models

You will be provided with a major U.S. city and then, using Google maps, you will apply your understanding of Urban Models to the city. Remember, the Urban Models you apply to your cities are *Concentric Zone, Sector, or Multi-Nuclei Model*. This is a group activity so you will be working with others to illustrate the urban model you think fits the city best.

Setting up Your Shared Google Map
Before you do anything you have to create a starting map in Google maps and share it with your fellow group members.
1. Go to http://www.maps.google.com

2. In the upper right hand corner click on the arrow box that says "Help & Feedback." Then click on the box that says, "Return to Google Classic Form".
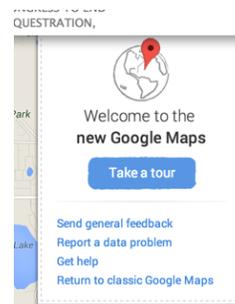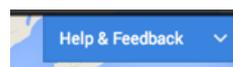
3. On the left hand side click the box that says "My Places"
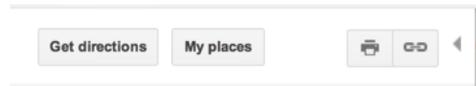
4. Next, click on the link that says "Or Create with Classic My Maps". DO NOT click on the red create map.
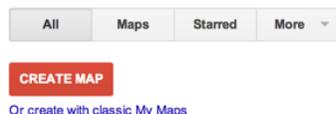
5. Title your map with the name of your city and Urban Model, for example, "Richmond's Urban Model"

6. Click on the link that says "Collaborate".

7. Invite other small group members to collaborate. You need to use your school's email accounts. Once you have entered the emails into the box that says "Invite people as collaborators" click on the button "Send Invitations". Then click "ok" in the bottom right corner of the window.

8. After everyone has been invited, you can then click on the "done" button.
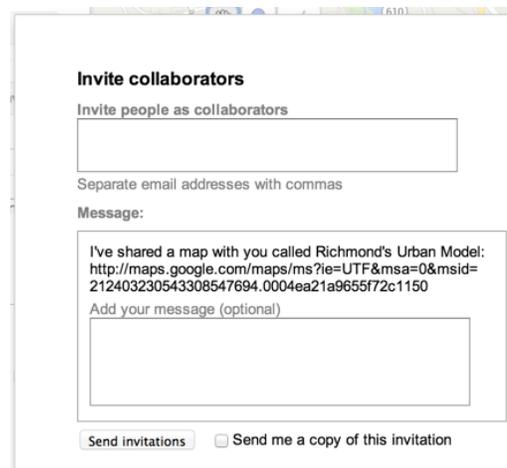
Editing Your Map and Applying the Models

After the map is shared with everyone, you are ready to go!

1. Head over to your city by searching for it in the search box at the top.
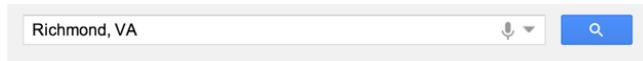
2. Click on Edit in the left window, right above the title of your map.

3. Use the icon in the top right of the map to change from a map to a satellite image. (You will primarily be using the satellite for this activity.) When you hover over the icon more options appear—you should toggle between the labels being off and on. Choose what helps you understand the city best.

4. Use the tools in the top left corner to map the areas that indicate what model the city is. For example, you should use the tool on the right that allows you to draw shapes. Draw those areas that identify different types of development. You should start with the Central Business District (CBD).

5. Label the areas with what they represent and, in the box that says description, explain what clues identify the area. For example, if you think it is the transportation and industry area that makes up the sector model, explain why you think this is true. Each area must be a different shade of color with a shade that allows the other layers under it to be visible.
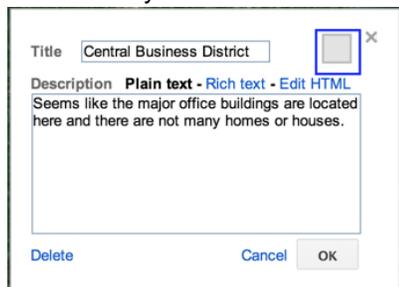
6. Once you have labeled all the parts of your model, you then need to go back to "Collaborate" and add the teacher as a collaborator.

REMINDERS
- Be ready to present your map to the class and to answer your classmates' and teacher's questions.
- Refer to classroom and textbook notes on Urban Models for assistance with your explanations.

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Rubric for Applying Urban Models

Components of the Assignment	Excellent 5	Satisfactory 4-3	Needs Work 2-1	Unsatisfactory 0
Map (x2)	• Map is neat and orderly. • The zones drawn correspond with the urban model chosen. • Zones are clearly labeled. • Map is shared with all group members and the teacher.	Only 3 of the 4 attributes in the excellent category are met.	Only 2 of the 4 attributes in the excellent category are met.	Only 1 of the 4 attributes in the excellent category is met.
Explanation (x2)	An explanation for each zone is provided that demonstrates understanding of the model chosen.	75% of the explanations provided for the zones are correct.	50% of the explanations provided for the zones are correct.	Less than 35% of the explanations provided for the zones are correct.
Grammar (x1)	Explanation uses complete sentences and is grammatically correct.	Has complete sentences, but grammar mistakes are distracting.	Does not have complete sentences or grammar mistakes are distracting.	Does not have complete sentences and grammar mistakes are distracting.
Total: _____/25pts				