Components for Tiered Lesson on Urban Land Use and Sustainability

Differentiated Instruction Example 2009
Subject/Grade: CGC 1P/Gr. 9 Applied

Topic (Big Idea):
• apply the concepts of stewardship and sustainability to analyse a current national or international issue.
• describe issues that affect natural and human systems in Canada

Essential Question:
• explain the relationship between stewardship, sustainability, and change in ... resource-use practices (land use planning);

Formative (pre-assessment/ongoing/diagnostic) Assessment formats will include:
Implement diagnostic assessment concerning previous learning material “Land Use Planning Review”. This diagnostic will be the basis for 3 tiered groupings. Ongoing formative assessment based on exit cards, group activity, and individual worksheets/maps/reports. Students will also have available a word wall display for key terms, checklist of urban planning guidelines and group tier activity – gallery walk.

Tiered Activities will include:

<table>
<thead>
<tr>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Tier 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>List and describe the various ways people can be more sustainable (reduce ecological footprint) in their homes, neighbourhoods, and lifestyles.</td>
<td>List and describe the ways cities and towns can protect ecologically sensitive areas and/or create natural corridors.</td>
<td>Determine the best location for a sewage treatment plant, water filtration plant-well, and landfill site (based on site and situation factors).</td>
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</tbody>
</table>

Evaluation and/or assessment will be done through the use of:
Each group will create a list of solutions (on poster paper) to answer each tiered group’s essential question.

Group/individual gallery walk, (to use as a resource) concerning the essential question/land use map presentation/written reports that synthesize the information learned from tiered assignment.

Final Product:
• create a visual (e.g., land use map) to address an environmental sustainability issue or promote environmental awareness;
Land use:
Various ways people use the land;
Example – urban parks are usually surrounded by homes;

Zoning by-law:
A law that controls where, how much, or what kind of development takes place;

Urban:
areas that include cities or towns that have more than 1000 people;
Examples – Fergus, Guelph, Toronto;

Rural:
areas that include settlements of under 1000 people;
Example – North Wellington,

Types of urban land uses:
Residential – Houses, Apartments, Condominiums
Commercial – Stores, Malls, Offices
Industrial – Factories, Warehouses
Recreational – Arenas, Parks, Rec. Centres
Institutional – Churches, Schools, Police Stations, Government Buildings
Utilities – Water & Sewage Treatment Plants, Landfills
Transportation – Roads, Bridges, Railways, Ports

Rural-urban fringe:
The zone where city and the surrounding countryside meets;
## Exit Card

**Reflecting on the learning goals, please complete the following:**

<table>
<thead>
<tr>
<th>Something new I learned today:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
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<th>Something that really helped me in my learning today:</th>
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Some Guidelines for Urban Planning

1. Businesses and Industry
   - List of 5 types of businesses and light industry in your report.
   - 2 tourist attractions discussed in your report

2. Land use is compatible
   - Does not have school, hospital, church, or residential land use next to landfill site
   - Does not have school, hospital, or church next to industrial sites
   - Recreational areas like parks are near or are surrounded by residential land use

3. Transportation and Accessibility
   - Commercial land use is near or on major road way
   - CBD is central or easily accessible by road way
   - Placement of bridges over rivers for roads and people
   - Proposed highway is connected to major road ways
   - Landfill site is connected by major road way but routed away from residential areas

4. Sustainable Urban Development
   - Ecologically sensitive areas protected by specific land use zoning
   - Natural Corridors created

Evaluation:

- Read rubric for evaluation criteria

Map Checklist:

- Title of map
- All symbols in legend
- Name and Date
Planning Checklist:

- Name of Community
- 4 zoning by-laws created
- Correct number of squares for each land use
- 40 Residential
- 18 Commercial
- 6 Institutional
- 30 Recreational
- 6 Light Industrial
- Transportation lines
- Correct placement of ‘S’ sewage treatment plant
- Correct placement of ‘W’ water treatment plant
- Correct placement of ‘L’ sanitary landfill site
- Rough Copy completed and Conference with teacher
- 1 to 2 page Report
# Land Use Review

**CGC1P Grade Nine Applied Geography**

Name: ____________________________________________________________

1. Match the word with the appropriate definition. The definitions can be found in the course glossary. (1 point each = 15 points total)

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>municipalities</td>
<td>laws or rules passed by a municipal council that apply only to that municipality</td>
</tr>
<tr>
<td>by-laws</td>
<td>towns, cities, counties, or other areas having local self-government</td>
</tr>
<tr>
<td>land use</td>
<td>laws made by various governments. In Canada, provincial and federal legislation must also be considered when planning municipal projects.</td>
</tr>
<tr>
<td>zoning by-laws</td>
<td>the places where people live, such as apartments, townhouses, semi-detached houses, single detached houses, etc.</td>
</tr>
<tr>
<td>legislation</td>
<td>the movement of goods or people</td>
</tr>
<tr>
<td>residential</td>
<td>various ways people use the land</td>
</tr>
<tr>
<td>transportation</td>
<td>laws passed by municipalities that control where, how much, or what kind of development takes place</td>
</tr>
<tr>
<td>institutional</td>
<td>having to do with an established organization or foundation, especially one dedicated to education, public service, or culture. Buildings include hospitals, post offices, schools, city halls, etc.</td>
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<tr>
<td>recreational</td>
<td>activities which people do for pleasure and the places for doing them, such as theatres, cinemas, ball parks, etc.</td>
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<tr>
<td>industrial</td>
<td>having to do with companies which manufacture products. The word also can refer to companies engaged in distribution.</td>
</tr>
<tr>
<td>commercial</td>
<td>retail stores and goods produced and distributed in large quantities</td>
</tr>
<tr>
<td>urban sprawl</td>
<td>urban growth that happens quickly and is sometimes out of control</td>
</tr>
<tr>
<td>rural-urban fringe</td>
<td>the zone where the city and the surrounding area meet</td>
</tr>
<tr>
<td>suburbs</td>
<td>generally newer areas found around the fringes of established cities</td>
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<tr>
<td>cities</td>
<td>urban centres with more than 10 000 people in each</td>
</tr>
</tbody>
</table>
2. Fill in the correct percentages for each city land use type.
   What percentage of a typical city is:

   ____ residential  ____ commercial  ____ industrial
   ____ institutional  ____ recreational  ____ transportation

3. List **three** pull factors for an immigrant coming to Canada to settle in the city.

4. Research and list three ways the city that is nearest to where you live (or the city you live in) has changed due to urban sprawl.

   The city I live in or that is nearest to me is __________________________.

   Three ways this city has changed due to urban sprawl is:

   a
   b
   c


5. From the website provided above, give three ways the Oak Ridges moraine helps the environment.
6. Paving the Oak Ridges Moraine is an example of urban sprawl.
   a) Do you think it is necessary for us to change this land to suit the needs of people living
      in urban centres? Why or why not?

   b) In what ways could we satisfy the needs of the people and still preserve the natural environment
      like the Oak Ridges Moraine?

7. The link in the website about Commercial Land goes to an interactive map from Natural Resources
   Canada. Zoom in on the cities in Ontario.
   URL: [http://atlas.gc.ca/site/english/maps/economic/si/is/I10](http://atlas.gc.ca/site/english/maps/economic/si/is/I10)

   a. Examine that map to answer the following true or false questions. Hint – The circles indicate the
      sizes of the population. The bigger the circle, the bigger the population:

      ___ Kitchener has more people than Brantford.
      ___ Hamilton has fewer people than Guelph.
      ___ Toronto is as big as Hamilton.
      ___ Barrie is bigger than Peterborough.
      ___ Thunder Bay is as big as Ottawa.

8. A Land-Use planner is an example of a Geo-Career. Click on the website link.
   a. What does a Land-Use Planner do?

   b. What types of questions are asked of Land-Use Planners? Give two examples.

Website URL: