City Planning Design Brief

Introduction:

Welcome to Centralville! You have been hired as the new planners for the city of Centralville. Centralville is popping up from the landscape between New Britain and Newington and will connect to the existing towns using various transportation systems. Your group will develop a previously untouched area of land in a way that is most beneficial to one segment of the community. The new city will consist of industry buildings, retail centers, government buildings, residential homes, many systems of transportation and open space. You will market your city through travel and tourism based on one unique quality that you have determined will make your city more attractive to live than surrounding towns.

Challenge:

Your new town will support government facilities, residences for 200 people, and employ 100 people within industrial positions created by the three manufacturing facilities you have been able to contract to moving to town. Your goal is to balance the transportation systems within the town to allow accessibility to work/life/play for all.

You will create a marketing campaign to promote your city based on the one feature you find will be most attractive to potential residents that you have built into your cityscape.

Design Brief Goals:

- You will understand different types of transportation systems and how they interact and support city planning.
- You will apply at least three of the following systems auto, bus, truck, rail, and human powered systems apply the use of at least three systems to the design of an efficient city model.
- You will rationalize your city layout, in particular the transportation systems used, based on the public transportation needs of one of the following city dwellers:
  - Manager at retail facility
  - Student that bicycles to school
  - Stay at home parent without a vehicle
  - Assembly worker at local industrial plant
  - Mayor/Civic Leader
  - Commuter to next major urban area
- You will construct a physical model of your city.
Resources and Materials Provided by Teacher:

- Building materials
- Activity Handouts
- Computer Lab
- Maps provided by teacher
  - [www.kurumi.com](http://www.kurumi.com)
  - [http://magic.lib.uconn.edu/historical_maps.htm](http://magic.lib.uconn.edu/historical_maps.htm)

Limitations/Requirements:

- You will work in assigned groups of two or three.
- You must follow guidelines provided on the “Challenge Rubric” on population, number of transportation systems, amount of industry and retail.
- You will have two days to complete their build (both Part I and Part II)
- You will have one day to sketch their marketing campaign.
- You must stay within budget, track spending and save some money for future construction.
- Part I is due on 5th of….
- Part II is due on 8th of….

Procedure:

- Using your plot of land purchase and build an urban cityscape based on the Activity 1 worksheet.
- Complete and post your marketing campaign.
- Once Activity 1 is complete and marketing campaign has been posted, provide Activity 2 worksheet.

Assessment:

- Informal assessment of the poster marketing their city as this is a personal objective piece and presentation of city rationale.
- Formal assessment of the construction of the urban space as it relates to the critical criteria and rubric provided within the design brief.
- Formal assessment - RAFT describing the changes you chose to make to your design based on your new knowledge on Ecological Sustainability. Rubric will be provided for structure of assessment.
Activity 1

Task: Your job is to design and present a plan for a city. You will use wood blocks to represent buildings, and erasable markers for roads. Your city will utilize a minimum of three transportation systems to move product and people.

Representative Resident:
Choose one of the following residents of Centralville as your target resident in which you will design your city to be most accommodating for:
- Manager at retail facility
- Student that bicycles to school
- Stay at home parent without a vehicle
- Assembly worker at local industrial plant
- Mayor/Civic Leader
- Commuter to next major urban area

Resources:
1. $10,000,000
2. A 12”x15” piece of paper representing your city
3. Wood Blocks representing buildings
   - GREEN for homes
   - GOLD for businesses (like stores)
   - ORANGE for industries (like factories)
4. Markers or crayons representing roads, train tracks, and bike paths:
   - GREEN for bike paths
   - RED for car roads
   - BLACK for bus roads
   - BLUE for train tracks

Constraints:
1. Your city must contain:
   - Homes for at least 100 people
     - FOUR people can live in each GREEN home
   - 15 businesses
     - Each GOLD building can hold TWO businesses
   - 3 industries
     - Each industry must be in its own ORANGE building
   - All buildings must be accessible by road, train, or bike:
     - Vehicles that...may travel on
       - Trains: BLUE train tracks only
       - Bicycles: GREEN bike paths
       - Buses or Trucks: BLACK bus roads only
       - Cars: BLACK bus roads or RED car roads only

2. You must save money for the future.

Costs:

<table>
<thead>
<tr>
<th>Resource</th>
<th>Cost</th>
<th>Color</th>
<th>per inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREEN Home</td>
<td>$40,000</td>
<td>GREEN</td>
<td>$5,000</td>
</tr>
<tr>
<td>GOLD Business</td>
<td>$100,000</td>
<td>RED</td>
<td>$20,000</td>
</tr>
<tr>
<td>ORANGE Industry</td>
<td>$1,000,000</td>
<td>BLACK</td>
<td>$50,000</td>
</tr>
<tr>
<td>Park land and Municipal buildings</td>
<td>FREE!</td>
<td>BLUE</td>
<td>$50,000</td>
</tr>
</tbody>
</table>
**Activity 2**

**Task:** Your job is to REdesign and present a plan for a city. Thirty years has passes and there is NEW LAW which requires all private vehicles to carry at least 8 people. LEED certification is not a requirement but can be a means of generating future funding.

**Resources:**
1. $3,500,000 and any money left over from the last group
2. The last group’s city model
3. Wood blocks representing buildings
4. Erasable markers representing roads, train tracks, and bike paths

**Constraints:**
1. Your city must contain:
   - Homes for at least 200 people: FIVE people can live in each GREEN home
   - 20 businesses: Each GOLD building can hold TWO businesses
   - 5 industries: Each industry must be in its own ORANGE building

2. All buildings must be accessible by road, train, light rail, bike or HPV:

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>...may travel on</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trains</td>
<td>BLUE train tracks only</td>
</tr>
<tr>
<td>Light Rail</td>
<td>BLUE DASH tracks only</td>
</tr>
<tr>
<td>Bicycles, HPV, Pedestrian</td>
<td>GREEN bike paths</td>
</tr>
<tr>
<td>Buses, Trucks, Automobiles</td>
<td>BLACK bus roads only</td>
</tr>
</tbody>
</table>

3. You must demolish all RED car roads.
4. You must save money for the future.

**Building Costs:**

<table>
<thead>
<tr>
<th>Building Type</th>
<th>Cost per inch</th>
<th>Building Type</th>
<th>Cost per inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREEN Home</td>
<td>$40,000</td>
<td>GREEN bike path</td>
<td>$5,000</td>
</tr>
<tr>
<td>GOLD Business</td>
<td>$100,000</td>
<td>DASHED BLUE light rail</td>
<td>$25,000</td>
</tr>
<tr>
<td>ORANGE industry</td>
<td>$1,000,000</td>
<td>BLACK bus roads</td>
<td>$50,000</td>
</tr>
<tr>
<td>Park land and Municipal buildings</td>
<td>FREE!</td>
<td>BLUE train tracks</td>
<td>$50,000</td>
</tr>
</tbody>
</table>

**Eco-Friendly Building Modifications:**
- Industry LEED-EB Certification: Cost: $25,000, Fed Credit for future use: $12,500.
- Solar Grid install on Industry bldg: Cost: $50,000, Fed Credit for future use: $25,000.

**Demolition Costs:**

<table>
<thead>
<tr>
<th>Building Type</th>
<th>Cost per inch</th>
<th>Building Type</th>
<th>Cost per inch</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREEN Home</td>
<td>$5,000</td>
<td>GREEN bike path</td>
<td>$2,000</td>
</tr>
<tr>
<td>GOLD Business</td>
<td>$25,000</td>
<td>RED car roads</td>
<td>$15,000</td>
</tr>
<tr>
<td>ORANGE industry</td>
<td>$1,000,000</td>
<td>BLACK bus roads</td>
<td>$40,000</td>
</tr>
<tr>
<td>Park land and Municipal buildings</td>
<td>Can not be demolished</td>
<td>BLUE train tracks</td>
<td>$40,000</td>
</tr>
<tr>
<td>Analytic Rubric</td>
<td>Task: Urban Planning</td>
<td>High School</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
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<td>-------------</td>
<td></td>
</tr>
<tr>
<td><strong>Core Element</strong></td>
<td><strong>4 “Strong Evidence”</strong></td>
<td><strong>2 “Limited Evidence”</strong></td>
<td><strong>1 “No Evidence”</strong></td>
</tr>
<tr>
<td><strong>Design Process:</strong> Create urban layout based on constraints provided in design brief</td>
<td>Three of three transportation systems have been planned. The student utilized correct quantities of all types of buildings available. Residence and green space are appropriately represented.</td>
<td>One transportation system has been utilized. Student utilized three or less building types and provided housing for most residents of the city. Green space is not represented.</td>
<td>There is no systematic flow within the city for transportation. Building representation is limited to one or two types. Green space is not represented.</td>
</tr>
<tr>
<td><strong>Transportation System:</strong> Utilization of transportation systems within urban planning.</td>
<td>The student made conscious effort to interconnect transportation systems within the urban plan allowing for intermodal transportation and reduced automotive traffic flow.</td>
<td>The student incorporated multiple modes of transportation within urban design but may not be interconnected to allow for intermodal transportation.</td>
<td>The student failed to show a structured transportation system within the urban plan.</td>
</tr>
<tr>
<td><strong>Problem Solving:</strong> Describe in detail the most positive aspect of your urban area.</td>
<td>The student can identify a strong feature of their urban plan that will entice residents to live there. (ie. Great mass transit, residence close to green space, community center)</td>
<td>The student can identify features that may be attractive to potential residents of their urban plan. (ie. We have industry, schools, retail, and residence)</td>
<td>The student cannot identify a pleasing aspect of their urban plan.</td>
</tr>
<tr>
<td><strong>Ecological Sustainability:</strong> Demonstrate the ability to add ecologically sustainable features to your urban design</td>
<td>The student will make identify and make modifications to their existing transportation design to reduce emphasis on auto transit and increase emphasis on bus/train/human powered transportation.</td>
<td>The student will make identify and make modifications to their existing transportation design to reduce emphasis on auto transit and increase emphasis on bus or train transportation.</td>
<td>The student chooses to make no change to their existing design.</td>
</tr>
</tbody>
</table>