Objective:
This game helps students learn how to design the placement of city elements within zoning areas.

Time:
60 – 180 Minutes

Materials (per group):
- City Planning Game Cards (Basic) (Included Below)
- Scotch Tape (1 roll per group)
- 4 x 24-inch pieces of different colored yarn
- City Zones & Infrastructure Evaluation Worksheet (Included below)

INSTRUCTIONS:

1. Ask the class to consider the following questions and discuss their responses:
   - What city services from the Brainstorming & Ranking City Features activity are necessary for your residential areas? What city services are necessary for business areas? What city services are needed for industrial zones?
   - Think about the location of things in your city. What areas of the city would you like to have located near your home? What areas would you like as far away as possible?
   - In what ways are necessary city services connected to each other? (Example: How do the things you buy from the store get to your house? From where does your electricity come?)

2. **Groups** - Divide the class into groups. Each group is a separate zoning commission whose task is to design the perfect city. Give each group the map template, or tell students to use a table or a section of floor as the map area.

3. **Summary of the Game** – Provide the following detailed instructions: In this game, students arrange cards with pictures of city features to form a simplistic city layout on a table. The goal is to have students think about placement of zoning areas and the services and city features within those areas. The cards can be moved around as each team of students forms the best arrangement. The
INSTRUCTIONS (Continued):

game can be used for a standard science or social studies class, class with limited time, or, if the table component is removed, a special-needs class.

4. **Data Tables** – Before the students are presented with the game pieces, ask them to create a plan based on previous discussions about city features and infrastructure. Have each group create a data table on which they can make decisions about the game cards they will need before they actually receive them. For example, if they think that they need a shopping mall, the group should decide on a commercial piece and then come up with a name for the mall. See sample table below.

<table>
<thead>
<tr>
<th>Type of Building</th>
<th>Type of piece</th>
<th>Name of Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopping Mall</td>
<td>Heavy Commercial</td>
<td>The Mega Mall</td>
</tr>
</tbody>
</table>

5. **Game Pieces** - Once students have a list of the pieces they need, they can collect the game pieces in any of the following ways: a buffet layout (in which all game pieces are displayed picture-up and students are able to pick a certain number), a distribution method (in which cards are handed out to each group or each group can request specific game cards), a barter system (in which certain cards are distributed to each group and they are allowed to trade with other groups), or money (in which students can use the daffy dollars located with Game Cards (extended) to buy the city features they need).

6. **Naming and placing game pieces** - Groups can label pieces with names if they like. They should place the pieces on the map/table/floor where they think they should go.

7. **Infrastructure** - Give each group four colors of yarn, and have each group show the connections between their city features and services by taping the yarn in a way that connects the city components. The colors of yarn are used to show four types of infrastructure in the city. Cities are not required to use all these features, but if the groups choose to use them they must show where they are set up. The categories are:
   - Major roadways (highways, main travel streets, etc.).
   - Sewer and water-main pipes.
   - Main power lines.
   - Train and subway lines.
INSTRUCTIONS (Continued):

8. **Collaboration** - Encourage each group to look at the other cities being developed. This can be done as a free-flowing process all through the creation of city plans or as a gallery walk at the end.

9. **Presentation** - Once the cities are created in the way that they like, the groups should prepare a 1-minute formal presentation of the benefits of their cities. Allow for questions and answers after each presentation.

10. **Evaluate** - After viewing all cities and hearing presentations, have students discuss what considerations affected the location of their city features. Talk about things like pollution, noise, traffic, accessibility for everyone, visual appearance, and service provided.

11. **Test and Record** – Take a picture of each group’s map, and have groups submit their tables and presentation notes. To see if students understood the project on an individual basis, have each student complete the evaluation exercise in the *City Zones & Infrastructure Evaluation Worksheet* (included below).

12. **Analyze Results** - Using the table and map pictures, have students rate all of the cities on a 10-point scale in terms of quality of life for the citizens.

**Extension:**
Prior to completing this activity, find a business owner and city leader who will answer these questions following a class presentation or web connection (if your school has one available).

**For business owner:**
- How did you choose the location of your business?
- How does transportation around your location impact your business?
- What services do you use that are provided by the city, county, or government?
- Which service is the best?
- Are there any services that could improve your business situation?

**For city leader:**
- What is the most important part of your job?
- When developing a city plan, what city services do you need to consider?
- What are some of the problems or issues you deal with every day?
- What are some of the trends in city planning to help a city provide a better quality of life for its citizens?
City Planning Game Cards (Basic)
City Planning Game Cards (Basic) – Page 4 of 4
City Zones & Infrastructure Evaluation Worksheet

Instructions: You are the head of a team of organizers for a new city. Your job is to complete the zoning and needed infrastructure to make your city successful.

First, decide the zoning, and lightly color the portions of your map to reflect the zoning. You will have to place your infrastructure over the colors, so make them light (preferably in colored pencil), but use three shades of each color to show the difference between low, medium, and high density areas. Use the following ratio: residential = 60%; commercial = 10%; and industrial = 30%.

Next, use the infrastructure legend below to build your infrastructure. Be sure to include all the listed items. Cross each off as it is placed on the map.

Finally, add transportation, using black lines for roads and brown lines for train tracks.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Infrastructure</th>
<th>Symbol</th>
<th>Infrastructure</th>
<th>Symbol</th>
<th>Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Power Plant</td>
<td>F</td>
<td>School</td>
<td>K</td>
<td>Stadium</td>
</tr>
<tr>
<td>B</td>
<td>Water Utility</td>
<td>G</td>
<td>Park</td>
<td>L</td>
<td>Large Apartment</td>
</tr>
<tr>
<td>C</td>
<td>Shopping Center</td>
<td>H</td>
<td>Government Center</td>
<td>M</td>
<td>Heavy Industry</td>
</tr>
<tr>
<td>D</td>
<td>Bridge 1</td>
<td>I</td>
<td>Park</td>
<td>N</td>
<td>Farm</td>
</tr>
<tr>
<td>E</td>
<td>Bridge 2</td>
<td>J</td>
<td>Airport</td>
<td>O</td>
<td>High-tech Industry</td>
</tr>
</tbody>
</table>

City Zones & Infrastructure Evaluation Worksheet– Page 1 of 1