

# Build a Sustainable Future: City Model Project

## Florida State Standard:

- **SC.6.E.7.1:** Explore and describe the importance of natural resources in sustaining human life and the role of technology in using and preserving those resources.
- **SC.6.E.7.4:** Explain how human activities can impact the environment and the importance of sustainability.

## Materials Required:

- Recycled materials (cardboard, plastic bottles, paper, fabric scraps, etc.)
- Art supplies (glue, scissors, markers, paint)
- Measuring tools (rulers, tape measures)
- Technology resources (tablets/laptops for research)
- Poster board for presentations
- Presentation tools (e.g., projector or poster paper)

## Safety Precautions:

- Ensure students handle scissors and other sharp tools carefully, keeping the points facing downward and away from themselves and others.
- Establish a clean working environment to prevent accidents and spills.
- Instruct students to report any unsafe conditions immediately, and ensure they know where the first aid kit is located.
- Encourage students to wear safety goggles if using any paints or glues that could irritate the eyes.

## Procedure:

1. **Introduction (15 minutes):**
  - Discuss sustainability and its importance in urban planning.
  - Show examples of sustainable cities to inspire students.
2. **Group Formation (5 minutes):**
  - Divide the class into groups of five. Each group will focus on designing a section of the sustainable city.
3. **Research (30 minutes):**
  - Allow groups to research sustainable practices and technologies using tablets/laptops.
  - Each group should create a list of ideas for renewable energy sources, green spaces, and eco-friendly materials.
4. **Planning (15 minutes):**
  - Groups will sketch their city section layout, including buildings, parks, and energy sources, ensuring they incorporate sustainability principles.
5. **Model Construction (2-3 class periods, 60 minutes each):**
  - Distribute materials for building.

- Groups will construct their section of the city, focusing on using recycled materials and demonstrating sustainable practices.
- Circulate the classroom to provide guidance and support as needed.
- 6. **Presentation Preparation (30 minutes):**
  - Groups will create a presentation summarizing their design, explaining the sustainable features and materials used.
- 7. **Presentations (30 minutes):**
  - Each group will present their model to the class and explain their design choices, highlighting sustainability features.
  - Allow time for peer questions and feedback after each presentation.

**Note 1: Clean Up**

After completing the project, students should follow a clean-up protocol:

- Gather all materials and sort recyclables into designated bins.
- Wipe down tables and workspaces to remove any debris or glue residue.
- Return all tools and unused materials to their proper locations.
- Ensure that the classroom is tidy and safe before leaving.
- Assign cleanup roles within each group to promote responsibility and teamwork.