(SN) Building a Scale Model of a City

Objective/question
Create a three-dimensional model of the designed future city. Question:
- How can the model be incorporated into a larger model of a future city?

Explorations
Have students design and build a scale model of a building.

Communication
Provide the students with an array of pictures of modern skyscrapers and other buildings. Have students study the pictures and decide on a preferred style of building.

Teach a lesson on how to draw scale drawings, guiding students in drawing scaled-down structures.

After the lesson, instruct them to draw an illustration of their preferred building on copy or graph paper. Be sure students select a scale for their model building (e.g., 1 inch = 10 feet).

Solve
Models are constructed using thin pieces of wood or dowel rods. Instruct students to explore recycled materials like soda or pill bottles, cell-phone packaging, boxes of various sizes, or old toys. Allow students to use drawing programs on computers or download texture patterns from model websites to decorate the buildings.

Have students draw on 8½ x 11 sheets of paper or construction paper, gluing individual sheets to larger pieces of butcher paper to make the walls of the buildings. Once the glue dries, have students attach the skin panels to the framework of their buildings.

Allow students to add battery-powered holiday lights to model buildings to give them a sense of color and texture.

Instruct students to limit the height of their buildings to no more than their own height. Have them group finished buildings together so they are organized into blocks of buildings. Instruct them to allow room for roads and streets to separate the various blocks. Allow students to add Matchbox cars or other miniature pieces to the model.

Test and record results
Evaluate students on participation in each phase of the project.
Analyze results
Have students explore each others’ buildings. Instruct them to discuss and evaluate suggestions about possible uses for particular buildings, making changes where they are needed.

Final product
Have students revise their model building per the discussion (see prior step). Have students hold an architectural contest, and enlist alternate judges to evaluate the buildings for innovative design or ease of use.