

A MATH AND ARTS CURRICULUM GUIDE: WHAT CAN THE HIGH LINE TEACH US ABOUT PARK DESIGN?

Grades 4 and 5

Materials:

Period 1:

- PowerPoint presentation
- Park design brainstorming worksheet

Period 2:

- Paper
- Pencils
- Colored pencils
- Measurement worksheet

Periods 3 – 7:

- Various art supplies for constructing the model, but might include:
 - Balsa wood
 - Cardboard
 - Foam board
 - Glue
 - Tempera paint
 - Construction paper
 - Pipe cleaners
 - Tissue paper
 - Glitter
 - Sand
 - Tape
 - Crayons
 - Markers

Period 8:

- Students' models

LESSON GOALS

Students will:

- Learn that the High Line was built in the 1930s to carry freight along Manhattan's west side
- Learn that the High Line is now open as a public park
- Learn that all parks are designed
- Learn some of the components of park design

- Equipment
- Athletic fields
- Variety in plantings
- Water elements
- Look at images of different parks to consider how their designs differ from one another
- Create a design of a section of the High Line
- Build a model of this design
 - Use measurement skills to create the model
 - Learn about scale to help make the model

Duration: 8 periods

Period 1—PowerPoint presentation with park design brainstorming worksheet.

Period 2—Students incorporate their ideas into a sketch. Students also determine how tall and long their model will be by learning about ratio.

Periods 3-7—Students build a model of their design for the High Line.

Period 8—Students present their models to the class, describing the different elements and how they made their model.

PERIOD 1:

Ask students, “What is a park?” (Answers may include a place to play, relax, enjoy nature, exercise, meet friends, read, etc.) Generate a list of parks where students have been. Ask if all parks are the same? (No.) Have students share the types of things they enjoy doing in parks. Answers might include playing sports like soccer, baseball, basketball, football, etc.; rollerblading or skateboarding; playing on playground equipment like the jungle gym; having a picnic; etc. Ask students if you can do all of these things at every park? (Not necessarily.) Why not? Some parks don’t have baseball fields or basketball courts. Ask students to think about how each park ended up with different elements? Elicit that every park must be designed. Ask students what is meant by the word design. When something is designed, a series of deliberate decisions have been made about the way an object or place looks. Say, “Let’s look at some different parks and see how their designs differ from one another.”

Set up PowerPoint presentation.

Slide 1: Aerial View of Central Park.

Looking south. Identify miscellaneous park components, such as the ball fields, the Metropolitan Museum, etc. Have students share their experiences in Central Park. List many of the things that people can do in Central Park. Explain that the people who designed Central Park long ago, wanted New Yorkers to be able to do a large variety of things in the park.

Slide 2: Gapstow Bridge.

Ask students if all of Central Park looks the same. (No.) Reiterate the reason: the design. In this view of Central Park, what activities do the students think you can enjoy? Boating, walking, jogging, just being outside.

Slide 3: Gantry Plaza State Park.

Does a park have to be green with trees and plants? (No.) Ask students to describe this park. They may not be familiar with the gantries, but they will be able to describe the path, the water, and the unusual bench. Explain that this park, which is in Queens, was built out of old railroad equipment that was no longer needed. Is it a good idea to build a park out of structures that aren't needed for their original purpose? (Answers will vary.) Ask students what types of activities they think people can enjoy at this park? Would they want to visit this park?

Slide 4: Playground, schoolyard.

Students should be familiar with this type of park. Ask if they think this park is designed for a specific age group? Why do they think the way they do?

Slide 5: Marine Park, Brooklyn.

Do the students think you could play basketball or football at this park? (Probably not.) What might you do at this park? Do the students think this park emphasizes nature? Why or why not?

Slide 6: Socrates Sculpture Park.

Have students describe what they see in this image. Explain that some parks have unusual components, like this park, which has different sculptures done by different artists. Do they think these artworks are meant for people to climb, sit on, and interact with them? (Yes, it is different from sculptures in a museum.) Would they want to visit this park?

Slide 7: The High Line.

Ask students if they are familiar with the High Line. Some may be, and others may not be. Explain that it is an elevated train line that was built to carry cargo on the West side of Manhattan. It fell into disuse in the 1980s, and is now open as a park. Does this look like the place for a park? (Students will probably say no.) (It was built in 1934 as part of a program called the West Side Improvement to ameliorate heavy shipping traffic on Manhattan's west side. At that time, the west side of Manhattan was NY's center of freight traffic—ship, train, and truck—and the streets were clogged with all manner of conveyance. Freight trains actually ran at grade along portions of 10th, 11th, and 12th Avenues, and were a public nuisance as well as safety hazard. The High Line was built to get the freight trains off of the streets. It begins at 34th Street and runs to Gansevoort Street (a southern portion was previously demolished) between 10th and 11th Avenues. By 1980, the High Line had become defunct, and it sat idle for more than 20 years. In the late 1990s, threatened with demolition, a grass-roots organization, Friends of the High Line [FHL], formed to preserve this important piece of New York's industrial history. FHL was successful in saving the structure and it is now open as a public park. FHL now serves

as a conservancy, raising funds and operating the park in a partnership with the New York City Department of Parks & Recreation.)

Slide 8: The High Line.

Explain that a group of New Yorkers saw the High Line sitting unused and thought it would be a good idea to turn it into a park. These people got together and called themselves Friends of the High Line (FHL). FHL knew they wanted a park, but what kind? A park for soccer? A park for swimming? A park for amusements? They didn't know what to do, so they had a contest. Over 720 people from all over the world submitted ideas. Tell the students that now they will have a chance to design their ideas for what type of park the High Line should be.

Slide 11: The High Line, looking toward the Starrett-Lehigh Building.

Another view of the High Line before it was turned into a park.

Distribute the park design brainstorming worksheet. Divide students into groups of three or four. Have them work together to go through sheet.

DESIGNING AND PLANNING

PERIOD 2:

Tell students that they are going to take their ideas and now turn them into a sketch. Working in their same groups, have them develop a sketch for their High Line park design. They should draw a map view that shows where the different activities or components will be.

After the students have made their map sketches, explain that they need to figure out what types of materials they will need to build this model, and how much. Distribute the measurement worksheet.

Students work in groups to fill out the spec worksheet.

MODEL BUILDING

PERIODS 3 – 7:

Using the students' data, they will build a model of the High Line. They will only be building a section of the High Line, one that represents one city block. They may use cardboard, construction paper, balsa wood, glue, pipe cleaners, paint, etc. The amount of material needed for the models will be determined by the students' own calculations. Each session, they will work on their model. As students progress on their model, they will continually have to measure and cut the proper components. Students should start

by constructing the structure itself, and then adding any recreational components (like slides, paths, etc.) As they advance in their work, they should add decoration that indicates any plantings that the students are including.

PRESENTATION

PERIOD 8:

Students present their model to the class, describing their design ideas, the elements they included, and how they built their model.

PARK DESIGN BRAINSTORMING SHEET

Grades 4 and 5

Name _____

Date _____

Instructions: With your group members, answer the following questions.

1. What types of activities would your group like to be able to do on your design for the High Line?

_____	_____
_____	_____
_____	_____

2. What types of special equipment will be on your group's High Line?

- ☐ Bike path
- ☐ Swimming pool
- ☐ Sports fields
 - _____ Basketball
 - _____ Baseball/softball
 - _____ Football
 - _____ Soccer
- ☐ Eating area
- ☐ Walking path
- ☐ Playground equipment (swings, slides, jungle gym)
- ☐ Garden
- ☐ Entertainment area
- ☐ Other _____

3. What types of plants does your group imagine?

- ☐ Mostly trees
- ☐ Tall grass
- ☐ Flowers
- ☐ Evergreen trees
- ☐ Cut grass
- ☐ Shrubs
- ☐ Trees that change color and lose their leaves

4. What types of materials will be used for walkways?

- Concrete
- Wood planks (as in a boardwalk)
- Stone
- Other _____

5. Will your group's design for the High Line be the same for the length of the park, or will there be different sections? _____

PARK DESIGN MEASUREMENT SHEET

Grades 4 and 5

Name _____

Date _____

Before your group builds its model, you must figure out how big your model will be. Answer these questions to help you figure out how big to make the model.

One block of the High Line is about 184 feet long. It is about 24.6 feet wide.

1. Round the length up to the nearest hundredth. _____
2. Round the width up to the nearest tenth. _____
3. With your rounded figures, the High Line is now _____ feet long and _____ feet wide.
4. Divide the rounded length by the rounded width. The answer is _____
5. According to your answers, the High Line is _____ times longer than the width.
6. How many inches wide do you think your model should be? (Don't go higher than 5 inches.) _____
7. How can you figure out how long the model should be? _____
8. Our model should be _____ inches long and _____ inches wide.
9. How tall should our model be? The real High Line is about 25' tall. So if your model is _____ inches wide, it should also be _____ inches high.