

## High School Field Trip: Mapping the Ecological Communities of Lower Mannahatta

### Objectives:

- Students learn where different ecological communities existed in Lower Manhattan in 1609
- Students communicate this information to people walking through the area

### Materials:

- Base maps of Lower Mannahatta\* (1/group)
- Ecological community maps of Lower Mannahatta (1/group)
- Walk instructions (1/group)
- photo log (1/group)
- digital cameras/camera phones (1/group)
- photographs of ecological communities (1 set/group)
- street chalk in a variety of colors



*Chalking in an ecological community in lower Mannahatta*

### New York State Elementary Learning Standards *Key Ideas* and *Performance Indicators*:<sup>1</sup>

- Geography *Key Idea SS3.2*: Geography requires the development and application of the skills of asking and answering geographic questions; analyzing theories of geography; and acquiring, organizing, and analyzing geographic information.
- *Geography Performance Indicator SS3.C.2B*: Students locate and gather geographic information from a variety of primary and secondary sources.

[Lesson prep: before handing out the base maps to each group, highlight different routes on each map. You could have students do this in the classroom before the trip – just make sure that they select routes that a) do not intersect with each other, b) run through an interesting variety of ecological communities, and c) seem like a manageable distance to cover, given your time constraints. For simplicity's sake, all routes should begin at the intersection of Wall, Pearl and Beaver Streets.]

### Introduction: Lower Mannahatta

(30 minutes)

Begin in the indoor “public space” at the Wall Street entrance to the 2/3 train, between Wall Street and Pine Streets, and Nassau and William Streets. Tell students that today we are going to find the ecological communities that existed in this part of Manhattan in 1609, when Henry Hudson first arrived. We are going to use maps of 1609 ecological communities overlaid with today's street grid to identify as many different ecological communities as we can. When we find locations of ecological communities, we will write the names of those communities in the appropriate places on the sidewalk in chalk, and draw a picture of that community as well (you can use the sample ecological communities photos to guide your drawings). Students will work in groups, and each group will have a different route to follow, so that we can cover as

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<sup>1</sup> From [www.nylearns.org/standards](http://www.nylearns.org/standards). NY State learning standards encompass standards, key ideas, performance indicators and major understandings.

\* All images/materials are available on our website, at [www.wcs.org/mannahatta](http://www.wcs.org/mannahatta). Though images can be printed out in color or black and white, the ecological community map works best in color.

much of the area as possible. Remember that probably no one working in this area has any idea about the natural history of the area, and the information you provide will really educate people!

Break students into groups of 4-5, distribute materials, and assign each a role:

- Navigator (holds the base map and makes sure students are following the correct route)
- Ecologist (holds the ecological community map and alerts students when they have passed into a new ecological community)
- Chalker (writes the names of the appropriate ecological communities on the sidewalk; also draws in the ecological communities if desired)
- Photographer (photographs the what exists at each stop now, as well as the street chalk markings, and records location of photographs in photo log)
- Group Manager (holds the walk instructions, makes sure everyone follows their roles, and explains what they are doing to passersby who ask)

Review maps and walk instructions with students. Make sure students understand how to read the maps. Once students understand their mission, walk out with the entire group to the intersection of Wall, Pearl, and Beaver Streets. Ask students if they know why these streets have these names. Wall Street is named after the wall that once ran along its line, built by the Dutch to protect themselves from Lenape attack; Beaver Street is named for all the beavers that used to live in the area; and Pearl Street is named for the beach that used to run along its line, which was made up of oyster shells deposited by the Lenape. Point out on the base maps that the original coastline of Mannahatta ran along Pearl Street. Ask students if they can imagine the water of the East River lapping at their feet – and if they can imagine that all the land to their east was once part of the river. Explain that the colonists first added landfill to the island, extending it out to Water Street, which is a block further east. Later, they added more landfill, so that the island extended even further east. Finally, send students on their routes, all of which originate at this intersection.

### **Activity: Mapping the Ecological Communities of Lower Mannahatta** (60 minutes)

Students follow their routes and mark their communities! They should document their walk with photography as much as possible. Depending on the maturity of the students, some groups might need to be accompanied by an adult.

### **Wrap-up** (10 minutes)

All groups return to the indoor “public space” to debrief. Ask how their walks went, if they had any interaction with passersby, and what kinds of things they discovered about the natural history of this area. Ask if they had difficulties imagining the existence of different ecological communities amid all the concrete and steel. Ask what else they learned.

### **Extension activities:**

- Students print out photos from walk and create a large before/after map of the area, showing what exists at each spot today, and what communities existed there in 1609.