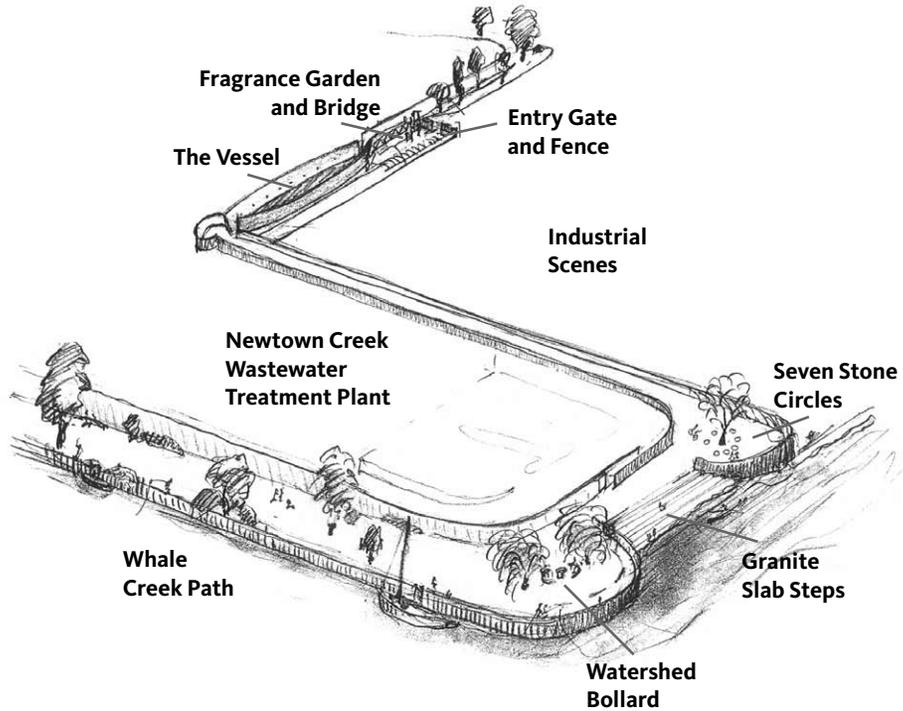


## Map of Newtown Creek Nature Walk



# The Newtown Creek Nature Walk Scavenger Hunt

Name: \_\_\_\_\_

Class: \_\_\_\_\_

School: \_\_\_\_\_



For more information about New York City's water supply and wastewater treatment systems:

- visit the New York City Department of Environmental Protection's website at [www.nyc.gov/dep](http://www.nyc.gov/dep), or
- contact us at [educationoffice@dep.nyc.gov](mailto:educationoffice@dep.nyc.gov)

Michael R. Bloomberg, Mayor  
Emily Lloyd, Commissioner

10/2007



Use this space for other notes and drawings.

## Welcome to the Newtown Creek Nature Walk!

You are about to embark on a journey through time. Use all of your senses as you explore art, history, geography, and science. Discover how our lives and the lives of the people that came before us are connected in many ways.

When the Native Americans, the Dutch and then the English colonists settled here, the land was green. It was colored by the different plants growing in the upland forests and meadows and the marshes hugging the creek. Today, women and men who work and live in “Greenpoint” have helped to create this Nature Walk, a green space filled with native trees, shrubs, grasses, and flowers. Now you can experience the beauty of the landscape and understand the importance of Newtown Creek.

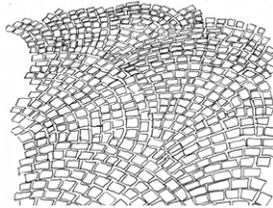
 *Use this scavenger hunt to discover the many stories Newtown Creek holds. Remember, if you need help on the hunt, feel free to ask an adult. Just check off the  symbol when you have found what you are looking for. Good luck!!!*

**The scavenger hunt begins at the entrance to the Nature Walk.**

Find the steel pipe fence, leading to the stairs and ramp. It looks like moving water. *Look around.*

Find shapes and patterns that resemble intricate details of the natural world.

For example, find bricks on the road that are arranged to look like fish scales.



Find two more shapes or patterns. Draw and write about them here:

1.

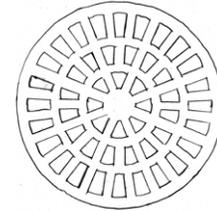
This \_\_\_\_\_ reminds me of \_\_\_\_\_  
(shape / pattern)

2.

This \_\_\_\_\_ reminds me of \_\_\_\_\_  
(shape / pattern)

**Continue to walk along Whale Creek Canal.**

Find an object that looks like this on the ground:



This is a storm drain cover. What can you see when you look into it?

**FUN FACT!!!** These and other storm drains collect rain and melting snow from around the city. They join underground sewer pipes that carry the storm water and wastewater to treatment plants. Most often, storm drains are shaped like a rectangle and are located at street corners.

Can you find trash?  yes  no

How do you think it got here? \_\_\_\_\_

Find a trash can.

What does it look like? \_\_\_\_\_

In the 1800s Greenpoint was also famous for barrel making, called cooperage. Coopers were the people who made the wooden barrels that were used for storing food, liquids, and supplies.

**FUN FACT!!!** It is very important to dispose of your trash properly. If you litter, your trash sadly can end up in places like Newtown Creek. Sometimes you can see DEP skimmer boats collecting this floating material from our waterways. It is then brought to wastewater treatment plants to be disposed of properly.

**Thank you for helping to protect the environment!!!**

## Look across Whale Creek Canal.

Find several LARGE, oval, metal structures.

Draw them here:

*These tanks are part of the Newtown Creek Wastewater Treatment Plant. They function like your stomach.*

What does your stomach do?

---



---

You are looking at tanks that are used during the last stages of the wastewater treatment process. The tanks are called “digesters.” Each of the eight egg-shaped digesters holds three million gallons of sludge, the substance that remains after the water is removed from the wastewater. It looks like black mayonnaise.

**FUN**  
FACT!!!

Like your stomach, the digesters get fed three times a day and are warmed to about body temperature (98.6°F). Tiny, microscopic bacteria eat and break down the chemicals in the wastewater, just like in your stomach. After about 15 days, digestion is complete!

## Find a bridge that you can walk across.

*Stand in the middle and look down.*

Draw or write what you see.

Although divided by waterways, New York City’s five boroughs are connected thanks to the many bridges that help transport people and goods. New York City’s earliest bridges were made of wood and stone; today they are made of iron and steel. The oldest surviving bridge in New York City is the High Bridge, connecting Manhattan and the Bronx. It carried the Old Croton Aqueduct, the first system to bring drinking water from upstate reservoirs.

**FUN**  
FACT!!!

Find two different materials that were used to make the bridge you are standing on. What are they?

1.

2.

*Now look to your right, across the ramp.*

Find the Newtown Creek Wastewater Treatment Plant!

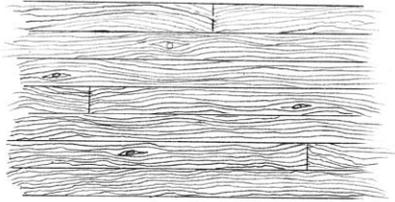
*Think about how you used water today.*

The water we use each day travels through underground sewer pipes to the City’s 14 wastewater treatment plants. Used water is cleaned there so it can be safely released into the waterways surrounding New York City.

**FUN**  
FACT!!!

## Cross the bridge.

Find walls that have a pattern like this:



What material are they made to look like?

---

Where does this material come from?

---

Find openings in the wall to look through. These are “portholes.”

What shapes, colors, and materials do you see? Write them here.

Shapes	Colors	Materials
1.	1.	1.
2.	2.	2.
3.	3.	3.

The pipes, tanks, machines and people you see through the portholes are working to clean the 310 million (310,000,000) gallons of used water that enters the Newtown Creek Wastewater Treatment Plant each day! This wastewater comes from more than 1.5 million (1,500,000) people living, working and visiting Greenpoint and other parts of Brooklyn, Queens, and even Manhattan.

**FUN**  
FACT!!!

## Continue to walk along Whale Creek Canal.

Find several large rocks, or boulders.

How many do you see?

Sketch your favorite one here:

What is the texture of the rock?

Is it smooth or rough? \_\_\_\_\_

How big is the rock (Is it taller than you)? \_\_\_\_\_

How much do you think it weighs? \_\_\_\_\_

What colors can you find in the rock? \_\_\_\_\_

Is the rock shiny or dull? \_\_\_\_\_

All of the boulders along the Nature Walk were rescued from New York City construction sites. Some are from the water filtration facility being built in the Bronx. Others are from City Water Tunnel #3, being bored under the streets of Manhattan. Similar rocks can be found throughout the five boroughs. They were originally deposited in New York City during the last Ice Age, around 18,000 years ago.

**FUN**  
FACT!!!

Continue along the path. You are about to walk along Whale Creek Canal.

Find two plants you have never seen before.

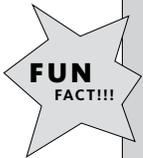
Sketch them here:

Large empty rectangular box for sketching plants.

Gently feel the different parts of the plant. How do the different parts feel?

Two horizontal lines for writing answers.

All of the plants along the Nature Walk are native to New York City. This means that these kinds of plants were here long before humans grew anything in the soil. They were selected for this nature walk because they attract wildlife and grow well along the banks of a tidal estuary like Newtown Creek. The Lenape used native plants too. The sugar maple trees, for example, offered leaves to cover fish for cooking in pits, hard wood to carve bowls, spoons, and canoe paddles, and sap that was boiled down to make maple syrup!



Find a big black circle on the ground.

Stand on it and look back to where you just were.

Find walls that are curved.

Draw the shape of the sidewalk you just walked on:

Large empty rectangular box for drawing the sidewalk shape.

Now look up at the skyline.

Find a famous building in the distance.

What is it called? \_\_\_\_\_

What borough is it in? \_\_\_\_\_

How would you cross the East River to get there?

Horizontal line for writing an answer.

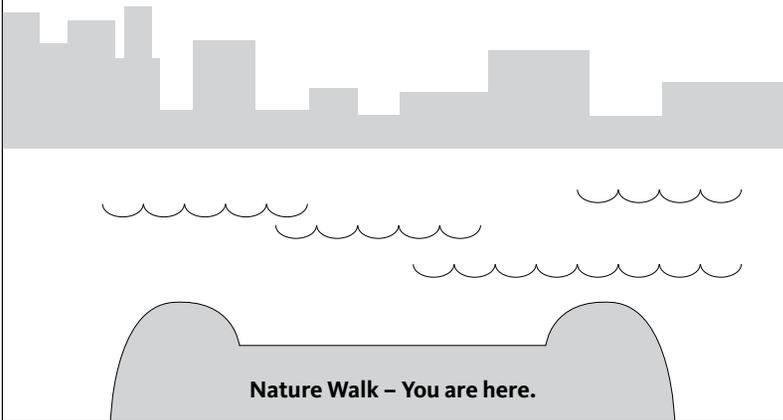
New York City's first skyscrapers were not buildings, but tall-masted ships that filled the harbor. The grand shipyards in Greenpoint turned out a variety of ships such as the *Great Republic*, the largest wooden vessel of the day, and the *U.S.S. Monitor*. Ordered by President Lincoln, the *Monitor* was an iron-clad warship built in 1862 to fight in the Civil War!



Continue your walk to the end of the path ...

Find a flowing body of water.

Draw an arrow below showing the direction of its flow:



Find out the name of the borough you are standing in.  
Write it here:

---

Find out the name of the borough across the water.  
Write it here:

---

*What else do you see?*

Find three things and add them to the drawing.

This water body is Newtown Creek. Named by the British, Newtown Creek is an estuary, which means its waters are brackish, a mixture of fresh and salt water. Newtown Creek is also a tidal estuary. Tides happen because the moon and sun pull the ocean's water causing a rise and fall along our shores. Due to the high and low tides of Newtown Creek, the water's current changes four times a day!

**FUN**  
FACT!!!

Find a map that looks like this. It is hidden so look carefully.



*This is a map of what Newtown Creek looked like when the Lenape were here.*

Use these clues to help you label the map:

Find the large section of rough rock along the edge.  
This is the East River.

Find a small brass circle embedded in the map.  
This marks where you are.

Find the compass with the North, East, South and West directions.

*What else can you add?*

On the table map, **find** east and with your finger trace a small stream. Move towards the East River. From your tracing feel the gentle sloping of the Creek's bed leading to the East River.

Does your finger move up or down when you do this?  
 up  down

*What do you think will happen when a drop of rain falls on the stream?*

This map represents the watershed for Newtown Creek. A watershed is all of the land that drains the rain and melting snow into a common water body (in this case, Newtown Creek). When it rains or snows, the precipitation falls on the land, soaks into the soil and flows downhill into creeks, streams, and rivers.

**FUN**  
FACT!!!

**Find an object that looks like this:**



*This is a model of what a single water molecule looks like. You have probably heard people speak of water as “h-2-o,” which is actually written as H<sub>2</sub>O. The H<sub>2</sub> stands for two Hydrogen atoms and the O stands for one Oxygen atom. All three atoms combined form one water molecule.*

**Find a water fountain.**

Circle:

This water is fresh salt brackish.

Draw a picture of where you think your drinking water comes from.

Circle:

The water of Newtown Creek is fresh salt brackish.  
(Hint: Read the Fun Fact on page 8.)

As you know from experience, the water you use for drinking, cleaning, and cooking is freshwater. This wonderful liquid that flows from your faucet starts as rain or melted snow. It travels as far as 130 miles from reservoirs in the Catskill Mountains, through large aqueducts deep underground, to smaller pipes until it finally reaches your home and school. With over nine million people, New York City and its upstate neighbors use more than one billion (1,000,000,000) gallons of water each day.

**FUN  
FACT!!!**

**Find seven stone circles that you can sit on.**

*Words, written on each stone, are arranged to point to the particular place it names. The words are in the language used by the Lenape, Native American people who farmed, hunted, and fished in this area.*

**Find** the word “MESAETHES.” It means “great brook with tide,” as in Newtown Creek.

**Find** the word next to it and write it here:

It means “shore path,” as in the path to Flushing Bay, another body of water located farther east in Queens.

**Find** “KESHAECHQUEREREN.” It means “grassy expanse tide,” as in Greenpoint.

**Find** the word next to it and write it here:

It means “salt water,” as in the Atlantic Ocean.

**Find** “KAPSEE.” It means “where there are sharp rocks,” as in the tip of Manhattan.

**Find** the word next to it and write it here:

It means “wet planting place,” as in the Algonquin Village.

For thousands of years before the Dutch arrived, the Lenape and Algonquin Indians along with other Native Americans lived here peacefully as farmers and hunters. During those times, Greenpoint contained pristine forests and lush meadows which provided the inhabitants with grapes and other fruits and nuts. The salt marshes and water also teemed with fish, crabs, oysters, and clams.

**FUN  
FACT!!!**

**Find a dry place to sit on the granite steps leading to Newtown Creek.**

*Spend a few minutes looking at the water.*

Close your eyes and listen. Describe the sounds you hear.

---

**Find four activities on this shore, across the water, and on the Creek that might affect the quality of the water in Newtown Creek.**

1.

---

2.

---

3.

---

4.

---

**Find four living things.**

Make a sketch of the things that you see:

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As you see and hear, Newtown Creek is a very busy place! Even in the 1800s, Newtown Creek was bustling with activity. For example, glass, porcelain, and refined oil were produced here as were the renowned ships the *U.S.S Republic* and *Monitor*. The huge iron pipe that carried drinking water from upstate reservoirs across the Highbridge to Manhattan was also made in Greenpoint.

**FUN  
FACT!!!**

**Find four words that you see written on a step near you.**

1.

2.

3.

4.

Are any of these words familiar to you?  yes  no

*Etched on the steps are the geologic time periods that depict the history of the Earth. The steps, and the words on them, represent the origins of life in the water and the evolution of life onto land.*

**Find the Cretaceous period.**

**Find the nearby word "AVES," meaning birds.**

Just like a timeline, the earliest period of geologic time (the Precambrian), starts at the bottom step in the water and progresses through time up the steps to the most recent period (the Pleistocene), at the top step. The steps also show the names of the significant group of living things that thrived in that particular time period.

**FUN  
FACT!!!**

**Find the Pleistocene period.**

**Find the nearby word "MAMMALIA," meaning mammals, which include humans.**

**Find the word "STURGEON," and the Latin name, "*Acipenser oxyrhynchus*." This may be underwater due to high tide.**

**FUN  
FACT!!!**

The steps also feature the names of wildlife that could live in Newtown Creek. Sturgeon, an endangered fish, has been making a comeback in the Hudson River. Perhaps one day it will flourish in Newtown Creek too.

**Find nine steps. How many do you see above the water? \_\_\_\_\_**  
**Why is it like this? (Hint: Read the Fun Fact on page 8.)**

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