

# Exploring nature in Jersey City using adventure packs

**START**

## EXPLORING WILDLIFE in Jersey City

**STEP 1**



**Binoculars**

Use your trusty binoculars to find a wild animal.

**CAUTION**

Don't touch the animals, only observe from a distance.

Move forward if you can answer these questions

What kind of animal was it?

Where do you think it lives?

**STEP 2**



**Notepad + Color Pencils**

**DRAW WHAT YOU SAW!**

**HINT**

When drawing, think about these questions:

What was it doing?

How big was it?

**STEP 1**



**Binoculars**

Use your trusty binoculars to find leaves high up on a tree.

What do you see?

Do you know the type of leaf?



**Magnifying Glass**

**STEP 2**

Use your trusty magnifying glass to examine leaves.

**HINT**

Try to find that same leaf on the ground!

What color is it?

How does it feel?  
Is it hard and crunchy or soft?

**STEP 3**



**Notepad + Color Pencils**

**DRAW WHAT YOU SAW!**

**HINT**

When drawing, think about these questions:

Does it have any veins?

What shape was it?

## EXPLORING TREES in Jersey City

Time to measure trees!

Go back to the tree the leaf belongs to. Please follow the "Measuring Trees" graphic.



**Measuring Tape**

**STEP 4**

**Compass**

**STEP 5**

Time to take out your compass!

**Congrats!** You're done with your adventure for today!

Which way is the sun?

**END**

It is time to make sure you return all of the items back to the Adventure Pack! If you return all the items, you get a prize!

**PRIZE**





# Measuring Trees

## in my Jersey City Neighborhood

Follow the steps below to complete **STEP 4** in the *Adventure Packs Game* on the other side of this paper.

### STEP 1

#### Measure a tree's caliper

Caliper is the diameter of a tree's trunk.

- First, stand at breast height to the tree. Aim for 4.5 feet above the ground.
- Wrap your measuring tape around the tree trunk to find its circumference. Then use a calculator to divide the circumference by 3.14. This new number will be the diameter of the tree, or caliper.

Use the formula: **Caliper (or Diameter) = Circumference/3.14**



*When measuring trees,* rather than relying on the measure of a tree's height or the width of its leafy canopy, trees are measured by their Caliper.

#### If a tree has multiple stems, follow these steps:

- If the tree is two or more trees that have their trunks pressing together: **Measure the largest trunk.**
- If the tree is a single tree, but splits below 4.5 feet: **Measure at the narrowest point between the split and the ground.**
- If the tree is a single tree and the split is above 4.5 feet: **Measure the trunk at 4.5 feet.**



### STEP 2

#### Measure the pit

A tree pit is an underground soil area for tree roots.

- Tree pits are essential for the growth and survival of a tree in the city.
- They give the tree room to spread its roots to gather water and nutrients.
- A tree pit should be a minimum of 5 by 5 feet.



### STEP 3

#### Record the date

It is very important to record the date you made your measurements.

- In the city there are many factors that can influence the health of a tree. So it is important to stay updated.

### STEP 4

#### Identifying the location (lat/long) data

- A way to collect location data is to write down the nearest address or cross streets.
- If you do have a smart phone, use the maps function to find the tree's latitude and longitude.
- Start by opening Google maps**
- Stand next to the tree and allow location services to locate you and your tree. "Drop a pin" by holding your finger down on your location.

The latitude and longitude will appear on the top of screen in a search bar. Latitude will be number without minus sign. Longitude will be the one with the minus sign.

### STEP 5

#### Identifying the health of a tree

Measure the health of a tree using a scale from 0 - 3.

<b>0</b> for empty tree pit	<b>1</b> for dead trees
<b>2</b> for trees that look sick*	<b>3</b> for full, vibrant, healthy trees

\* They may have a lot of dead or cut branches, and/or show signs of decay.



**IDENTIFYING THE HEALTH OF A TREE BY LOOKING AT:**

- 1 Large scars, rotten branches, and signs of fungus at the base of the tree.
- 2 The color of the leaves give a clue. Check how vibrant, sturdy, and green the leaves look.
- 3 Look for concrete or bricks that have gotten tangled in the roots. These can hinder the tree's ability to absorb water and nutrients.