

LESSON 4 – LOST RIVER MYSTERY TOUR

Developed with the assistance of Helen Mills of the North Toronto Green Community's Lost Rivers Project

Duration: 120 mins.

Setting: classroom and outdoors

Materials: maps of the neighbourhood (one copy per group, print from the website, see additional resources, p. 24), worksheets (one per student, see p. 25), clipboards, binoculars, books and photos, camera, paper, paints

“A river seems a magic thing. A magic, moving, living part of the very earth itself for it is from the soil, both from its depth and from its surface, that a river has its beginning.”

~Laura Gilpin

DESCRIPTION

The class tours the neighbourhood around the school to find exposed waterways and use clues to discover hidden or lost rivers. They follow up by researching old photos of the neighbourhood and discuss the reasons why the rivers were lost and how natural communities were affected. They draw pictures of the way they imagine the area looked before it was built up.

LEARNING EXPECTATIONS

Students will:

Science & Technology	<i>Demonstrate an understanding of the ways in which humans change habitats and communities, and the effects of the changes on plants and animals.</i>
Social Studies	<i>Demonstrate an understanding of their local watershed system. Use maps to locate places in their watershed.</i>
Language	<i>Communicate ideas and information for a variety of purposes. Begin to develop research skills. Participate in discussions and ask and respond to questions. Contribute and work constructively in groups.</i>
The Arts	<i>Produce a work of art that communicates their feelings and ideas about lost rivers using the elements of design.</i>
Health & PE	<i>Perform the movement skills required to participate in lead-up games and outdoor pursuits: locomotion/traveling, manipulation and stability. Participate vigorously in all aspects of the program. Follow the rules of fair play in games and activities.</i>

BACKGROUND INFORMATION

- ◆ Every city or town has its fair share of “lost rivers”, creeks or tributaries that dried up or were built over and diverted into gutters and storm sewers as the town was being built up. Finding them is a great way of reconnecting with the local landscape and watershed and provides opportunities for an exploration of what could have been and what might still be, if and when, the lost rivers were brought to daylight once again.
- ◆ The Toronto lost rivers Web site has maps and information that will help you put together your own lost river walk (see additional resources, p. 24). You can make a map of the school neighbourhood streets using the city of Toronto Web site.
- ◆ Visit the area beforehand to plan out where you want to take your class and what you want them to see.
- ◆ Collect some information and maps about the rivers in your area (see additional resources, p. 24), visit neighbourhood first to locate the best area to take the children.

PROCEDURE

In Class:

1. Review or introduce the definition of watershed, watershed habitat and communities, p. 8, drawing on p. 9).
2. Introduce the activity by explaining that when cities are built, many of the little creeks and wetlands are built over or diverted into pipes underground. Inform your students that they

LESSON 4: LOST RIVER MYSTERY TOUR cont'd

LOST RIVER CLUES

- ♣ Dips in roads.
- ♣ Newer houses on dips between older houses on higher ground.
- ♣ Curves and dead ends in streets.
- ♣ Higher yards on one side of the street.
- ♣ Low-lying parks or public buildings.
- ♣ Wet patches of ground that never seem to dry up (this might also be a spring).
- ♣ Water-loving trees like willow.
- ♣ Wet basements.

RUNNING RIVER – HOW TO PLAY

Divide the class into two teams (rivers). Each team forms a line one behind the other and the children put their arms around the waist of the person in front. The last person gets a flag tucked into the back of his or her pants. The person at the front or mouth of the river tries to catch the flag at the back or source of their river. If they catch the flag, they go to the end and the second person in the line becomes the new mouth. Afterwards, you can discuss how the rivers were like real rivers – they are always running, moving. Do rivers really run in circles? Review the idea of a water cycle- water from the mouth of the river flows into the lake, evaporates, and might fall as rain near the source.

are going to be detectives and will try to find a lost river in the neighbourhood by examining a map of the neighbourhood around your school. Discuss existing waterways, high points and valleys in the area and where a lost river could be.

3. Review rules of working in groups (group etiquette), i.e. let everyone share ideas and materials; when you disagree, find a way to compromise and/or ask the teacher for assistance.
4. Give the students copies of a map of the neighbourhood to work on in partners or groups of three. Ask them to highlight existing waterways, and look for lost river clues: dead end streets, curves in the street grids, pockets of leftover ravines, low-lying parks or public buildings. Have a class discussion about any interesting finds and decide which area near the school the class should visit to try and find the lost river.
5. Hand out copies of worksheet.
6. ESL Support: Go over lost river vocabulary.

Outside:

7. Review rules of being outside. As a small warm-up, stretch with the group.
8. Take the class on a short walk in the neighbourhood of the school to investigate the possible route of a lost river. Look for the lost river clues such as the dead end streets and street jogs located on the map. Look around to see high points and low areas remembering that a river or creek would have flowed in the low area or valley. Also look for other clues that you can see: water-loving trees like willow (they might have their roots down into the storm sewer or water saturated soil where the river once flowed). Explain how the city builders put in storm sewers (big cement pipes) for the rivers and sewage to flow through and then covered them over in order to use the land for building.
9. On the walk, have them check off what they find from the worksheet.
10. In a circle, go over what was found and the answers to #2 on the worksheet.
11. Work on sketch (#3 on worksheet).
12. If there's time, play a game of Running River (Catch the Dragon's Tail) in the school ground (see below).
13. Outside or back in the classroom, have the children draw the possible route of a lost river on a neighbourhood map. (If you are in Toronto in the Don Valley you can use the lost river maps as a guideline).
14. Look at a large map of your watershed to see where your lost river fits in (where it comes from where it used to go).
15. Discuss what the area might have looked like before it was built over, and what kinds of plants and animals might have lived there. Ask the children to use their journal to write down their thoughts about the lost river, i.e., "I wish the river was still there because..." or "People should bring the lost river back to life because...".
16. Have the students draw or paint how they think the river might have looked, or what the area might look like in the future if we could bring the river back to daylight.

EXTENSION

- ♣ Draw blue squiggles on the sidewalk or road with chalk to show the path of a lost river.
- ♣ Create a class model of what your lost river would look like if uncovered.
- ♣ Visit other lost rivers in the city.
- ♣ Write stories about the lost river – how it was, how it could be, or how it is now.

ASSESSMENT & EVALUATION

- ♣ Worksheet
- ♣ Journal entry
- ♣ Observation of participation

ADDITIONAL RESOURCES

- ♣ If you are in Toronto, you may be able to get a volunteer to come and lead or help you with your lost river walk – call the North Toronto Green Community 416-781-7663 or email Helen Mills at mills@internationalcourier.com. You will find lots of information and maps for lost rivers in the Don River watershed on the NTGC lost river Web site at www.lostrivers.ca
- ♣ For a general map of your neighbourhood visit: <http://www.toronto.ca/torontomaps/>



LOST RIVER DETECTIVE

1. What clues did you find to help you discover a lost river?

Dead end streets	Willow trees
Curving streets	A park in a valley
Dips in streets	Muddy or wet patches of ground
New houses in a dip in the street between old houses higher up	Higher yards on one side of a street

2. Check out nearby storm sewers for signs of your river....

What can you hear?

What can you smell?

What can you see?

3. Draw a sketch map of the lost river you have discovered on the other side of the paper.
Don't forget to include a title, symbols and a legend.