# Freshwater Tool Kit

## Day at the Beach or River Cleanup

## Grades: 3 - 12

Get out of the classroom and spend a fun and meaningful day with your students on the water! Whether it's a Lake Michigan beach or one of Milwaukee's rivers, streams or creeks, you'll have a beautiful day cleaning up a beach or riverbank and doing two other activities before you settle down for a quick picnic. You can spend as little as 3.5 hours for this project or as long as like. You will need to supply transportation and chaperons.

### Planning Steps:

1. Pick the date and have a plan if it rains or weather is inclement.
2. Pick your waterway. Make sure there is safe access. If you choose a river, make sure it isn't flooded.
3. Figure out transportation or if the students can walk.
4. Get permission slips from the students.
5. Find enough chaperons to keep students safe and out of the water. Typically 1 per 10 students.
6. Pick your activities and acquire the supplies you need. Placing supplies in plastic bins is helpful to keep the sand out. See sample activities below to choose from our make-up your own.
7. Tell students to dress appropriately – it can be cooler and windier by the lake. They should not wear good shoes -- they will be walking in sand or dirt/mud. Hats are good for sunny days.
8. Assign students to groups before getting to the waterway. If you're doing 3 activities divide the class into groups of 3. It's much easier to assign students to groups before you leave.

### Sample Timeline:

Below is a sample timeline with 25-minute rounds, 10 minutes to switch and get instructions, 30-minute picnic lunch or snack and a pledge to the waters when you're done and ready to go. You can make the rounds longer if you have time.

9:30 a.m. - Students arrive. Set-up stations
9:45 - 10:10 a.m. – Round 1
10:20 - 10:45 a.m. – Round 2
10:55 – 11:20 p.m. – Round 3
11:30 – 12:00 p.m. – Picnic
12:05 p.m. – Make a pledge with the students to keep Milwaukee's waters clean. Have them sign their name in the sand and then it's time to go.

**Supplies:** Activity supplies in bins, sun screen, hand sanitizer, roll of paper towel, lunches and camera

**Arrival:**

- Welcome the students to the waterway. Give them a few facts or ask them what they know about the waterway before they begin. See Milwaukee Waters Map Facts and History activity for ideas.
- Assign the 3 groups to a different activity. Let them know they will each do an activity for 25 minutes (or however long), and when the whistle blows, they will be directed to switch to the next activity.
- Take Group A to the cleanup, Group B to the 1st activity and Group C to 2nd activity.
- ***Make sure students are safe and stay out of the water at all times.***
- Assign someone to watch the clock and blow the whistle after 25 minutes and rotate the groups to their next activity.

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# Activities:

## 1. Beach or River Cleanup:

A typical cleanup can be done where students pick up garbage on the beach or riverbank, or they can collect and document the types and number of items they pick up on a data card. If you do a data collection cleanup you can do math activities after the cleanup, such as comparisons of data or graphing the amount of the top 5 pieces of garbage.

Supplies needed: Garbage bags, gloves, paper towel roll and a few small bottles of hand sanitizer>
If you're collecting data on cleanup: data cards for each group, clip board for groups and pencils.

Safety Rules:

- ✓ WEAR GLOVES AT ALL TIME DURING CLEANUP. DON'T TOUCH YOUR MOUTH.
- ✓ BE CAREFUL WITH SHARP OBJECTS – HAVE AN ADULT PICK IT UP
- ✓ DO NOT BOTHER WILDLIFE
- ✓ LEAVE NATURAL ITEMS ALONE: DRIFTWOOD, ROCKS, SHELLS, ALIVE AND DEAD FISH AND BIRDS
- ✓ DON'T LIFT ANYTHING TOO HEAVY

Process:

- Before students begin make sure an adult checks the area for anything dangerous or odd that the students don't need to see.
- Split the group for the cleanup into 3 or 4 groups. Give students gloves and each group a bag. Data collection: Give each groups a data card, clipboard and pencil. Tell each group to assign a person to record the debris collected. The data person should keep the data card clean and dry.
- Direct students to the cleaning area
- Help students with the cleanup and make sure they are recording all the debris.
- Collect data cards and quickly review cards for completeness. Clarify questions.
- The next group can use the same garbage bags as the bags probably won't be full.
- At the end of the day place all garbage bags in one area and make sure the beach looks better than when you started. Leave no debris from the cleanup.
- **HAVE EACH STUDENT CLEAN THEIR HANDS WITH HAND SANTIZER AND A PAPER TOWEL BEFORE THEY EAT LUNCH OR LEAVE.**

***You can choose <u>two</u> activities below or add any other activities that you'd like.***

## 2. Build a Watershed in the Sand:

This activity is building sand castles with a purpose. Remind students of what a watershed is and mention all the components in the watershed. They should have a high and low area of their watershed so water flows when you add water. They can be simple or elaborate.

<u>Supplies</u>: Pails to get water if you want the students to add water to their watershed. Shovels and a variety of empty containers they can use to make buildings and structures. Using different sized recycled containers work well. Depending on the size of the group you can break them into groups of 3 or 4 and have multiple watersheds going, or they can all work on 1 watershed. After the 1st group is done, move to another area to keep the watershed intact.

## 3. Water Games:

**Water Volleyball** – 10-15 minutes then switch to second game
This activity uses the terms for items found in watersheds to keep a clean drop of water in the air while playing a fun game of volleyball.

**The rules:**
1. They must remain in a circle and in their place
2. Play stops when the ball hits the ground – then the water drop is polluted
3. Only one hit per person, no bobbling
4. Only use hands – no heads or body parts
5. Count the number of hits and try to beat the last score

**Procedure:**
- In a clear open area, free of big rocks or other items that may hurt feet, gather students in a circle elbow to elbow. Review the rules.
- Begin with a quick discussion about watersheds. Ask students to name things in a watershed.
- Explain that the ball is a drop of clean water.
- Tell them to shout out things in a watershed as they hit the ball and try to keep the water clean as it's in the air – one hit per student.
- If the ball drops the water becomes dirty and the person who missed the ball must pick it up and say, "wastewater treatment". If they don't, they must go to the middle to play and become water guardians to help keep the water clean.
- Count the number of hits it takes before the ball falls. Begin play again and try to keep the ball in the air longer.

**Optional:**
- Use 2 balls for more action
– Have students mention types of pollution or ways to keep water clean

**Water Hula Hoop –** 10-15 minutes

This activity introduces the water cycle, the three forms of water – liquid, solid, gas - and the concept that a water molecule travels through the environment, all while playing a fun hula hoop game.

**The rules:**
1. They must remain in a circle and in their place.
2. They must keep the hoop moving without letting their hands go.
3. Play stops when the hoop hits the ground.

**Procedure:**
- Keep the students in the same circle and begin with a quick discussion about water's characteristics: 1. a water molecule - ask them if they can describe it – 2 hydrogen and 1oxygen molecule, 2. where and how much water there is in the world: 98% saltwater in oceans, 2% freshwater (in ice, groundwater, in lakes and rivers, and in air), and 3. water properties (solid, liquid and vapor).
- Begin the game. Have students firmly hold hands to form a circle. Place the hula hoop through the arm of the first student then move it onto their shoulder and close the circle. The hoop must always keep moving.
- The first student must shout out a water characteristic as the hoop moves over their head, and under their feet as it moves to the next student. The next student continues naming a water characteristic and moving the hoop over their body on to the next. If a student cannot think of a characteristic, help them by yelling one out to help them keep the hoop moving.

  Optional:
  - After the first round they can try to race for speed
  - Use 2 hoops moving in opposite directions to race to the finish

## 4. Water Scientist Visit:

Another fun idea is to contact the UWM School of Freshwater Sciences to schedule scuba divers to come out of the water in the beginning of the activities. They can be one of the activities and meet with each group to discuss what they do and tell the students about their career path. Contact the School of Freshwater Sciences at 414-382-1700.

## 5. Water Quality Testing:

See the separate "Water Quality Testing" activity that is part of the Freshwater Tool Kit. You can contact Milwaukee Riverkeeper to possibly borrow water quality testing kits or they may be able to run this activity the day of the cleanup. Contact the water quality specialist at Milwaukee Riverkeeper at 414-287-0207.