IceWatch



# Topics

* NatureWatch
* Climate Change

# Objective

* Learn how to monitor freeze/thaw events of local lakes and rivers.
* Connect local lakes and rivers to climate change.
* Show students what citizen science is all about.

## Environmental Education Activity

# Age/Grade Range

* Grade 7-12

# Group Size

* Large group activity (15-30 students)

# Time

* Prep time: 10 minutes
* Set-up: 5-20 minutes
* Activity: ½-1 hr, This works best as a weekly or daily activity

# Materials

* Note paper or recording sheets, and pencils
* Thermometer (optional)
* Camera (optional)

# Additional Considerations

* This is an outdoor activity for the spring or fall, where students will gather ice data and contribute to a real citizen science database. It is best to visit the same site multiple times during freeze up and spring thaw to get an accurate record of the ice.
* The second part of the activity requires access to computers and the Internet.

# Set Up

1. Visit the IceWatch website and become familiar with the program. https://www.naturewatch.ca/icewatch/
2. Create a nature watch account, and explore the “submit observation” page so you can see how it works and what information your class will need to collect.
3. Pick a location, or a few locations where you and your class will collect the data; a nearby lake or river.

# Activity Directions

1. Describe what events you are looking for, and their significance. When submitting an observation the website will ask which of two events you observed.
	* + 1. Ice on: When the ice *completely covers* the lake, bay, or section of river.
			2. Ice off: When the ice *completely disappears* from the lake, bay, or section of river.

You may be able to record these events multiple times during either the spring or fall, so just make a note on the observation when you submit about whether it is the first time it is freezing or thawing in a given year

Tracking these key events allows us to see changes occurring to our environment over time. One effect of climate change is that some lakes and rivers may be freezing over later in the fall and breaking up earlier in the spring than they used to; citizen science is one of the best ways to keep track of these changes.

1. You may want to divide students into groups and provide each group with paper and pencil to record their findings, a thermometer for recording the air temperature, and a camera to photograph the observation area.
2. Go to out to your lake or river as a class and take your observations of the ice.
3. Return to the classroom to share findings. Pictures taken in the field can uploaded onto a slide show to be shared with the class. After a week of observations students can use their own pictures to create a slideshow of the freeze up or break up. Alternatively, you could have the pictures printed so that the students can paste them in sequence on a board.
4. If you determine you’ve witnessed an ice on or ice off event, students can create their own accounts and submit their observations to the IceWatch database. If they don’t all have their own computers you can also do this as a class.