

Niagara Falls Ice Bridge  
NewsDepth January 22, 2009  
Classroom Activities



**Overview:**

Bitterly cold temperatures recently have caused lots of freezing and ice which can produce some breathtaking winter scenery. There is nothing, however, quite as spectacular as the winter wonderland you can experience at Niagara Falls in January and February. The most stunning scene perhaps is the Ice Bridge on the lower Niagara River in Ontario Canada. Ice bridges form when Lake Erie freezes and strong winds push ice into the gorge beneath the Falls. Years ago the ice bridges were even more spectacular but ice booms, which hold back the ice, were installed at the head of the river. Students will learn more about ice bridges and write some creative pieces about the impressive winter scene.

**Grade Level:** 4-5

**Subject Matter:** Science and Language Arts

**Standards Addressed:**

Students will produce informal writings for various purposes.  
Students will identify how freezing and thawing reshape the land surface.  
Students will describe evidence of changes on Earth's surface in terms of slow processes.

**Classroom Activities:**

**1. Activity #1 Let's Learn A Little More About the Falls**

- Short discussion
  - How many of you have ever been to Niagara Falls?
  - What do you remember the most about it?
  - If you were to pick out two adjectives to describe the falls, what would they be?
  - Can you describe the sound of the falls?
  - Can you imagine what it would be like if the sound was to stop? That happened once before. The flow of water was stopped completely over both falls on March 29<sup>th</sup>, 1848 due to an ice jam in the upper river for several hours. This is the only known time to have occurred. The Falls did not actually freeze over, but the flow was stopped to the point where people actually walked out and recovered artifacts from the riverbed!"  
[http://www.niagaraparks.com/nfgg/falls\\_stopped.php](http://www.niagaraparks.com/nfgg/falls_stopped.php) More on the stopping of the falls.
  - Where does the water come from that flows over the falls?

- The following website can provide you with some interesting information about Niagara Falls: <http://www.personaltours.ca/niagara-info.htm>

## 2. Activity # Slow Down, Ice Bridge Ahead

- Have you ever been traveling with your family in the winter and come across a sign that warns, Slow Down, Ice on Bridge Ahead! Well, perhaps the bridge has a layer of ice on it and it is a good idea to slow down and try to avoid sliding all over the place. Well, imagine seeing this sign “Slow Down, Ice Bridge Ahead!” and coming across this spectacular site:



[image.iarchives.nysed.gov/images/bulk\\_images/](http://image.iarchives.nysed.gov/images/bulk_images/)

- Just what is an ice bridge and how does it form?  
<http://www.iaw.com/~falls/icebridge.html> A thorough yet simple explanation can be found at this site?  
[http://www.cliftonhill.com/niagara\\_falls\\_history/niagara\\_falls\\_history\\_icebridge/](http://www.cliftonhill.com/niagara_falls_history/niagara_falls_history_icebridge/) Another very good site with additional photos.  
<http://www.iaw.com/~falls/icebridge.html> This site provides a history of ice bridges as well as ice booms which were mentioned in the NewsDepth feature. It includes updated pictures of ice bridges which change every 20 seconds. (Source for overview photo)
- **Take a pictorial journey through the Niagara Falls Ice Bridges**  
[http://www.ebpm.com/niag/regpix/glry\\_niag\\_w-icebr.html](http://www.ebpm.com/niag/regpix/glry_niag_w-icebr.html)



## 3. Activity #3 Join Abe Who Fell for the Falls

- Watch the video feature on this week's NewsDepth of the Ice Bridge at Niagara Falls. There is also a very nice video put to music entitled Winter at the Falls  
<http://www.youtube.com/watch?v=UqKawfm8gBU&feature=related>

- Read this description of Niagara Falls to your students:  
 “Niagara --Falls! By what mysterious power is it, that millions and millions, are drawn from all parts of the world, to gaze upon Niagara Falls? There is no mystery about the thing itself-- Every effect is just such as any intelligent man knowing the causes, would anticipate, without it-- If the water moving onward in a great river, reaches a point when there is a perpendicular jog, of a hundred feet in descent, in the bottom of the river, -- it is plain the water will have a violent and continuous plunge at that point-- It is also plain the water, thus plunging, will foam, and roar, and send up a mist, continuously, in which last, during sunshine, there will be perpetual rain-bows-- The mere physical of Niagara Falls, is only this-- Yet this is really a very small part of that world's wonder-- It's power to excite reflection, and emotion, is it's great charm.”
- Ask them if they could possibly guess who wrote it. It was written by Abraham Lincoln whose 200<sup>th</sup> birthday we are celebrating this next month.
- Visit the following site where you will find a plethora of beautiful winter pictures of Niagara Falls: [http://www.pbase.com/michaelsv/niagara\\_falls](http://www.pbase.com/michaelsv/niagara_falls)
- Ask students to join Abe by writing their own paragraph describing a picture of their choice. Have them share with the class their paragraphs.
- As an alternative writing activity, the students could write an acrostic poem, a haiku, diamante, or cinquain describing their chosen photograph. You can also use [http://www.ebpm.com/niag/regpix/glry\\_niag\\_w-icebr.html](http://www.ebpm.com/niag/regpix/glry_niag_w-icebr.html) which is a site abundant with Ice Bridge pictures. [http://www.niagarafallslive.com/Niagara\\_Falls\\_Winter\\_Panorama.htm](http://www.niagarafallslive.com/Niagara_Falls_Winter_Panorama.htm) is a panorama of the Ice Bridge which can also be used.