

Lesson Plan

Niagara Falls Face-Offs

Book: *Niagara Falls*

Series: Natural Wonders of the World

Level: Navigator

Objective

To help students understand the ways natural processes such as erosion change landscapes over time and the effect humans and their actions have on such changes.

Supplies

- *Niagara Falls*
- Niagara Falls Face-Offs Word List (attached)
- Niagara Falls Face-Offs (attached)
- Beach ball

Before the Activity

Read through *Niagara Falls*, or assign it to students to read on their own. Divide students into two teams. Print one copy of the Niagara Falls Face-Offs Word List. Cut it in half to create two lists of words. You will use one list for each team. Cut the words apart so that each word is on a separate slip of paper, but keep the lists separated by team.

Activity

Niagara Falls is located along the border of the United States and Canada. This beautiful feature draws millions of tourists each year. However, its appearance has changed over time. Today, students will play a game to review what this amazing set of waterfalls looks like today and how it has changed throughout history.

Divide students into two teams. One team is Team Canada. The other is Team USA. Have the teams line up along either side of the classroom, with an open area in between the teams. Place the beach ball in the middle of this open area. Then hand out the Niagara Falls Face-Offs Word List to each team, giving one word to each student on the team.

Explain that you will read a sentence about Niagara Falls that has a blank inserted into it. If a student's slip of paper has the term that fills in the blank to complete the sentence, the student should run to the middle and try to grab the beach ball. If students are not sure of the answer, they can turn to their teammates for help. However, there will also be a student with the same term on the opposing team. That student should try to grab the beach ball as well. The team that grabs the beach ball first gets one point.

Sometimes, there will be more than one correct answer that can fill the blank. For those statements, all students who hold papers with possible answers can run to the middle and try to grab the ball.

Note: The Niagara Falls Face-Offs Word List has 12 words on it. If you have fewer than 24 students, omit one of the following terms and the corresponding questions:

- Whirlpool Rapids
- Whirlpool

If you have more than 24 students, double up one or more of the following terms, which occur most frequently:

- Niagara River
- American Falls
- Bridal Veil Falls
- Horseshoe Falls

Evaluation

The correct answer to each question, along with the page number where it can be found, is included underneath each statement on the Niagara Falls Face-Offs (attached). Give each team one point each time the correct student is first to grab the beach ball.

Standards

This lesson may be used to address the Common Core State Standards' reading informational texts standards, grade 4 (RI 4.1) and the National Science Education Standards' Content Standard F, grades K–4.

Niagara Falls Face-Offs Word List

| | |
|--------------------------|--------------------------|
| American Falls | American Falls |
| Bridal Veil Falls | Bridal Veil Falls |
| Goat Island | Goat Island |
| Horseshoe Falls | Horseshoe Falls |
| Luna Island | Luna Island |
| Lake Erie | Lake Erie |
| Lake Ontario | Lake Ontario |
| Whirlpool Rapids | Whirlpool Rapids |
| Whirlpool | Whirlpool |
| Niagara Falls | Niagara Falls |
| Niagara Gorge | Niagara Gorge |
| Niagara River | Niagara River |

Niagara Falls Face-Offs

1. The _____ runs from Lake Erie to Lake Ontario.

Niagara River (p. 6)

2. _____ is actually made up of three waterfalls.

Niagara Falls (p. 6)

3. Niagara Falls is located at the head of _____.

Niagara Gorge (p. 15)

4. _____ is the biggest of the three waterfalls that make up Niagara Falls.

Horseshoe Falls (p. 6)

5. The brink of _____ stretches 2,200 feet (670 m) across.

Horseshoe Falls (p. 6)

6. The waterfall known as _____ has slight curves.

American Falls (p. 6)

7. _____ is 850 feet (260 m) across.

American Falls (p. 7)

8. The waterfall known as _____ is straight across.

Bridal Veil Falls (p. 7)

9. _____ has a brink of only 50 feet (15 m).

Bridal Veil Falls (p. 7)

10. The _____ drops approximately 185 feet (56 m) at Niagara Falls.

Niagara River (p. 8)

11. At _____ and _____, the water tumbles 70 to 110 feet (21 to 34 m).

American Falls (p. 8) Bridal Veil Falls (p. 8)

12. At _____, water drops the full 185 feet (56 m).

Horseshoe Falls (p. 8)

13. The waterfall known as _____ is in Canada.

Horseshoe Falls (p. 8)

14. The waterfalls known as _____ and _____ are in the United States.
American Falls (p. 8) Bridal Veil Falls (p. 8)
15. _____ separates Horseshoe Falls from the other two falls.
Goat Island (p. 8)
16. The smaller Luna Island separates _____ and _____.
American Falls (p. 8) Bridal Veil Falls (p. 8)
17. More than 600 varieties of plants have been found on _____.
Goat Island (p. 20)
18. Approximately 12,500 years ago, ice melted to form _____, _____, and the _____.
Niagara River (p. 11) Lake Erie (p. 11) Lake Ontario (p. 11)
19. Water once ran from _____ to Lake Ontario in five different places.
Lake Erie (p. 12)
20. Eventually, water ran into _____ in only one place, which became the original Horseshoe Falls.
Lake Ontario (p. 12)
21. The original location of _____ was 7 miles (11 km) north of its current location.
Horseshoe Falls (p. 12)
22. The 7-mile (11-km) stretch from the original falls to its current location is called _____.
Niagara Gorge (p. 15)
23. Four miles (6.4 km) from the original site of _____, the Niagara River swirled around an old buried riverbed.
Niagara Falls (p. 12)
24. The Niagara River's swirling eventually formed a 90-degree turn now known as the _____.
Whirlpool (p. 14)
25. The section of Niagara River between Niagara Falls and the Whirlpool is known as _____.
Whirlpool Rapids (p. 14)

26. _____ is the longest course of constant waves in North America.
Whirlpool Rapids (p. 14)
27. The water in _____ can rush up to 30 feet (9.1 m) per second.
Whirlpool Rapids (p. 14)
28. The water in the _____ turns both ways.
Whirlpool (p. 14)
29. Scientists have found more than 1,200 plants in the _____ region.
Niagara Gorge (p. 15)
30. Many rare plants, such as four-leafed milkweed and maidenhair spleenwort, grow on _____.
Goat Island (p. 20)
31. Fourteen rare plant species, including pawpaws and fairy wands, are found in the _____.
Niagara Gorge (p. 20)
32. Various types of trees, including sugar maples and white pines, grow on _____.
Goat Island (p. 20)
33. Since 1896, the strong water flow in _____ has been used to create power.
Niagara River (p. 28)
34. The swirling waters of the _____ are too dangerous for most boats.
Whirlpool (p. 15)
35. A community of ring-billed gulls live on _____.
Goat Island (p. 18)
36. The _____ is home to salmon, sturgeons, smallmouth bass, and trout.
Niagara River (p. 18)
37. The _____ once eroded approximately 4 feet (1.2 m) per year.
Niagara Falls (p. 26)
38. People have modified the flow of the Niagara River so that _____ now erodes 12 inches (30 cm) each year.
Niagara Falls (p. 26)

39. Continued erosion will eventually move the falls to the outlet of _____.
Lake Erie (p. 26)

40. When that happens, the Niagara River would likely become a long rapid between
_____ and _____.
Lake Erie (p. 27) Lake Ontario (p. 27)