

Write your notes
about what you are
reading in this space.

Science Shorts -6

Roll Out the Barrel

Waterfalls are some of the most spectacular natural wonders on earth. A waterfall is a place where the rushing water of a river comes to the edge of a cliff and spills over. Some waterfalls only drop a few feet, but others plummet a great distance. One of the most famous waterfalls in the world is the twelve thousand year old Niagara Falls on the border between Ontario, Canada and the state of New York. Thousands of people visit Niagara Falls each year to watch the river spill over the cliff and drop one hundred and sixty feet. At the bottom, the water calms and moves slowly away.

What many visitors don't know, however is that Niagara Falls serves as much more than just a spectacular view. The waterfall is the center of a network of electrical power lines. The falling water is used to generate electricity for much of the neighboring region. It does this by converting the potential energy of the falling water to kinetic energy.

The water at the top of the falls has gravitational potential energy because it is higher than at the bottom. But as the water falls, its height decreases and it loses potential energy. At the same time its kinetic energy increases because the water is falling faster and faster. So the potential energy at the top of the waterfall is converted to kinetic energy on its way to the bottom.

Thrill seekers have always been attracted to Niagara Falls. The daredevils pad themselves with all sorts of protective gear, jump into the river above the Falls and over they go. Until 1901, every person who went over the Falls perished. So many were killed while trying the stunt that a special "Niagara Falls Stunters' Cemetery" was created just for the daredevils.

In 1901, a schoolteacher, named Annie Taylor, celebrated her forty-third birthday by strapping herself into a padded barrel and going on the most dangerous journey of her life. Several thousand people watched as the woman rolled herself into the rapids above the Falls. The barrel was carried out and over the cliff and crashed into the water far below. The barrel, with the teacher still in it, submerged for a few seconds and the popped back up. The woman was a bit stunned and had a cut on her head, but she was alive! She was the first person to survive a trip over the falls.



Fill in the blanks using the words from the word bank.

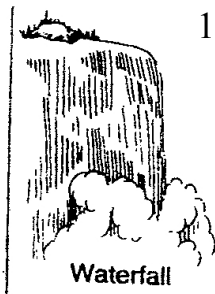
1. Very few people _____ the Niagara plunge.
2. Fast moving river water is called _____.
3. The most famous falls are _____ Falls.
4. Someone with no money is _____.
5. Waterfalls have _____ energy at the top.
6. Niagara Falls is between New York and _____.
7. Daredevils often use protective _____.
8. Niagara Falls _____ a great distance.
9. Many Niagara Falls stunters _____.
10. People who did not survive the plunge are buried in the Stunters' _____.
11. As the water falls the potential energy converts to _____ energy.

WORD BANK

potential
perish
survive
penniless
rapids
Ontario
gear
Cemetery
plummets
Niagara
kinetic

Match the words with their definitions

- | | |
|--------------------------|---|
| _____ 12. stunned | a. people who perform dangerous acts for excitement |
| _____ 13. stunt | b. dizzy and confused |
| _____ 14. submerged | c. dangerous trick |
| _____ 15. thrill seekers | d. went under the surface of the water |



16. _____

Label the location of the **potential** and **kinetic** energy on the blanks near the waterfall.

17. _____