



Yosemite Falls
California, USA



Havasu Falls
Arizona, USA



Angel Falls
Venezuela



Kaieteur Falls
Guyana



Iguazu Falls
Brazil



Victoria Falls
Zimbabwe



Gullfoss
Iceland



Baatara Gorge Falls
Lebanon



Weeping Wall
Hawaii, USA



Plitvice Falls
Croatia

WONDERFUL

WATER FALLS OF THE WORLD

by Molly Sanchez



THE GOOD AND THE BEAUTIFUL LIBRARY



HAVASU FALLS

Arizona, USA



We begin our journey at Hualapai Hilltop, where we will leave our cars and carry our heavy packs, making the 12.8-kilometer (8-mile) desert hike amid the majestic rock walls of the Grand Canyon until we arrive in Supai Village.

After hiking for an hour or so, we can hear the creek. There it is, up ahead! Let's take a dip in the cool blue-green water! Ahh! Doesn't it feel refreshing? The clear water looks a stunning blue-green color because of the calcium carbonate that forms the limestone that lines the creek. Notice the natural travertine formations! After about three hours, we have arrived at Supai Village where we can refill our water and buy snacks at a small convenience store before hiking 3.2 kilometers (2 miles) more to our campsite and the falls.

We finally arrive at Havasu Falls, the most spectacular of the five waterfalls along Havasu Creek. Its stunning cascade falls 29.8 meters (98 feet), cooling the air all around it. Its roar drowns out other sounds. The blue-green pool calls for us to get in and stay for a bit!





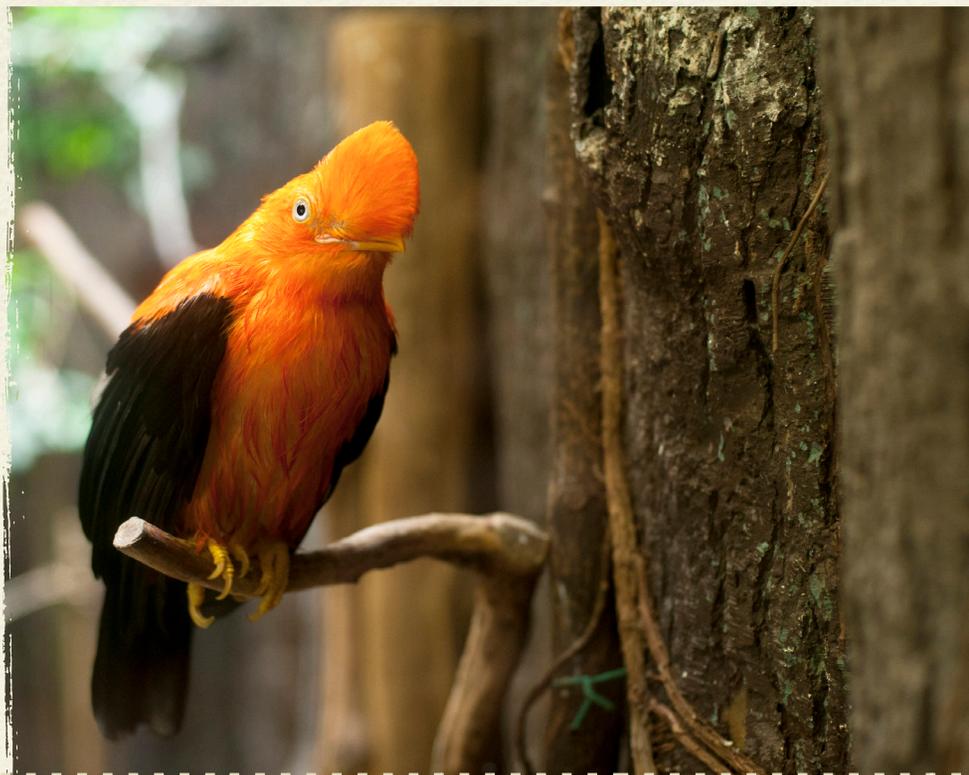
KAIETEUR FALLS

Guyana



We are at the airport in Georgetown, Guyana, a beach town on the northern edge of South America, just beyond the Caribbean Islands. Climb aboard the small plane that will take us into the Amazon rainforest! The hour-long flight imparts to us the vast, green forest stretching out as far as we can see! It's a thick, leafy carpet with veins running through it. We spot the tranquil Potaro River. It scrawls a happy doodle through the lush verdure.

Arriving at the Kaieteur landing strip—which is a grassy field—we begin our 15-minute hike through dense jungle. We can already hear an ominous rumble. The heat and humidity send trickles down our backs. Look! Perched on a limb is a bright orange rock bird with its unique head fan.



FUN FACTS

- Kaieteur Falls is one of the world's largest waterfalls due to the combination of height and volume of water flow—an average of 663 metric tons (23,400 cubic feet) per second! It has 225.8 meters (741 feet) of unbroken falls and is 113 meters (371 feet) wide.
- Kaieteur means “Old Man Fall” in the dialect of the native Patamona Amerindians.
- You may spot the colorful endangered golden frogs that dwell at the base of the falls in the giant tank bromeliad plants—wide-leaf plants that grow 2.4 to 2.7 meters (8 to 9 feet) tall.
- If you look carefully, you may see the blue tarantula, known only to the Potaro Plateau area. It truly is a stunning cobalt blue!
- To reach Kaieteur Falls on the ground, it takes five days: travel eight hours by bus, then trek three days through the rain forest, camping along the way, to the base of Kaieteur Mountain. On the fifth day is a hike up the mountain, which is not for the faint of heart!



As we approach, the sound crescendos into a deafening roar. And there it is—the mighty Kaieteur Falls. The coffee-and-cream-colored water thunders over a majestic cliff! Rays of sunlight collide with the fine spray, creating a dazzling rainbow. The deluge tumbles in frothy torrents down, down, down, crashing over boulders, the mist drenching the mossy banks below. The sheer power and magnitude of the falls are mesmerizing.





FUN FACTS

- Iguazu Falls spans 2.7 kilometers (1.7 miles) and is made of 275 waterfalls. Iguazu means “big water.” The name doesn’t do it justice, nor do pictures. You have to be there to appreciate the magnitude of it! These falls are on a scale difficult to comprehend, even when you are surrounded by them.
- Iguazu River and Falls serve as the dividing line between Argentina and Brazil. The Brazilian side is excellent for photo shoot views of the falls. The Argentinian side takes you much more up close and personal with its walkways. Both offer boat rides up the middle of the falls.
- Located in the Atlantic Forest of South America, the falls have been wisely preserved by both Brazil and Argentina. The tropical, lush national parks surrounding it are teeming with wildlife, including 80 types of mammals, 400 bird species, and countless invertebrate and insect species. It is said that you may see toucans, monkeys, and even jaguars on your way to the falls.





BAATARA GORGE WATERFALL

Lebanon



From the small village of Balaa, we are hiking the Lebanon Mountain Trail for a brief five minutes into a valley, which opens to us an astounding sight! Tucked up against Mount Lebanon is a massive cave, complete with three natural limestone bridges, hanging one above the other. Down the center of the cold, stony cave pours a 99.9-meter (328-foot) cascade, which then continues into a 255.1-meter (837-foot) chasm to an underground lake beneath the mountain. New spring vegetation sprinkles the limestone with inviting color and invigorating new life as the waterfall energizes everything within sight and sound of it. The curious, splendid formation pulls us in, and we carefully walk across the middle limestone bridge, drawing closer to the falls, and peer down into the deep, stony cave below and up to the mouth of the cave and falls above. At the bottom of the cave, we can see the falls become a stream before disappearing underground.





PLITVICE WATERFALLS

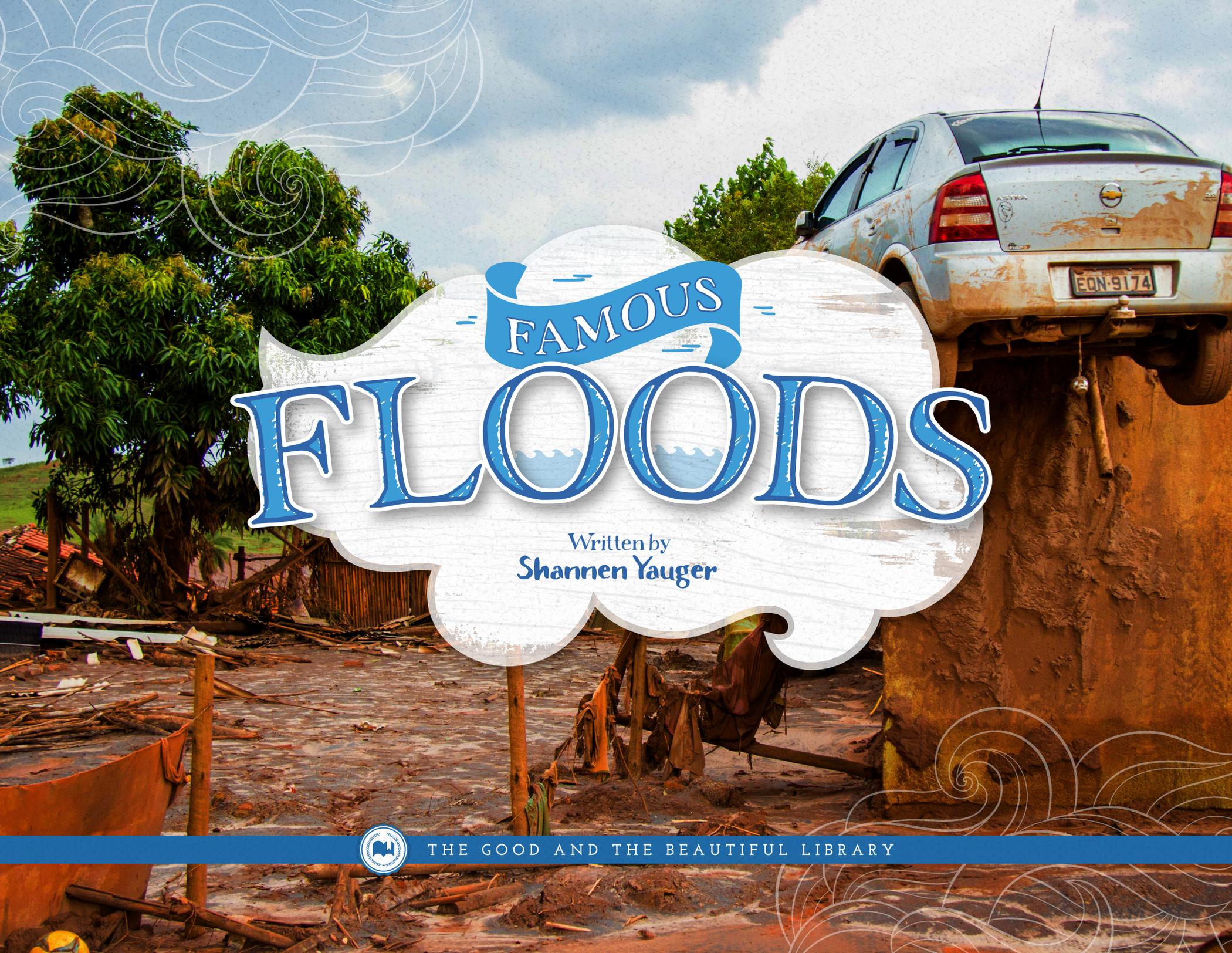
Croatia



Let's go together to the beautiful natural kingdom hidden in Croatia. If Kaieteur, Iguazu, and Victoria Falls were the dramatic drums, crashing cymbals, and blaring brass instruments of a band, Plitvice (PLEET-veet-seh) Lakes and Falls are the gentle woodwinds, tinkling bells, sweet hum of violins, and deep mellow strokes of a cello in a long, enchanting symphony. Plitvice is a lush valley of 16 terraced lakes, linked together by miles of charming wooden plank pathways and laced with waterfalls. The boardwalk trail takes us across the middle of a turquoise lake and alongside a row of gurgling waterfalls. We can see large rainbow trout in the crystal clear water. As we walk down wooden steps, we discover a cave and then another lake and more tinkling falls.

The jutting mountains, the lush greenery, and the lakes, falls, and caves all combine to create an absolutely gorgeous world.





FAMOUS FLOODS

Written by
Shannen Yauger



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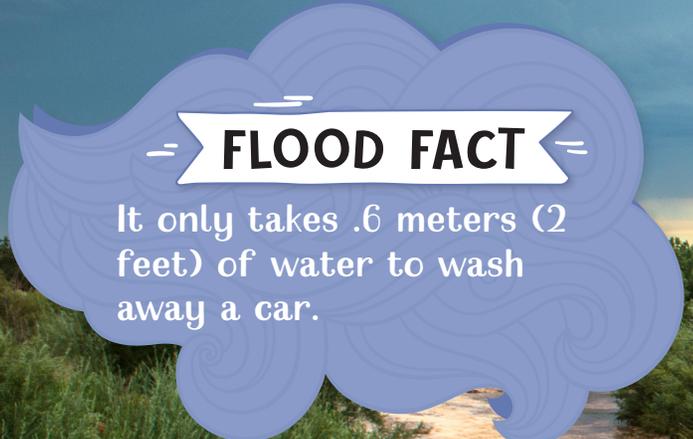
Have you ever seen a **flood**? Perhaps you have seen one after heavy rain or a thunderstorm when the rivers and lakes overflow. Water from a flood can range from just a few inches to many feet deep and spread over a small distance or even hundreds of miles!

FLOOD

A flood is an overflow of water that submerges land that is usually dry.



What causes a flood? There are many causes of flooding, including heavy rainfall, broken dams or levees, storm surge, overflowing rivers, melting snow or ice, and even lack of vegetation in an area. Any event that involves a large amount of water can cause flooding.



FLOOD FACT

It only takes .6 meters (2 feet) of water to wash away a car.

While the initial impact of a flood is often devastation, there are long-term benefits of flooding.

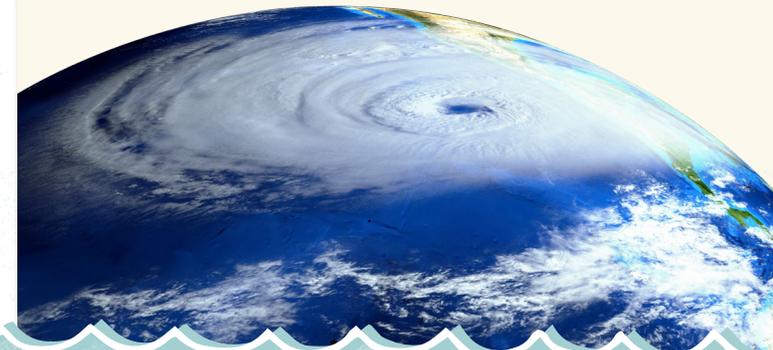
- River floods distribute and deposit sediments over large areas of land. These river sediments replenish nutrients in topsoil and make agricultural lands more fertile. The populations of many ancient civilizations settled along the floodplains of rivers such as the Nile, the Tigris, and the Yellow because periodic flooding resulted in fertile, productive farmland.
- Flooding also helps to replenish underground aquifers. The water is absorbed into the ground and moves down through the rock to supply natural springs, wells, rivers, and lakes with fresh water.



Floods occur all over the world, though the climate, landscape, and man-made structures play a large part in how severe the flooding is in a particular area. Let's take a look at some of the catastrophic floods that have happened around the world.

CATASTROPHIC

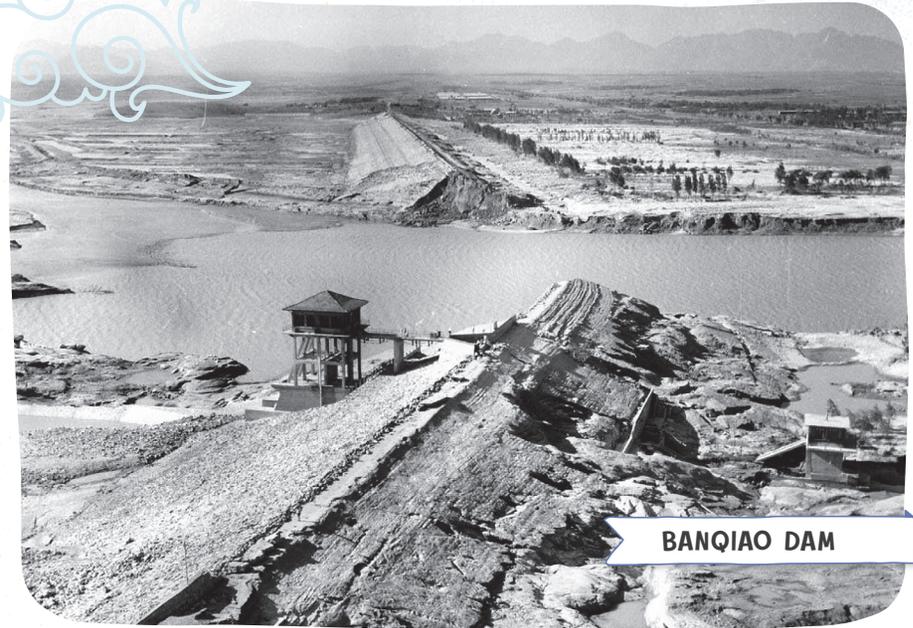
Catastrophic (adj): involving or causing sudden great damage or suffering; involving a sudden and large-scale alteration in state



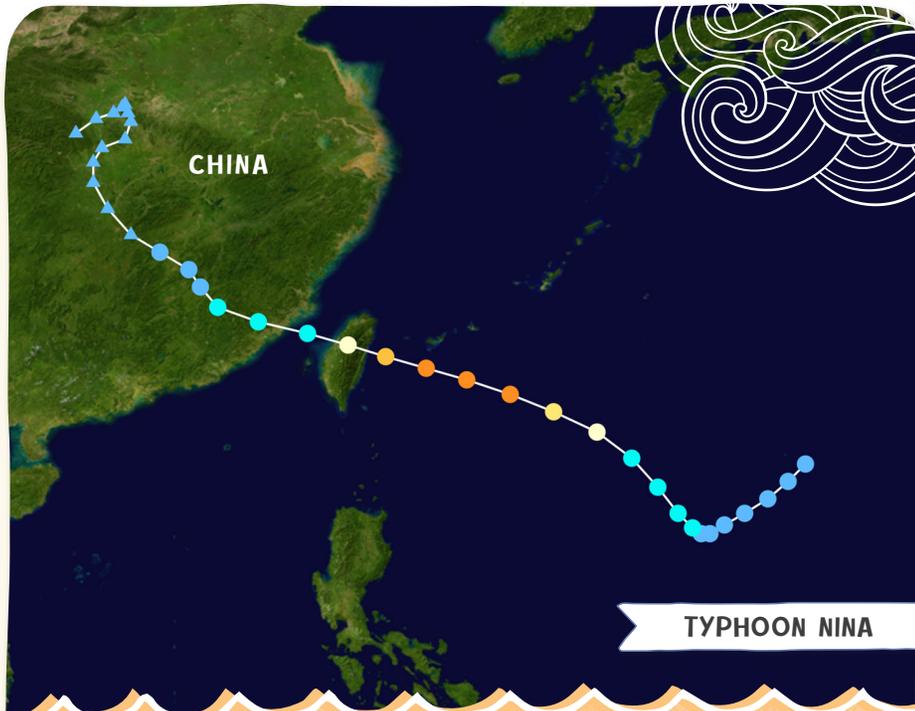
Asia

THE IRON DAM FAILURE

The Banqiao Dam was originally constructed in 1951 and was later dubbed “the iron dam” due to the repairs that were made in the following years when cracks appeared due to construction and engineering errors. The creation of this dam was a source of controversy, as hydrologists and engineers could not agree on the appropriate safety features of the dam. These disagreements were revisited in 1975 in the wake of the worst water disaster in this area’s history.



BANQIAO DAM



TYPHOON NINA

As Typhoon Nina made its way through Henan Province in eastern China, a catastrophe was building. In one day the area received the total amount of its annual rainfall average and then continued to be deluged for another 29 hours! The Banqiao Dam, which crossed the Ru River, was built to handle a foot and a half of rainfall over three days. It gallantly fought to hold back nearly six times that much water.

Africa

2000 MOZAMBIQUE FLOOD

In early 2000, the country of Mozambique was inundated with heavy rainfall. Within the first few days of heavy rains, the capital city was flooded. The rivers that ran through the country's valleys began to overflow, culminating in the Limpopo River surging over its banks, flooding villages, and destroying homes.

The weather continued to batter the soaked country as Cyclone Leon-Eline stormed into the coast. This caused further extensive damage, mainly from flash floods, as farms and land were completely submerged in water. People climbed trees and onto rooftops as they attempted to avoid the water, and some people were plucked from their places of refuge by helicopters that were sent in to help.



LIMPOPO RIVER





At first the floods were one-time events in certain areas. However, on Christmas Eve of 2010, a monsoon arrived. The heavy rainfall did not cease, and by the 30th of the month, vast areas of Queensland were under water. Initially, the most heavily impacted areas were along the banks of the Burnett River and the Fitzroy River. As these areas flooded, forcing the evacuation of thousands of people, the water shut off access to those towns for days. As the flooding continued, the Brisbane River's banks broke. Twenty thousand homes were flooded, as well as local businesses, historical sights, and monuments. One bridge, The Brisbane River Walk, collapsed into pieces.

The floodwaters not only devastated homes and businesses but also resulted in a massive invasion of crocodiles and snakes. The country's infrastructure was also heavily impacted, and 300 roads and highways were forced to close for safety. The disaster was said to cover three-quarters of Queensland itself.



South America

2015 EL NIÑO FLOODS

Weather phenomena, such as cyclones and hurricanes, can have a devastating impact on the severity of floods because of their strong winds and the amount of water they produce. There is another weather pattern that can impact our world, created near the equator in the Pacific Ocean.

El Niño is caused as the sun warms water near the equator, inducing cloud formation and rain. While trade winds normally blow this weather out to sea, during an El Niño, the westerly winds are weaker, and the clouds and rain blow eastward, toward land.





HOW DO LEVEES FAIL?

Levees are meant to hold back water, which has a lot of force due to its weight and movement, but levees can fail. When the force of the water pushes on a weakened part of the levee, or when it overruns the top of the levee, the levee can collapse, opening a large hole for waters to flow through and flood the surrounding areas.



Levees can also fail if they become overly saturated with water. This can cause “leaks” in the levee where water flows through it. This eventually weakens the levee to the point of collapse.

Both of these situations occurred during the Mississippi River Flood of 1927.



In many areas of the world, rivers that are known for flooding are carefully monitored. People have built levees, dams, and reservoirs in attempts to keep the rivers from overflowing their banks. When these fail, emergency measures like sandbags and even portable inflatable tubes can be used. For coastal flooding, seawalls and barrier islands have been created to help stop the flow of water into areas where it isn't wanted.

