

Why Sinkholes Open Up

Florida Sinkhole Swallowed a Sleeping Man

When Jeff Bush, a 37-year-old Florida man, screamed out for help, his brother Jeremy ran into Jeff's bedroom.

1) Jeff와 그의 가구들이 땅 속으로 사라진 것을 보고 Jeremy는 그를 구하기 위해 필사적으로 노력했다.

→

He didn't stop until the police arrived. "I tried so hard. I tried everything I could, but I couldn't get him out," Jeremy cried. It was a sinkhole that instantly pulled Jeff into the earth.

A sinkhole is a hole that opens up in the ground caused by a collapse of the land surface. Sinkholes vary in size from 1 to 600 meters deep. Some sinkholes are large enough to swallow entire buildings. Sinkholes have been around for a long time.

2) 고대 마야인들은 싱크홀이 죽은 자들의 세계로 가는 길이라 믿었다고 전해진다.

→

3) 플로리다의 싱크홀과 달리, 모든 싱크홀들이 다 위험하고, 파괴적이며 파멸적인 것은 아니다.

→

Some sinkholes attract tourists who are interested in the mystery and the beauty of nature. Some notable sinkholes include Sima Humboldt in Venezuela, which is 314 meters deep and Xiaozhai Tiankeng in China, 662 meters deep and 626 meters wide. Sinkholes can form underwater, too. Underwater sinkholes are called blue holes. The Great Blue Hole in Belize is one of the most spectacular; it is 300 meters wide and 124 meters deep.

4) 싱크홀은 일반적으로 표면 아래의 돌이 석회, 탄산암, 사암과 물에 쉽게 닳는 다른 부드러운 돌인 곳에서 발생한다.

→ _____

These kinds of rocks are found in many parts of Florida, Texas, and Kentucky in the U.S. They are also common in the U.K., Mexico, Belize, Slovenia, Croatia, and China.

When rainwater seeps down through surface soil, it eventually reaches bedrock below.

5) 천천히 그리고 꾸준하게, 종종 수백 년에서 수천 년이 걸리면서, 물은 돌의 작은 부분들을 침식시키고 지하에 균열을 만들어낸다.

→ _____

6) 이 과정이 계속되면서, 위의 땅은 균열 속으로 쏠려 내려가고 그것은 땅 속에 공간을 만들어낸다.

→ _____

It is not seen on the surface. As the space becomes too large to support the soil above, it collapses, and a hole opens up on the surface.

7) 싱크홀이 생성되는 것은 점진적이지만, 표면층의 최후의 붕괴는 갑작스럽게 발생한다.

→ _____

The most common factor that triggers a collapse is a change in underground water levels. For example, during long periods of drought, underground water levels will fall.

8) 이러한 일이 발생하면, 물로 인해 지지되었던 공간은 약해지고 무너지게 된다.

→ _____

Another trigger is a rapid increase in surface water.

9) 갑작스러운 폭우는 표토의 무게를 극적으로 더하며, 아래의 공간이 버티기 너무 무겁게 만든다.

→ _____

This, too, can bring about a collapse.

Sometimes the trigger can be man-made.

10) 우리가 요즘 보고 있는 대부분의 싱크홀은 구멍을 뚫는 것, 광산업, 건축과 같은 인간의 활동에 간접적으로 연결되어 있다.

→ _____

They may also occur because of broken water pipes, heavy traffic, and the excessive use of groundwater.

11) 이러한 인간이 만든 원인은 특히 더 극적인 영향을 끼칠 수 있는데, 이것들이 길 한 가운데나 주거지역에서 자주 발생하기 때문이다.

→ _____

Recently, many sinkholes have opened up in urban areas around the world, sometimes resulting in tragic accidents. In 2010, in Guatemala City, an area approximately 20 meters wide and 30 meters deep collapsed, swallowing a three story factory and killing 15 people.

12) 싱크홀은 열대 폭풍 Agatha로 인해 표면의 물의 증가하며 해당 지역의 하수관이 샌 것으로 인해 야기되었다.

→ _____

Generally speaking, naturally occurring sinkholes cannot be prevented.

13) 그러나, 만약 당신이 이전에 싱크홀이 발생했던 곳에 살고 있다면, 기울어진 나무, 잘 닫히지 않는 문과 창문, 이상한 곳에서 고인 빗물과 같은 가능한 주의 사항들을 찾아 보아라.

→ _____

Sinkholes caused by human carelessness can often be prevented.

14) 건축 전 철저한 토양점검 및 지하수와 배관 체계를 정비하는 것이 도시 한 가운데의 싱크홀 형성을 막는 가장 좋은 방법이다.

→ _____

Sinkholes are not widespread events like hurricanes or earthquakes. They are very localized.

15) 그러나, 이것은 우리가 싱크홀의 발생 가능성을 무시해야 한다는 뜻은 아니다.


→

16) 우리의 인구가 늘고 싱크홀이 흔한 지역에서 발전하면서, 우리는 더 많은 싱크홀을 보고 그들에 의해 영향 받는 사람들의 이야기를 더 많이 본다.

→

17) 우리가 싱크홀을 찾아내고 예방할 수 있는 방법을 찾는다면, 세계의 다른 어딘가에서 또 다른 Jeff를 싱크홀로부터 구하기 쉬운 것이다.

→



◇「콘텐츠산업 진흥법 시행령」제33조에 의한 표시
 1) 제작연월일 : 2019-04-29
 2) 제작자 : 교육지대㈜
 3) 이 콘텐츠는 「콘텐츠산업 진흥법」에 따라 최초 제작일부터 5년간 보호됩니다.

◇「콘텐츠산업 진흥법」외에도 「저작권법」에 의하여 보호되는 콘텐츠의 경우, 그 콘텐츠의 전부 또는 일부를 무단으로 복제하거나 전송하는 것은 콘텐츠산업 진흥법 외에도 저작권법에 의한 법적 책임을 질 수 있습니다.

정답

- 1) [정답] Seeing that Jeff and all his furnishings had vanished into the earth, Jeremy desperately tried to rescue him.
- 2) [정답] It is said that the ancient Maya believed sinkholes were passageways to the world of the dead.
- 3) [정답] Unlike the sinkhole in Florida, not all sinkholes are dangerous, destructive, and ruinous.
- 4) [정답] Sinkholes typically occur in areas where the rock beneath the surface soil is limestone, carbonate rock, sandstone, or some other soft rock that is easily worn away by water.
- 5) [정답] Slowly and continually, sometimes taking hundreds or thousands of years, the water erodes small parts of the rock, creating cracks underground.
- 6) [정답] As the process continues, the soil above is gradually washed into the cracks, and it creates a space in the soil.
- 7) [정답] Though sinkholes form gradually, the final collapse of the surface happens suddenly.
- 8) [정답] When this happens, the space that was once supported by the water may become weaker and collapse.
- 9) [정답] A sudden heavy rain can add dramatically to the weight of the surface soil, making it too heavy for the space beneath to bear.
- 10) [정답] Most sinkholes we are seeing these days are indirectly related to human

activities, such as drilling, mining, or construction.

- 11) [정답] Collapses from these man-made causes can have especially dramatic effects because they often occur in the middle of a street or in housing areas.
- 12) [정답] The sinkhole was caused by the increase of surface water due to tropical storm Agatha and leakage from a local waste water pipe.
- 13) [정답] However, if you live in an area where sinkholes have happened before, look around for possible warnings, such as leaning trees, doors or windows that don't close properly, or rainwater collecting in unusual spots.
- 14) [정답] Thorough soil testing prior to construction and maintaining the underground water and plumbing systems are the best ways to prevent the formation of a sinkhole in the middle of a city.
- 15) [정답] However, this does not mean that we should ignore the possibility of sinkholes.
- 16) [정답] As our population grows and we develop in areas where sinkholes are common, we seem to be seeing more sinkholes and more stories about humans being affected by them.
- 17) [정답] If we look for ways to detect and prevent sinkholes, it may be easier to rescue another Jeff from a sinkhole somewhere else in the world.