The Incas are renowned for massive carved stone structures, the construction of thousands of miles of roads, and the establishment of one of the greatest empires in the ancient Americas. However, one of their achievements remains especially impressive. In just over sixty years (ca. 1470–1532 CE) they constructed stone structures on nearly 100 mountains ranging from 17,000 to 22,000 feet, and they did this in an area spanning 2,000 miles in the Andes. The Incas were incredible empire builders, who showed they could create a city in the most remote and desolate of places. But their administrative structures and impressive buildings couldn't prepare them for or protect them from the catastrophic events, like earthquakes and volcano eruptions, that would routinely rock their homeland. According to the Salta's Museum of High Altitude Archaeology, the Incas turned to their religion for answers; believing that chosen children were able to cross over to the gods' world, where they could persuade the gods to protect the Incas and stop these disasters from happening.

The ritual sacrifices called capacocha didn't happen often and coincides with important events in Incan society – like catastrophic events or the death of an emperor. When they did happen, the children were carefully selected from the highest classes for their purity, attractiveness and status. It was considered a privilege to be picked – they didn't believe they were going to die, they would be transcending to godliness. The children would be prepared with lengthy celebrations – which would see them travel by foot across the empire to their final resting place on top of some of the highest mountains in the region.
Mummies of Llullaillaco

On 16 March 1999 an archaeological team discovered three 500-year-old mummies near the peak of the Llullaillaco Volcano on the Chile–Argentina border. Located 22,110 feet above sea level. They were children. The oldest, known as the Ice Maiden, was only 14 years old. Experts estimated the other two, the boy, seven years old and a young girl six years old.

The Llullaillaco mummies represent an exciting find for the scientific community, shedding light on the ancient practice of Incan sacrifice. It is likely all three died in a ritual called Capacocha, in which they were sacrificed to the Sun God. Their bodies were shockingly well-preserved; the freezing, thin air in the high mountains turned them into frozen mummies naturally. They looked like they simply fell asleep.

The three mummies – the Maiden, the Llullaillaco Boy and the Lightening Girl (earning this nickname since she appears lightning struck) are all on display in Salta, Argentina. The mountaintop conditions were perfect for preserving the children's bodies. Unlike other mummies from around the world, there were no substances, natural or man-made used to preserve the bodies. The climate alone, freezing temperatures and extremely dry, thin air kept the tissues intact. The children are among the most well-preserved mummies in the world. Their bodies' hair, skin, facial features, blood and internal organs are still intact, providing researchers with a goldmine of clues about the lives of Incan sacrifices.

Experts theorize the children, specifically the older girl, spent their final year living in Cusco, Peru, the capital of the Incan Empire. She devoted her last year preparing for her trip to the mountain by "weaving textiles and brewing chicha."

Common in Incan culture were chicha, a corn-based beer, as well as the coca leaf, from which cocaine is a byproduct. Both however were controlled substances and not available for the general population. Tests of the children's hair showed in the year before their deaths, their consumption of chicha and coca increased significantly.
The Children

The children were walked up to the summit of the mountain and plied with chicha until they fell asleep. Then, they were arranged in specific positions, lowered into prepared holes in the snow, where they would never wake up.

The evidence, combined with other archaeological and radiological data, suggests that the Maiden was treated very differently from the other two children, Llullaillaco Boy and Lightning Girl. After being selected for the deadly rite, the Maiden likely underwent a type of status change, becoming an important figure to the empire, the other two children may have served as her attendants. The Maiden became somebody other than who she was before. Her sacrifice was seen as an honor.

Hair Analyses:
To learn about the final moments of the mummies' life, scientists tested hair samples which provide a record of what substances were circulating in the blood when new hair cells formed. And because hair grows at a relatively constant rate, it can provide a kind of timeline of what a person has consumed. The length of timeline depends on the length of the hair available. The child mummies' hair revealed that the children came from a peasant background, as their diet consisted mainly of common vegetables, potatoes in particular. But in the year leading up to their deaths, they ate "elite" food, including maize and dried llama meat, and appeared to have been fattened up in preparation for the sacrifice.

Additionally, the 13 year-old Maiden consumed more of the elite food than the other two children. Scientists also analyzed the mummies' hair for cocaine and ethanol. The scientists created a timeline of coca and alcohol consumption for the children – due to respective hair lengths, the chronology for the younger children only went back to about nine months before their deaths, whereas the Maiden's timeline spanned about 21 months before death. The younger children ingested coca and alcohol at a steady rate, but the Maiden consumed significantly more coca in her final year, with peak consumption occurring at approximately six months before her death. Her alcohol consumption peaked within her last few weeks of life.

Why do you think the older 13 year old Maiden was given more alcohol and coca leaves before her sacrifice?
Do you think the children fully understood what was about to happen?
The increase in drug and alcohol ingestion likely made the Maiden more at ease with her impending death. The sizeable coca quid in between her teeth suggesting she was sedated when she died.

**The Chosen One:**
The children's burial conditions provide further insight into their final moments. The Maiden sat cross-legged and slightly forward, in a fairly relaxed body position at the time of her death. She also had a feathered headdress on her head, elaborating braided hair and a number of artifacts placed on textile that was draped over her knees. Furthermore, scans showed the Maiden had food in her system and that she had not recently defecated. This shows that she was not in a state of distress at the point at which she dies. It's not clear how the Maiden died, but she may have succumbed to the freezing temperatures of the environment and was placed in her final position while she was still alive or very shortly after death.

By contrast, the Llullaillaco Boy had blood and vomit on his cloak, apparently dying under stress. He also had a nit infestation in his hair. He was the only child to be tied up. His ribs and pelvis were dislocated. Lying in the fetal position, he was wearing a gray tunic, a silver bracelet and leather shoes and had been wrapped in a red and brown blanket. The skull had been slightly elongated.
Due to the way in which the boy was tightly wrapped up, it is believed he may have died of suffocation. He was also buried with a collection of small objects, some of them depicting finely dressed men driving caravans of llamas, and others depicting a ritual activity in which men use slingshots to launch cannons into the lagoons at the end of the dry season to hasten the coming of the rains.

The Lightening Girl didn't appear to be treated as roughly as the boy, though she didn't receive the same care as the Maiden – she lacked the Maiden's decorated headdress and braids. Her face, one of her ears and part of her shoulder were damaged by a lightning strike that occurred after her death. Her head was lifted high, and she was facing toward the south-west. She was wearing a traditional light brown acsu dress, and her head, along with part of her body, was wrapped in a thick wool blanket. Additionally, her entire body was wrapped in another blanket, this one an embroidered blanket of red and yellow. Her skull appears also to be intentionally elongated.

Why do you think the boy was treated differently than the two girls? What do you think was the purpose of the elongated skulls in the two younger children?

Some of the artifacts that were buried with the children. Including pots, jewelry and clothing that they could use when they reached the gods' domain.
These Three Children Were Not the Only Ones Frozen In the Mountains.

They represent one of the best preserved archaeological finds in the world, but the Ice Maiden, the Lightning Girl and Llullaillaco Boy are hardly alone up on the peaks of the Andes. Over 100 other graves or sacrifice sites exists within the Incan Empire, with mummies in various states of preservation. One mummy called "Juanita" was discovered in 1995, and another known as the "Reina del Cerro" (Queen of the Hill) spent decades circulating among private collectors after its initial discovery in the 1920s. These mummies now reside alongside the three Llullaillaco children in the Museum of High Altitude Archaeology in Salta, Argentina.

Controversy

The mummies have been the subject of controversy, especially with regards to indigenous rights. The exhumation and display of the bodies is opposed by some indigenous people. The leader of the Indigenous Association of Argentina called the display a violation of their loved ones. "They should never have profaned that sanctuary and scientists should not put the children on exhibition as if in a circus". The leaders believe that the mummies exhumed need to be returned to the indigenous tribe. It is not good that the museum is earning money that doesn't belong to them. The high Andes from which the three mummies were taken is believed to be home to at least 40 other similar ritual burial sites. To continue to have good relations with the Indian people, no more mummies will be removed from the area, according to the director of the Museum of High Altitude Archaeology.

Other indigenous people support the research. The Third World Congress of the Quechua Language in late 2004 brought together 300 representatives from Andes countries. At its conclusion the congress passed a resolution. The congress approved supporting investigations of the Llullaillaco Children and the diffusion of such investigations for recognizing the greatness and the evolution of their ancestors from their origins to the present day.
Engaging Questions!

1. Why do you think they buried the children so high up in the mountains?
2. Why do you think they gave the children so much coca and alcohol?
3. Why do you think they were fed better as they got closer to their sacrifice?
4. How do you think the children were chosen?
5. What are your thoughts about displaying the mummies? Do you think they should be returned to where they were found or allowed to be studied?

Additional information:
46 minute video from Smithsonian:
https://www.dailymotion.com/video/x64bah4