

# CITY IN THE SKY

Scientists search for clues about why Machu Picchu in Peru was built.



The peaks of the Andes mountain range in Peru, South America, stretch as far as the eye can see in every direction, their summits wrapped in mist. As the sun rises in the sky, the mist burns away, revealing an awe-inspiring sight. Perched around 2,430m up on one of the tropical, forest-covered mountaintops is an old city made of stone. Known as **Machu Picchu** (pronounced 'mah-chu pea-chu'), the site has been there for centuries. But while it has become one of the world's most important archaeological sites, even the descendants of Machu Picchu's builders don't know for sure why the mysterious city was built.

## The Rise of Machu Picchu

Machu Picchu was constructed some **500 years ago** during the **Inca Empire**. This powerful civilisation thrived during the **15th and 16th centuries**, ruling parts of western South America. Archaeologists believe that hundreds of builders constructed the mountaintop city, which was a **five-day trek** from the empire's capital. Using stones from an on-site quarry, they made **houses, temples** and even **fountains**. They also built more than 100 stone staircases to connect different levels in and around the city. But after the Inca Empire fell in the mid-1500s, Machu Picchu was abandoned.

Few knew about the neglected metropolis until American explorer **Hiram Bingham** stumbled upon its ruins in **July 1911**. As news of his 'discovery' spread around the world, so did theories about the mysterious sky-high city. Many people thought Machu Picchu was a fortress where the Inca battled invaders. Some have even suggested that **aliens built it to have a base on planet Earth!** But scientists digging for clues about the purpose of Machu Picchu have recently made some interesting finds.

## Love of the Land

Anthropologist and National Geographic Explorer **Johan Reinhard** thinks answers to the Machu Picchu puzzle lie in the

surrounding landscape. "The Inca believed that **gods lived in landforms and bodies of water**," Johan says. "And they worshipped these places."

During one expedition to Machu Picchu, Johan came across several large stones **sculpted into the shape of the surrounding peaks**. "The carvings were likely made to celebrate these landforms," Johan says. "The mountains were considered sacred, and the stones reflect that." Johan also knew that the peak Machu Picchu rests on is encircled by a river the Incas worshipped. "The area was important to the Inca," he says. "And Machu Picchu may have been built as a way of honouring this cherished landscape where mighty gods were thought to dwell."

## Star Power

It's likely that the site was also a gathering place during **astronomical events** such as the summer and winter **solstices** (the longest and shortest days of the year). Machu Picchu's high elevation makes it a perfect spot for sky watching. And celestial events were important to the Inca, even affecting how buildings here were designed. For instance, one temple in the city was built at an angle so that **the sun shines directly into its window on the morning of the winter solstice**, illuminating a stone shrine!

In 2013, a team of archaeologists from Peru and Poland found even more

evidence that Machu Picchu was used as a viewing spot for celestial events. They uncovered a building that they believe was an **astronomical observatory** where **Inca priests** may have plotted the movement of stars and planets.

So are the mysteries of Machu Picchu solved? Not quite. Evidence certainly exists that the site was built to honour sacred land and used as an astronomical observatory. But without written records – or a time machine to travel back and question the Inca – we may never be *absolutely* sure. In other words, the purpose of this city in the sky may forever stay cloudy...

Machu Picchu means 'Old Peak' in the local language of Quechua.

Peru's Colca Canyon is 3,400 deep – that's nearly twice as deep as the Grand Canyon.

## DID YOU KNOW...?

Wearing yellow underpants on New Year's Eve is a tradition in Peru!

An estimated 60% of Peru is covered by rainforest.

How does the height of Machu Picchu stack up to other sites around the world? Check out this size comparison chart.

