



# CHACO CANYON

CANYON OBSERVATION SEASONS + ALIGNMENTS TIME REFERENCES WEBCAST

ANCIENT OBSERVATORIES

## ABOUT CHACO CANYON

[See a map of Chaco Canyon.](#)

[Teacher's Guide](#)

### Ancient Chaco

Chaco Canyon is a shallow, ten-mile canyon situated in the northwest corner of New Mexico. Seventy miles from the nearest town and accessible only by washboard dirt roads, it's remote by today's standards. The canyon itself has been carved from ancient sea beds by centuries of erosion. Millions of years of history reveal themselves in the layers of rock and the fossils embedded therein.

At an elevation of 6,200 feet, Chaco is a high desert, sun-scorched in the summer and bitterly cold in the winter. Despite these harsh conditions, evidence of human presence in the area stretches back to as early as 2900 BC. These groups were largely nomadic, until around AD 200, when the first farmers settled in the area and built small pit houses.

Then in roughly AD 850, a great change took place. The people began building in a radically different manner, constructing massive stone buildings unlike any that had been built before. These structures soared to four or five stories and contained up to seven hundred rooms and dozens of [kivas](#). Connected to one another by lines of sight that would have enabled rapid communication, these [great houses](#) were feats of engineering. Often built along celestial [alignments](#), they included water-collection systems and were linked to outlying communities by an extensive network of roads. These elaborate buildings evidence a sophisticated and highly organized culture, with Chaco Canyon at its center.

Construction continued for three hundred years, until about AD 1150, when the area was abruptly abandoned. It's not completely clear why the people left



See how patterns of light change throughout the day at Chaco.

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Chaco Canyon, but prolonged drought is one possible explanation. It was around this time that communities in other places in the region, such as Mesa Verde and the Chuska Mountains, grew in size and importance. Most likely, the departing [Chacoans](#) migrated to these surrounding areas.

When the Spanish arrived in the Southwest in the 1600s, they named the people living there Pueblo - one name for nineteen groups of people speaking four distinct languages. Today, modern Pueblo people all trace their roots to Chaco Canyon, and consider it a sacred place.

### **Modern Chaco**

In the late 1800s, it became clear that Chaco Canyon needed protection from looting and vandalism. Chaco Canyon National Monument was established soon after, in 1907. In the nearly one hundred years since, the site has been widely excavated, surveyed, and studied. It became a national historical park in 1980, and was designated a UNESCO World Heritage Site in 1987, one of a select list of protected areas "whose outstanding natural and cultural resources form the common inheritance of all mankind." Today, roughly eighty thousand people visit Chaco Canyon each year, most of them drawn to see the remains of the excavated great houses, which are maintained in a state of "arrested decay."

Chaco Canyon continues to be of great interest to those who study ancient cultures, including [archeoastronomers](#). Evidence suggests that the Chacoans were expert skywatchers, with a clear knowledge of the cyclic and seasonal patterns of the sun, moon, and stars. This knowledge is reflected over and over again in the architecture of the great houses, and in various observational and ceremonial sites around the canyon. The most famous among these sites is the Sun Dagger, a [petroglyph](#) crafted to mark the cycles of the sun (and possibly also the moon).

Chaco Canyon draws astronomers for another reason - its exceptionally dark night sky. Unpolluted by city lights, Chaco Canyon's nighttime skies are resplendent with stars and other features that are rarely visible elsewhere. It's the only national park to feature its own observatory, where visitors can look upon the same star-studded skies that the Chacoans did one thousand years ago.

Though it's rich with artifacts, much about Chaco Canyon and its early inhabitants remains a mystery. Why did the ancient Pueblo choose to build so extravagantly in so harsh an environment - one with 100-degree summers, frigid subzero winters, and only nine inches of rain each year? Who orchestrated the construction, which took place over several hundred years, and how were these plans transmitted, with no written language? Says park interpreter G. B. Cornucopia, "Everybody who comes here feels that sense of attention that was lavished on this place. And that pulls you in. You want to know, 'Why were they here? What was this all about?' The questions just keep coming."

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