

[LAI130875 Strib Features: Qin-novation EDIT]

China's Terracotta Warriors: The First Emperor's Legacy

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Qin-novation!

What does the word “innovation” suggest to you? On so many levels, the story of Qin Shihuang's Terracotta Army is about the importance of innovation.

As a leader, the First Emperor was very innovative. In a short period of time he unified China, established a central government, abolished the corrupt practice of inheriting titles and offices, and rewarded people for their accomplishments. He standardized coinage, weights, and measures across the empire, to ensure fair trade.

Endless innovation was needed to fulfill the First Emperor's demand for thousands of distinctive, painted, clay soldiers. No undertaking on this scale had been attempted before. To create thousands of figures strong enough to survive forever underground, the artists first had to determine what kind of clay was dense and sticky enough to hold its shape. They determined that the clay for the job was available at a site near the First Emperor's tomb.

The artists also had to innovate to find a solution to creating life-size figures that did not crumble under their own weight. They borrowed from building technology's use of molds to make ceramic tiles and pipes. The artists built each figure from a solid base to support its weight. Hollow above the lower legs, the remainder of the body was built up using coils of clay. The heads, arms, and hands were made separately. The artists used molds to form the hands, which they then bent into different positions. They cast the heads from molds and added details such as beards and eyebrows by hand. Details of the bodies, clothing, hair, and armor were formed and finished by hand. Finally, each was brightly painted.

Innovation has also been necessary to further scientists' understanding of the terracotta warriors. In Wellington, New Zealand, Neoface facial recognition software, which can match about one million faces per second, has been used to confirm that each soldier is unique. (Visit <http://video.pbs.org/video/1907176069> to see “Secrets of the Dead: China's Terracotta Army.”)

Use the News Activity!

Innovation was essential to the successful creation of Qin Shihuang's Terracotta Army. Today, innovation is equally important for businesses and individuals who want to stay competitive in a rapidly changing and expanding world. Search the StarTribune for stories about innovation. In what newspaper sections did you find these stories? What kinds of innovations did you find most interesting? In your opinion, which of the innovations you read about will have a major impact on the world? Why?



China, Qin dynasty (221–206 BCE), *Armored General*,
terracotta, excavated from Pit 1, Qin Shihuang tomb complex, 1980, Terracotta Warriors and
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