HORSES
A LITTLE BIG HISTORY

BIG HISTORY PROJECT

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HORSES

GALLOPING THROUGH TIME

By Peter Stark, adapted by Newsela
The horse, once hunted and later domesticated, helped advance human communication and transportation, accelerating global change.
The speed of things

Thanks to modern technology, our messages can now travel close to the speed of light, nearly 186,000 miles (about 300,000 kilometers) per second. But for early humans, most long-distance messages traveled no faster than a person could walk or run. The fastest marathon runners cover 26 miles (or 42 kilometers) in just over two hours. Afterward, even the best human runner is completely exhausted.

The domestication of the horse signaled a major innovation in transport and communication. Humans could travel farther and could carry much more with them. Horseback riders also carried messages, increasing collective learning as information changed hands. Humans could now travel as fast as a horse could walk, trot or gallop, from about 4 to 55 miles per hour (the record gallop speed over a short distance).

What made horses so fast? How did their speed give humans an energy boost? And how did humans come to choose the horse as a method of transport? To answer these questions, we must begin by looking at how the horse evolved.
The evolution of the horse

The history of the horse goes back some 55 million years, to a very small animal — about the size of a dog or a baby lamb — named Hyracotherium (or Eohippus). The Hyracotherium evolved as part of the mammalian rise that followed the extinction of the dinosaurs. This distant ancestor of the horse lived in tropical rain forests in North America and ate leaves.

Some ancestors of the horse went extinct. But certain lines of these early horses continued to develop in response to predators, competitors, and changing environmental conditions. They gradually grew larger. Legs grew longer and developed powerful ligaments. Feet with a large center toe evolved into a single hoof. These physiological changes equipped the proto-horse for speed across open spaces and hard ground.

Over millions of years, the rain forests of what is now North America dried up and the Rocky Mountains arose. Enormous grassy plains appeared on either side of the peaks. The horse’s ancestor adapted to better consume the tough but increasingly abundant prairie grass. The animal needed stronger jaws and bigger teeth that wouldn’t wear down from all that grinding.

Moving to distant lands

These early horses crossed over the Bering Land Bridge from the Americas to Asia, and eventually spread to Europe. Curiously, they suddenly vanished from the Americas about 10,000 years ago. Their disappearance could have been caused by the changing climate at the end of the last ice age, or perhaps by the arrival of human hunters from Asia, who were skilled spear throwers. Humans hunted the animal for meat long before using it for transportation.

Whatever happened in America to cause the disappearance of the horse, foragers in Europe and Asia continued to hunt horses and, in some ways, admire them. Cave paintings by early humans from Lascaux, France that date to over 17,000 years ago beautifully display horses. Later human societies named constellations after the horse.

Hunters began to follow horse herds. While the horse still remained a “wild animal,” humans and horses grew closer together. Humans could attract the horse by providing food. They found that they could milk the lactating mare and serve the milk to their own families. The first known evidence...
of domesticated horses comes from horse dung found inside postholes of what appears to have been a stable in today’s Kazakhstan, dating to 5000 BCE. Ancient knife marks on thousands of horse bones indicate these horses were raised for meat, and perhaps milk.

Horses and riders

At some point — no one is sure exactly when — humans began to see horses as more than simply food. One can imagine some adventurous young herder climbing atop a docile-looking horse for amusement. We don’t know if humans used horses to pull wheeled vehicles before they learned to ride them. Because most of these developments occurred before writing was invented, we depend on archaeological evidence to help us understand what happened.

Horses pulling chariots are depicted in drawings from the Middle East about 4,000 years ago. The earliest evidence of humans riding horses is 5,000-year-old fossils of worn-down horse teeth that indicate a riding bit was placed in the animal’s mouth. It is certainly possible that humans rode horses without bits long before that, but no physical evidence remains.

Now that humans had the ability to ride the horse, and to domesticate it for food, horse-centered cultures emerged in places like the steppes of Central Asia. Horses and riders or chariots could cover huge distances at great speed. As trade routes developed, roads were built to move horses and chariots more quickly. Horse-mounted messengers on the Persian Empire’s Royal Road in the fifth century BCE could carry a message 1,700 miles in seven days, compared with 90 days by foot.

“There is nothing in the world that travels faster than these Persian couriers,” wrote the Greek historian Herodotus.
Coming home

Humans also figured out how to use horses in warfare. The chariot was a fearsome weapon. The invention of the saddle, and then the stirrup, which first appeared in China about 2,000 years ago, made horse-mounted warfare much more effective.

With a saddle and stirrups, warriors could use their hands to fling spears, slash with swords, or fire arrows. The Mongols, who used lightning-fast raids to conquer much of Asia in the thirteenth century, were famous for their horse-mounted archers. When the stirrup arrived in Europe, it allowed European warriors to ride while armored with metal plates made by medieval blacksmiths. These armored warriors — European knights — were like early tanks.

The horse-loving Spaniards (the word for gentleman in Spanish is caballero, or “he who rides a horse”) reintroduced the horse to North America. They brought horses on their first expeditions to Mexico, shortly after Columbus’s voyages. Some horses quickly got free of the Spanish conquistadors and bred in the wild.

Native Americans quickly saw the utility of the horse. The Plains Indians became experts at horse riding. Plains Indian children who were too young to talk could comfortably ride their own small horses, according to early European explorers of North America.

Ocean-crossing boats brought the horse back to its ancestral home, where it became important in both foraging and agrarian societies.

All the while, humans bred horses selectively for characteristics like maneuverability, speed, gentleness, and strength. More than 300 breeds exist today, reflecting the many ways horses have served humans.

In other parts of the world, humans domesticated other animals to carry themselves or their loads: elephants in what’s now India and Thailand, camels in North Africa and parts of Asia. In North America, before the reintroduction of the horse by the Spaniards, Native Americans on the Great Plains relied on dogs pulling small sleds to carry their tepees, cooking ware, and other goods when they moved from camp to camp. But the horse proved able to carry far heavier loads than a dog could.
An unburdened future

The dominance of the horse changed dramatically with the invention of the steam engine. Not surprisingly the new machines were measured in “horsepower.” With this new energy source powering steamboats and railroads, and the invention of the automobile, the number of workhorses dropped significantly.

Electronic communication and new forms of transportation made the horse obsolete for carrying messages. Telegraphs and railroads replaced the Pony Express, which once carried letters across the American West. Advances in the transport of information continued with the radio, telephones, television, and the Internet.

Today, the horse continues to be used for transport and farming in some regions. But it is mostly ridden for recreation or kept as a pet in the industrialized world.

Humans and horses have had a relationship for thousands of years. It’s possible horses understand humans in ways we don’t even know. Recent scientific studies have indicated that autistic children are soothed by riding and grooming horses.

In the past, the horse carried heavy loads and transported messages over long distances. Perhaps in the future the horse may have a more complex and important relationship with humans.
COLLISION
The K-T impact near the Yucatán Peninsula of Mexico 65 MYA wipes out the dinosaurs, triggering the rise of mammals.

EVOLUTION
A leaf-eating, dog-size mammal named Hyracotherium lives in North America 55 MYA and eventually evolves into the horse.

CONTEMPLATION
Human foragers hunt the horse for meat and revere it, depicting the animal in cave paintings.

DOMESTICATION
Agriculture recasts the horse as a versatile work animal, providing a major energy boost to human societies.

CONNECTION
The horse, now a major player in communication, transportation, and warfare, is reintroduced to the Americas by Spanish conquistadors.

ACCELERATION
Inventions like the steam engine and the telegraph make the horse nearly obsolete for transportation and communication, but mechanical power is measured in “horsepower.”

A LITTLE BIG HISTORY OF HORSES
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