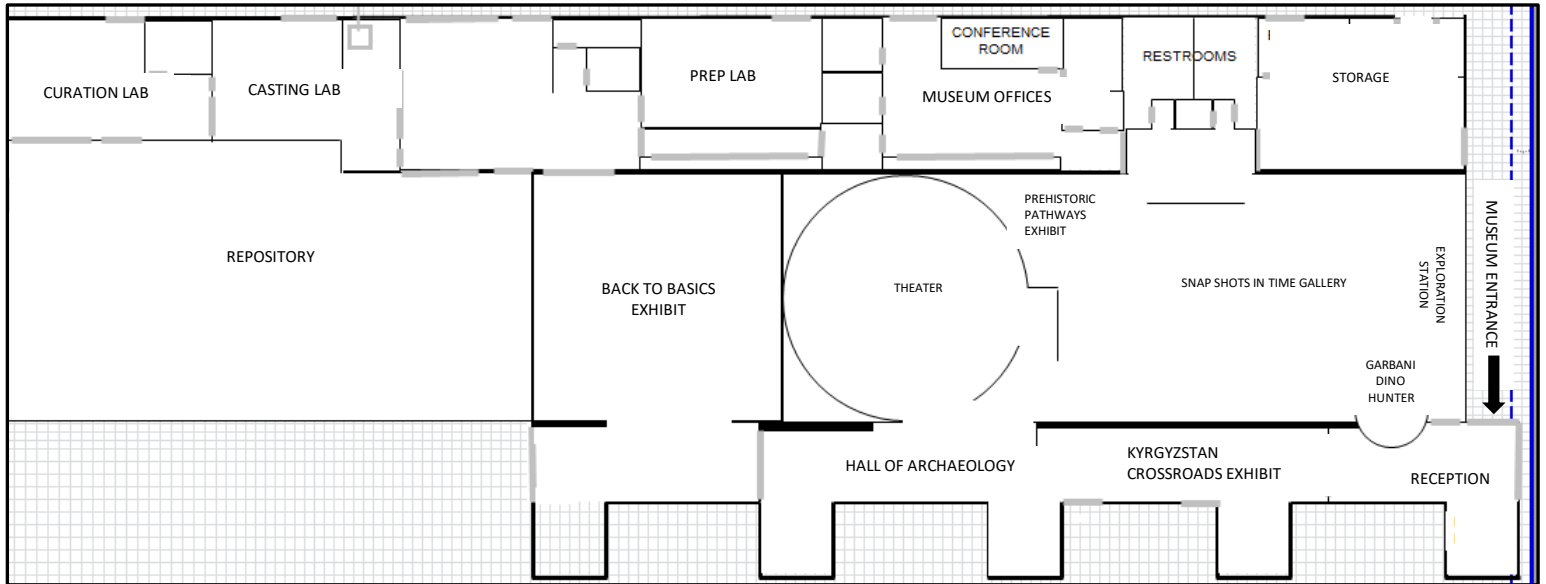


Curator's Files

General Museum Information

Museum Map



Kyrgyzstan Crossroads Exhibit

The new temporary exhibit located in our Hall of Archaeology brings fossils of extinct animals all the way from Central Asia! The country of Kyrgyzstan is located in the most seismically active area in the world.

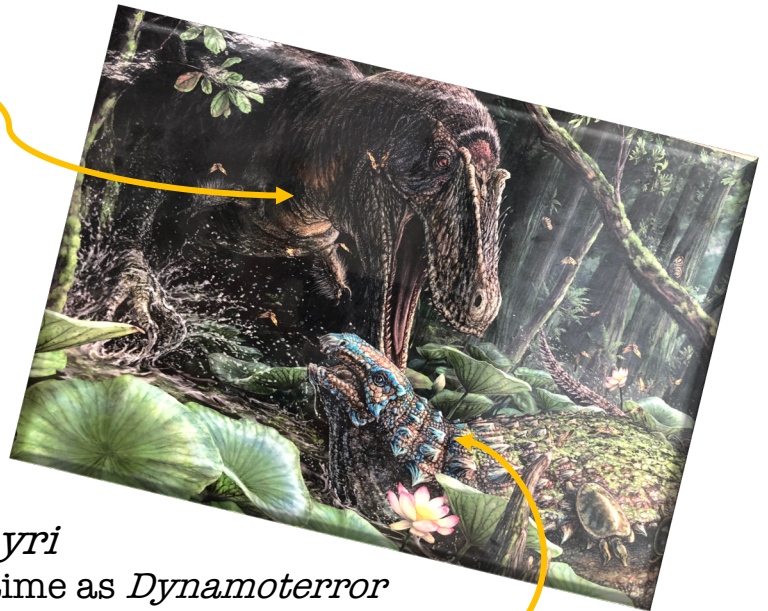


In this exhibit you can find fossils of rhinoceroses, giraffes, horses and more that are 5 to 10 million years old. These fossils, excavated by Dr. Win McLaughlin, help date geologic formations that are hard to date because of earthquake activity. The fossils can also help provide information on changes in the climate. During her excavation she would wrap the fossils to travel back to the United States in felt rugs that were made locally.

New Dinosaurs from Prehistoric Pathways: A Walk Through the Cretaceous Exhibit

Dynamoterror dynastes

- Lived in New Mexico
79 million years ago
- One of the earliest giant tyrannosaurs found in the fossil record.
- Name means “powerful terror ruler” in Greek/Latin.



Invictarx zephyri

- Lived the same time as *Dynamoterror*
- Plant-eating dinosaur belonging to the ankylosaurus group.
- Name means “invincible fortress of the western wind” in Latin.
- The part of New Mexico where it was found can be very windy and the fossils included bony armor plates.

For more information about the Dynamoterror and Invictarx discovery:

<https://www.smithsonianmag.com/science-nature/newly-discovered-tyrant-dinosaur-stalked-ancient-new-mexico-180970491/>



Ornatops incantantus

- Large plant-eating dinosaur.
- Part of the hadrosaur family.
- Lived in New Mexico during the Late Cretaceous, 79 million years ago.
- Name means “enchanted ornate face” in Latin/Greek. A nod to New Mexico’s nickname of “The Land of Enchantment”.

The animals in the Prehistoric Pathways exhibit were all found in a geologic deposit in New Mexico called the Menefee Formation.

For more information on the Menefee Formation click the link below.

<https://www.nps.gov/chcu/learn/nature/menefee-formation.htm>

Exhibit Notes for Back to Basics: The Difference Between Archaeology and Paleontology



When the Western Science Center first opened our doors in 2006 we were known as the Western Center for Archaeology and Paleontology. This exhibit takes you back to our beginnings and back to the basics for what archaeology and paleontology are and what they study.



Archaeologists and Paleontologists both excavate in the ground to find clues to help us better understand the earth's past but what they are looking for is very different!



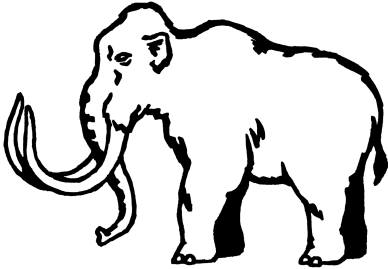
Paleontologists study past life on earth by looking at **fossils** preserved in geologic layers of rock. Paleontology is considered a natural science; the focus is on questions about the history of the natural world, how and why the environment has changed over time, how organisms are related to each other, and how and why organisms have changed over time.



Archaeologists study human history and prehistory oftentimes through **artifacts** and site analysis. Archaeology is considered a social science; the focus is on questions about human prehistory and history, the evolution of cultures, and the development of human society.

Ice Age Animals and Imprint Fossils from Snap Shots in Time Gallery

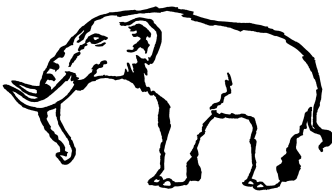
In our main exhibit space, you can still find the visitors' favorites, Ice Age fossils! These fossils are from the Pleistocene and were discovered during the Diamond Valley excavation project.



Columbian mammoth (*Mammuthus columbi*)

Fossils of the Columbian mammoth were found in the Diamond Valley Lake project. It was the largest land animal alive during the Ice Age.

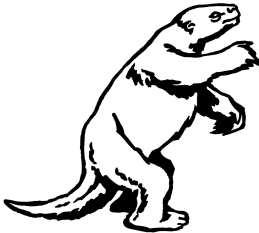
Columbian mammoths could be 13ft. high at the shoulder. They could weigh as much as 10,000 lbs. Columbian mammoths did not have thick shaggy coats of fur.



Pacific mastodon (*Mammut pacifica*)

Many fossils of Pacific mastodons were found when digging the Diamond Valley Lake. The mastodon is a distant relative of elephants and mammoths, but overall it is a smaller animal. It is not as tall but it is longer from trunk to tail than a mammoth.

When you visit the Western Science Center you will get to view two examples of Pacific mastodons; "Max" who is the holotype for the species and "Little Stevie."



Harlan's ground sloth (*Paramylodon harlani*)

The Harlan's ground sloth would have stood over 6 feet high. It weighed about 3,500 pounds. The Harlan's ground sloth had flat peg-like teeth, and ate tubers, leaves and twigs.

Mylo is our new Paramylodon stuffy, joining Max in our store!

On the floor near the west wall of the gallery (also near the restrooms) are replicas of imprint fossils from our Ice Age animals. You don't need to find a fossil bone to know where an animal once lived. Paleontologists can look at a type of fossil called an imprint fossil. When an animal walks in the mud, an impression of the footprint is made. The mud hardens, and over time, the footprints are buried. This preserves the footprints, making them an imprint fossil.



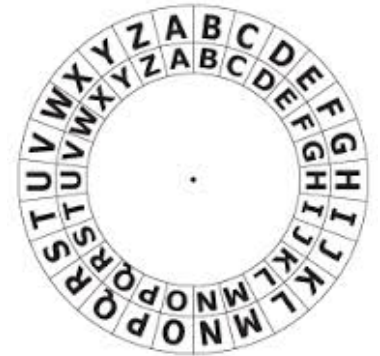
Some notes and information on ciphers!

There are many different types of ciphers. A cipher is what we call a secret way of writing using a code. Some ciphers are substitution ciphers where a letter is switched out for another letter creating a code. Others use shapes or diagrams to create their ciphers.

✦ Many of the puzzles found in the museum seem to have different forms of ciphers on them so here is a little background on some different types!

Caesar Shift Cipher

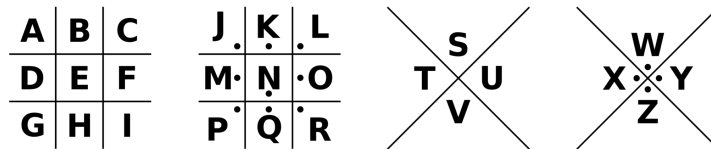
- ⇒ Replaces one letter with another that moves or shifts the alphabet a selected number of letters. The two alphabet sets will each be written onto a circle. The circles can then be laid on top of each other. The top circle can be rotated the number of letters needed for the encryption. Example ROT3 (rotate to the right 3 letters) so A in now D.
- ⇒ Named after the Roman Emperor Julius Caesar, this cipher is one of the oldest encryption methods.



The Pigpen Cipher

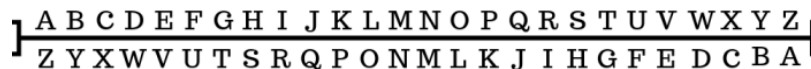
- ⇒ Also known as the Freemason Cipher.
- ⇒ Replaces letters with geometric shapes to form the message. The geometric shapes match a key showing letters in a grid system.
- ⇒ Examples have been found dating to the early 1700's and may have been use during the revolutionary war.

An example of possible keys for Pigpen Ciphers.



The Atbash Cipher

- ⇒ An alphabetic substitution cipher, but unlike the Caesar Cipher the alphabet is lined up with a second set in reverse. A=Z
- ⇒ The name comes from the Hebrew alphabet (alef, tav, bet, shin) the first, last, second and second to last letters. It is thought to date to as old as 500 B.C.



The Dancing Men Cipher

- ⇒ Sir Arthur Conan Doyle made a substitution cipher of stick figures for his famous detective, Sherlock Holmes, to have to break in the 1903 story, *The Adventures of the Dancing Men*. Doyle originally only came up with the 17 figures that he needed for his ciphers in the story but since then people have completed the rest of the alphabet and it has become a popular cipher.

