**Pentaceratops**

* “Five horned faced dinosaur” was a plant-eater that lived during the late Cretaceous between 90 and 65 million years ago.
* Paleontologists think *Pentaceratops* may have been 7 meters/25 feet long and weighed up to 5 tons.
* It had a bony frill, five horns on its face (two on the brow bone, one on the snout and two on the cheeks) that it may have used for display and protection.
* *Pentaceratops* has been found (so far) only in the southwest, along the New Mexico border, formerly the western shore of a seaway that ran from the Gulf of Mexico to the Arctic Ocean.

A close-up of a stone structure

AI-generated content may be incorrect.

A skull of a dinosaur

AI-generated content may be incorrect.

Images courtesy of Arizona Museum of Natural History

**Camarasaurus**

* The name means “chambered lizard,” and it lived in North America about 155 to 145 million years ago, during the Jurassic Period. Its bones were filled with chambers of air which helped reduce the animal’s weight.
* Known as the “Jurassic Cow,” this long-neck member of the sauropod family, can be seen in museums around the world.
* A *Camarasaurus* could be up to 65 feet long and was one of the smaller sauropods.
* It was a herbivore, and because of its 48 spoon-like teeth, was most likely a browser who ate ferns, cycads, and pine needles. It probably swallowed its food whole or partially chewed and used stones (gastroliths) in its stomach to help break up its food.
* Its skull was square with a blunt snout. More skulls of this dinosaur are known than all other skulls combined and we have found every bone of this dinosaur’s body.
* Long shot of a group of dinosaurs

  AI-generated content may be incorrect.A unique feature of the *Camarasaurus* was that all four of its legs were the same length, unusual for most species of dinosaurs.

[www.kidsdinos.com](http://www.kidsdinos.com/)

A dinosaur skeleton in a museum

AI-generated content may be incorrect.

Image courtesy of Arizona Museum of Natural History

**Zuniceratops Christopheri**

* The name means “Zuni horned face” (after the Zuni tribe of North American Indians) was found in 1996 by 8 year old Christopher Wolfe. Christopher is the son of Douglas Wolfe, a paleontologist affiliated with the museum.
* This frilled plant eater lived in the late Cretaceous Period, around 90 million years ago in what is now New Mexico, and is the earliest known ceratopsian to have brow horns. This was about ten million years before the more familiar *Triceratops.*
* It is the oldest known ceratopsian from North America and represents an evolutionary transition between earlier ceratopsians such as the Asian *Protoceratops* and the later, larger North American ceratopsians that had very large horns and frills. *Zuniceratops* had a beak-like snout with a small horn and teeth that could slice up plant food.
* A skeleton of a dinosaur

  AI-generated content may be incorrect.It was 10 to 12 feet long, about 3 feet high at the hips and perhaps weighed up to 400 pounds.

A drawing of a dinosaur

AI-generated content may be incorrect. Image courtesy of Arizona Museum of Natural History

**Stegosaurus**

* Meaning “covered” or “roofed lizard,” it was an herbivore that lived in the late Jurassic Period and had largely disappeared by the Creataceous Period.
* A *Stegosaurus* was 26 to 30 feet long, 9 feet tall, and weighed about 6,800 pounds. It had a very small head with a long, pointed skull and a tiny brain weighing 2.5 to 2.9 ounces, or about the size of a walnut.
* It had a toothless beak, with small back teeth and may have eaten ferns, small club mosses, cycads, horsetails, and bushy conifers.
* It was a quadruped (walked on four legs), but its back legs were twice as long as its front legs.
* It is characterized mainly by the distinctive plates along its spine and the spikes on its flexible tail, thought to be defensive structures. The tail spikes were certainly defensive, but new evidence points to a dense network of blood vessels beneath the skin covering the bony plates, a feature not consistent with a structure likely to suffer damage during an attack by a carnivore. The exact use is not known, but it could have been used to regulate body heat or as a mating display.
* The tail spikes could be up to 4 feet in length and the number of spikes on the tail varied according to the species.
* Some species also had armor-like scutes (bony plates) on the skin of their neck, hip, and perhaps on their sides for added protection.A dinosaur model in a display

  AI-generated content may be incorrect.

Image courtesy of Arizona Museum of Natural History

**Tyrannosaurus Rex**

* The name means “king of the tyrant lizard” in Greek and Latin. *T. rex* was one of the last and the best known of the theropod dinosaurs. (Although birds are theropods.)
* *T. rex* lived in North America during the Late Cretaceous, about 67 to 65 million years ago.
* At over 40 feet in length, 18 feet tall and weighing up to 8 tons, the *T. rex* has long been considered to be the largest terrestrial carnivore to have ever lived. Lately however, there have been two new contenders for that title, the *Giganotosaurus* of South America and the *Carcharodontosaurus* of North Africa.
* *T. rex* had a large head with an extra joint in the lower jaw to allow it to open its mouth very widely to bite large prey.
* Its jaws contained more than 50 curved blade-like teeth. Each 7” to 8” serrated tooth curved backwards to prevent struggling prey from escaping.
* A fossil of a dinosaur

  AI-generated content may be incorrect.There is some debate among scientists as to whether a *T. rex* used its huge jaws and very thick yet razor sharp teeth primarily to kill their prey or if they may have been scavengers, feasting on the bodies of other dinosaurs that had died from other causes such as disease, injury or old age.

A model of a dinosaur

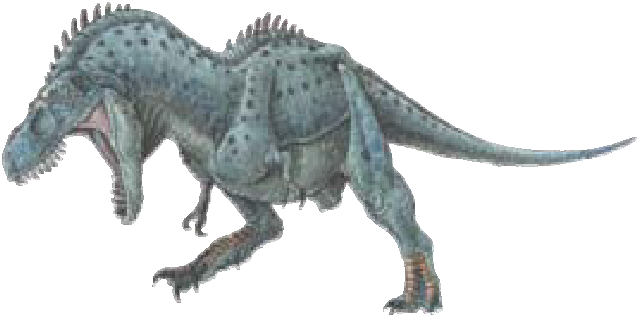
AI-generated content may be incorrect. Images courtesy of Arizona Museum of Natural History

**Tyrannosaurus Bataar**

* *T. bataar,* whose name means “alarming hero reptile,***”*** roamed Mongolia during the Late Cretaceous and was a very close relative of the North American *T. rex.*
* The specimen in Dinosaur Hall was a juvenile, and when fully grown it may have been up to 40 feet long and weighed up to 6 tons.
* It was older than the *T. rex,* suggesting the genus originated in Asia and migrated to North American via the land bridge that joined the continents during the Cretaceous Period.
* It was a carnivore, and likely ate anything it came across. Because of its bulkiness it was possibly a scavenger, although the debate goes on as to whether the tyrannosaurids were active predators or scavengers.
* The first rather nondescript fossils of a tyrannosaurid were found in the Gobi Desert by the Sino-Swedish Paleontology Expeditions between 1927 and 1931.
* It wasn’t until after World War II that several tyrannosaurid specimens were found in the Gobi Desert, including several nearly complete skulls and skeletons.
* There are a few slight differences between the *T. bataar* and the *T. rex.* The most notable differences are its smaller forearms and a relatively longer skull in the *T.bataar*.
* A dinosaur skeleton in a museum

  AI-generated content may be incorrect.No *T. bataar* specimens have been found outside of Asia.

Image courtesy of Arizona Museum of Natural History



**Triceratops**

* *Triceratops* means “three horned face.” It is the best known of the ceratopsians.
* *Triceratops* was also the largest and heaviest of this group, weighing between 5 to 7 tons. It was up to 25 feet long and stood 9.5 feet high.
* *Triceratops* lived in western North America during the last few million years of the Late Cretaceous ending 65 million years ago. It was one of the last of the horned-faced dinosaurs to develop and one of the last of all dinosaurs to become extinct.
* *Triceratops* had a smooth, solid frill, a short, thick nose horn and two enormous 40 inch forward-curved brow horns.
* Heavily built with four short sturdy legs, it could have charged like a tank when threatened by the large carnivores of its day, such as a *T. rex.*
* Its frill, the back edge of which was lined with a zig-zag of knobs, was likely used for both display as well as defensive purposes. It also served as protection for the brain and as a place of attachment for the powerful jaw muscles.
* An herbivore, *Triceratops* had a parrot-like beak and scissor-like teeth in its cheek. Ceratopsians, unlike most other dinosaurs, could chew well, the slicing edges of the teeth easily cutting through the tough fibrous plants that made up its diet. The teeth continued to grow, providing a continuous self-sharpening edge.
* A dinosaur with a large horn

  AI-generated content may be incorrect.*Triceratops* may have traveled in herds that roamed western North America. Many have been found in New Mexico and there is evidence of finds in Arizona as well.

A skeleton

AI-generated content may be incorrect.

Image courtesy of Arizona Museum of Natural History

**Hadrosaurus**

* *Hadrosaurus* means “bulky lizard.” It was the first nearly whole dinosaur found in North America. Originally found in New Jersey, its fossils have also been found in Montana and Alberta, Canada.
* A dinosaur of the Late Cretaceous, it lived between 84 and 71 million years ago.
* The top of the skull has not been found yet, but it is considered to be a Hadrosaurine (no skull crest) because of its body structure. The *Hadrosaurus* had a bulky body, stiff tail, and four legs. Its rear legs were longer than its front legs.
* The *Hadrosaurus* was between 27 and 32 feet long, could be 10 feet tall at the hips, and weighed up to 3 tons.
* An herbivore, it had a wide, flat toothless bill, and a powerful jaw with hundreds of cheek teeth.
* A dinosaur walking on ice

  AI-generated content may be incorrect.It is a member of the Hadrosaurid family, the duck-billed dinosaurs that evolved from the Iguanodontids. They were largest of the ornithopods, the bird-hipped dinosaurs. *Maiasaura* and *Edmontosaurus* were also members of the Hadrosaurid group of dinosaurs.

A close-up of a foot print

AI-generated content may be incorrect.Courtesy of paleodirect.com

Image courtesy of Arizona Museum of Natural History

**Psittacosaurus**

* Pronounced si-TAK-oh-saw-rus, it was a small, very primitive ceratopsian.
* This “parrot-beaked dinosaur” was 2.6 to 6.5 feet in length, stood about 4 feet high and weighed 50 to 175 pounds.
* It was a bipedal egg layer that belonged to the ornithischian or bird-hipped group of dinosaurs. They had small parrot-like heads with a boxy skull that had short horn-like projections on the cheek.
* *Psittacosaurus* looked like a ceratopsian but it lacked frills and horns. Its front legs were shorter than its back legs and it could probably run on two legs to escape predators. They could also use their short front legs to assist in walking. There were four long “fingers” on each front leg that may have been able to grasp.
* *Psittacosaurus* were herbivores with a toothless beak and sharp slicing teeth to cut through tough plant material. They may have used gastroliths (gizzard stones) to further break down the material. As these animals evolved, better teeth with self sharpening edges replaced the gastroliths.
* Alive in the Early to Mid Creataceous, between 120 and 90 million years ago, *Psittacosaurus* have been found only in Asia, mainly in Mongolia, China and Siberia. Many complete skeletons have been found in Mongolia.
* Based on the growth lines on its bones, paleontologists believe they had a life span of 10 to 11 years.
* *Psittacosaurus* changed very little prior to extinction, having persisted for about 30 million years.

A dinosaur with a long tail

AI-generated content may be incorrect.A skeleton of a dinosaur

AI-generated content may be incorrect.

www.kidsdinos.com Image courtesy of Arizona Museum of Natural History

**Protoceratops**

* Pronounced pro-toe-CER-a-tops, its name means “first horned face.” It lived in the Gobi Desert in Mongolia during the Late Cretaceous, about 86 to 71 million years ago.
* It was a primitive “neoceratopsian” or new ceratopsian, a group that included all later ceratopsians, such as *Zuniceratops, Triceratops and Pentaceratops,* and had several primitive characteristics such as single rooted teeth and no brow horns.
* *Protoceratops* had a bulky body, a large head with a parrot-like beak, cheek teeth and a small frill on its head. They were 6 to 8.5 feet long, 3 feet tall at the shoulders, and weighed up to 900 pounds. It was a quadruped, with four short legs and five-toed feet.
* *Protoceratops* belonged to the ornithischian group of bird-hipped, herbivorous dinosaurs.
* The hatchlings would have all looked pretty much the same, but as they grew older they changed. Some had wider skulls, long frills and prominent nasal horns and were most likely males. Others, probably females, had narrow skulls, short frills, and less prominent nasal horns.
* A skeleton of a dinosaur

  AI-generated content may be incorrect.Numerous fossils have been found, including nesting sites with multiple nests, eggs in nests, juveniles and mature specimens.

Image courtesy of Arizona Museum of Natural History A brown dinosaur with large horns

AI-generated content may be incorrect.

**Bagaceratops Rozhdestvenskyi**

* Pronounced bag-a-CER-a-tops rose-DEST-ven-ski-i, meaning Rozhdestvensky’s small horned face, was a small ceratopsian closely related to the *Protoceratops* that lived during the Late Cretaceous, about 84 to 71 million years ago.
* Found in Mongolia, this dinosaur was about 3 feet long and weighed about 65 pounds. It had a bulky, barrel shaped body with a short tail, a slender frill at the back of the skull, a small horn on the snout and bony cheek projections. A quadruped, it moved about on short stocky legs.
* *Bagaceratops* was an herbivore with a toothless parrot-like beak, powerful jaws, and sharp cheek teeth for chewing tough plants.
* It laid eggs and there is evidence that it took care of its babies. This specimen is the top of a skull of a hatchling.

A rock on the ground

AI-generated content may be incorrect.

Image courtesy of Arizona Museum of Natural History

A drawing of a dinosaur

AI-generated content may be incorrect.

**Pachycephalosaurus**

* Meaning “thick-headed lizard,” the dome-headed, thick-skulled dinosaur lived in the Late Cretaceous Period.
* The function of this skull, which could be up to 10 inches thick, is not fully understood. The skull may have had a defensive purpose, as a way to recognize each other, to butt tree trunks to knock fruit off of trees, or as a mating display. It has long been thought that the males may have butted their heads in a mating ritual, but newer evidence suggests that the skull bones may have been more porous than previously thought and would not be able to stand up to such battering.
* *Pachycephalosaurus* were about 15 feet long. They had short forearms with clawed five fingered hands, long powerful hind legs with three toes on each foot and a long stiff tail. They had large eyes, a tiny brain and may have had a very good sense of smell. These dinosaurs also had bumpy knobs on their snouts and along the rear of their skulls.
* They were most likely herbivores. *Pachycephalosaurs* had small ridged teeth and could not have eaten tough, fibrous plant materials; rather they may have eaten a mixture of shoots, leaves, seeds, and perhaps even small animals.

A close-up of a skull

AI-generated content may be incorrect.A green dinosaur with a hat on its head

AI-generated content may be incorrect.

Image courtesy of Arizona Museum of Natural History

**Coelophysis**

* One of the earliest known dinosaurs, it was a small meat eating theropod that lived in the Late Triassic Period.
* Discovered in 1881 and named in 1889, *Coelophysis* was a small, lightly built dinosaur that walked on two long legs. About nine feet long, it had light, hollow bones, a long neck and a long pointed head with dozens of small serrated pointed teeth.
* *Coelophysis* possibly lived and hunted in packs, as is suggested by the existence of fossil bone beds containing hundreds of *Coelophysis* fossils found at Ghost Ranch, New Mexico.
* A *Coelophysis* fossil was sent into space on the Shuttle Endeavor in 1998 and it also traveled to the space station MIR.

A large rock with a snake carved on it

AI-generated content may be incorrect.

A dinosaur in a cage

AI-generated content may be incorrect.

Images courtesy of Arizona Museum of Natural History

**Apatosaurus**

* Once known as the *Brontosaurus,* it was a long-necked herding plant eater from the Late Jurassic Period, about 150 million years ago.
* Sometimes called “thunder lizard” because it is thought that the ground shook as it walked, it was about 80 feet long (longer than a tennis court!) and could weigh as much as six elephants.
* *Apatosaurus* had a very heavyset body supported by four pillar-like legs, a long tail, and a long neck supporting a small head with a tiny brain in proportion to its body size.
* A plant eater with small peg-like teeth, an *Apatosaurus* may have eaten a half a ton of vegetation a day.

A large bone on a display

AI-generated content may be incorrect.

A dinosaur with a long neck

AI-generated content may be incorrect. Image courtesy of Arizona Museum of Natural History

**Dilophosaurus**

* Discovered on the Navajo Indian Reservation near Tuba City in Northern Arizona in the early 1950s and was named in the 1970s.
* *Dilophosaurus,* whose name, “two-ridged lizard,” was taken from the distinctive pair of bony ridges atop its head, was one of the oldest carnivorous dinosaurs discovered so far and roamed Arizona about 190 million years ago.
* Approximately 20 feet from head to tail, it stood upright and is believed to have used its forearms to grasp its prey.
* This dinosaur is also a movie star, having had a featured role in the original “Jurassic Park.” You may remember *Dilophosaurus* as the nasty little spitting dinosaur who jumped into the jeep of the creepy computer guy fleeing with the dinosaur embryos. There are a few points where fiction won out over truth. First, the real *Dilophosaurus* was a great deal larger than shown in the movie. And there is no reason to believe they had frills. The spitting is based upon an interpretation of a groove in the jawbone, but is very much in question. Just goes to prove you can’t believe everything you see in the movies!
* Trackways purportedly attributed to this dinosaur can be seen near Tuba City.
* It is the new logo of the Arizona Museum of Natural History.A dinosaur in a museum

  AI-generated content may be incorrect.

Image courtesy of Arizona Museum of Natural History

###### **Coelurosaur**

* Meaning “hollow tailed reptiles,” applies to the large group of meat eating dinosaurs that includes allosaurs, tyrannosaurs, and oviraptors. The most advanced members are related to birds and may have had feathers.
* This dinosaur is a new species and is therefore unnamed so far. Before receiving a scientific name, a detailed study must be made to determine how it is different from other dinosaurs as well as how it may be related. “Little Tooth” is its unofficial nickname.
* The Zuni Basin Coelurosaur was found in the Cretaceous Period rocks of the Moreno Hill Formation near the Arizona and New Mexico border during expeditions sponsored by the Mesa Southwest Museum. This is the same formation that contained the *Zuniceratops,* as well as fossil turtles, fish, crocodiles and lizards.
* This reconstructed cast of the skeleton is a composite of two partial fossil skeletons found in rocks that were once forested swamps, lakes and streams 90 million years ago.

A skeleton of a dinosaur in a glass case

AI-generated content may be incorrect.

A dinosaur with long neck and long tail

AI-generated content may be incorrect. Image courtesy of Arizona Museum of Natural History

***Oviraptor* Eggs**

* For decades, these *Oviraptor* eggs were thought to belong to *Protoceratops.* Recent discoveries, especially of a mother *Oviraptor* brooding her eggs have proved that these eggs actually belong to the small theropod.
* Please note that the eggs seem to be “paired off”, an apparent trait of this dinosaur.
* *Oviraptor* lived during the Late Cretaceous Period, about 85 to 75 million years ago. A small and bird-like omnivore, they were about 6 feet long with a flexible neck, long legs, short arms, and a long tail. Lightly built and agile, an *Oviraptor* probably weighed between 55 to 76 pounds. They had a parrot-like head with extremely strong jaws for crushing things.
* The name, meaning “egg thief” is a misnomer, their toothless jaws were not useful for eating eggs, but for crushing very hard food such as clams.

A hand made of white sand

AI-generated content may be incorrect.

A close-up of a dinosaur

AI-generated content may be incorrect. Image courtesy of Arizona Museum of Natural History

Artwork copyright Joe Tucciarone

**Probactrosaurus Gobiensis:**

* Name means “before *Bactrosaurus*” or “before Bactrian reptile.”
* A relative of the hadrosaur, it was an iguanodont who lived in China during the early Cretaceous Period, around 100 million years ago.
* An adult *Probactrosaurus* was between 17 to 20 feet long.
* An herbivore, it had a horny toothless beak with tightly packed cheek teeth suited to a diet of soft plant material. Under the rows of functional teeth there were other rows of unerupted teeth in the jawbone which would gradually replace the functional teeth as they wore out or were broken.
* A *Probactrosaurus* had a narrow snout and an elongated lower jaw.
* It could walk on all four feet but was probably bipedal (walking on two feet) when moving quickly. It had three toes on the back feet.
* *Probactrosaurus* was a possible ancestor of the duck-billed dinosaurs.

A skeleton of a dinosaur on a display

AI-generated content may be incorrect.

Image courtesy of Arizona Museum of Natural History

A dinosaur with a long tail

AI-generated content may be incorrect.

**Scutellosaurus**

* The name, which means “little shield lizard,” refers to its lizard-like appearance and the scutes (small bony plates) that covered it.
* This small herbivore was one of the earliest known ornithischians or bird-hipped dinosaurs.
* *Scutellosaurus* lived in the late Jurassic and has been found in Western North America, including Arizona.
* It weighed a little over twenty pounds, could be 48 to 52 inches long and about 18 inches tall at the hips.
* It had a long body, a long tail, and hind legs that were much longer than the front legs. A *Scutellosaurus* was semi-bipedal, meaning it could walk on two legs or on all four legs.
* A dinosaur in a glass case

  AI-generated content may be incorrect.It was protected by its speed and the hundreds of small bony scutes that covered its body.

Image courtesy of Arizona Museum of Natural History