

Discovering Dinosaurs

INTRO TO DINOSAURS

Grades

4-6

Objective

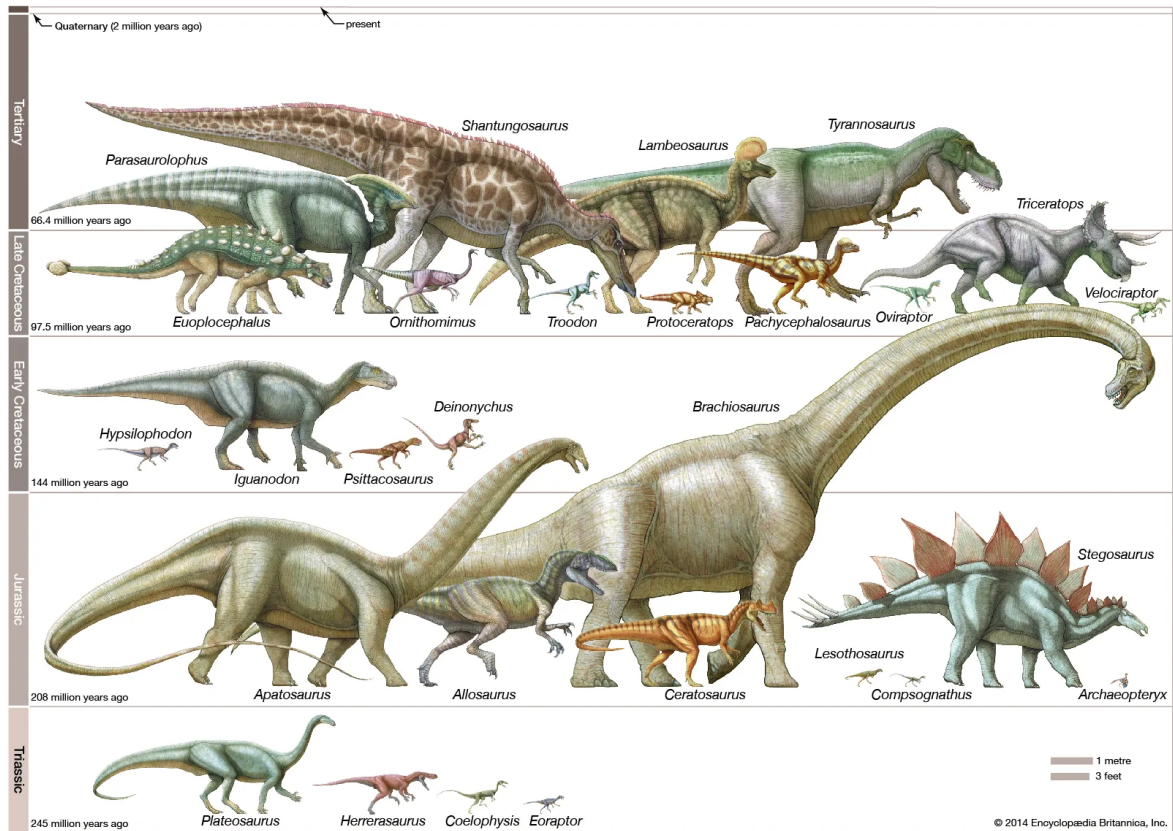
This activity will introduce students to dinosaurs and help them summarize the main points, record questions they want to investigate, and develop related vocabulary.

Materials

- Britannica Kids article "Dinosaurs"
- Graphic Organizer



Sources: <https://kids.britannica.com/kids/article/dinosaur/353055>. Retrieved 02.04.22



Introduction

Dinosaurs were the main animals on Earth for more than 150 million years. They were lizardlike reptiles. Some of them were the largest and scariest creatures that ever walked on land. The word dinosaur comes from Greek words meaning "terrible lizard."

The last dinosaurs became extinct, or died out, about 65.5 million years ago. Fossils of dinosaurs were first discovered in the early 1800s. Fossils are remains or impressions of a plant or animal that have been preserved in rock. By studying these fossils, scientists know that dinosaurs were the ancient cousins of today's crocodiles, snakes, and lizards. Scientists also believe that today's birds descended from dinosaurs.

Where and When Did Dinosaurs Live?

The study of the history and physical features of Earth is called geology. Earth began forming about 4.6 billion years ago. Earth underwent many changes from then until the present. Geologists call this vast time period geologic time. They break geologic time into smaller time periods. Dinosaurs lived from about 245 to 65.5 million years ago. They were common during the Triassic, Jurassic, and Cretaceous geologic time periods. Not all the species, or types, of dinosaur lived at the same time. They also did not all become extinct at the same time. They died out gradually.

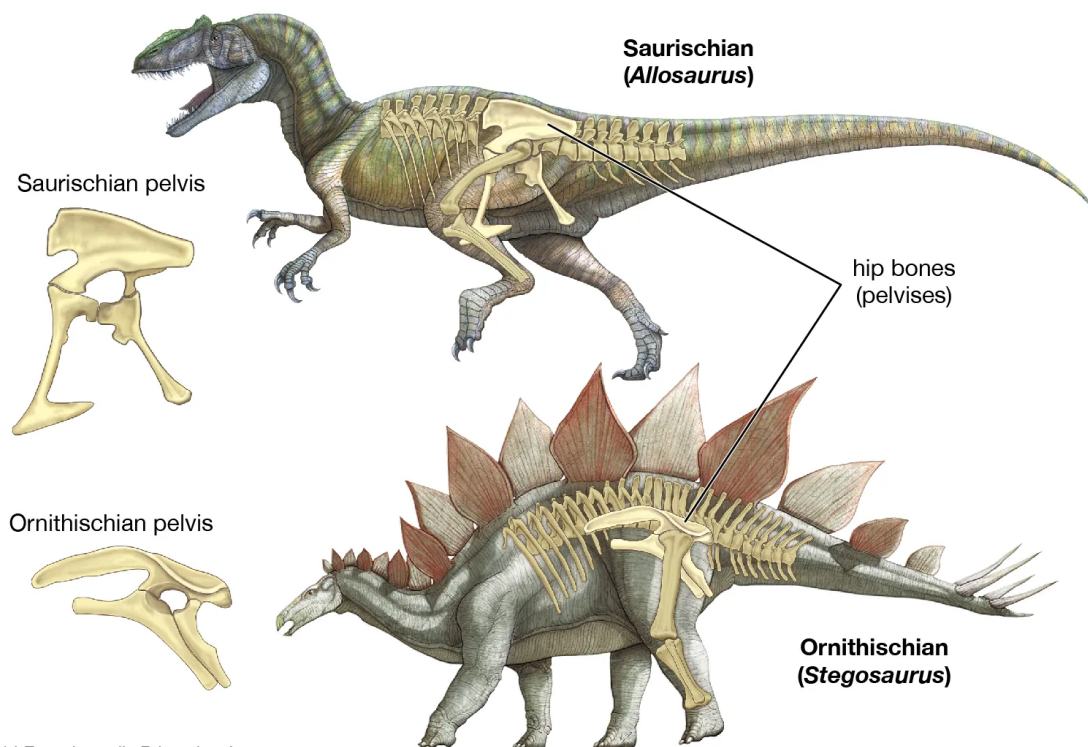
Dinosaurs lived throughout the world, and their fossils have been found on every continent. They lived in all different kinds of environments as well, ranging from tropical forests to dry, sandy deserts.

Physical Features and Behavior

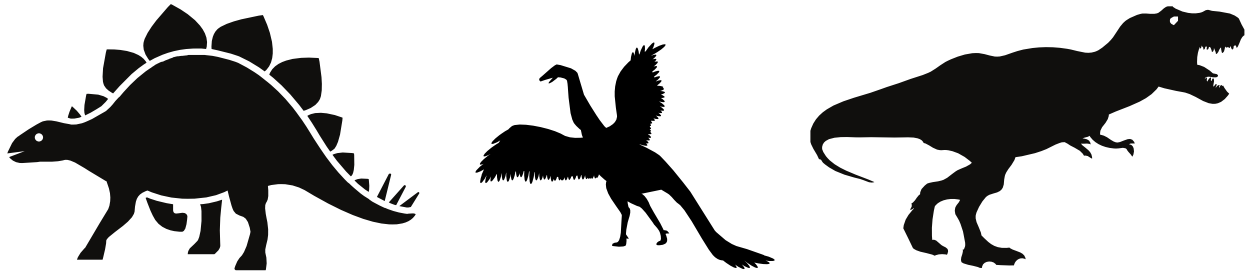
Dinosaurs were all different sizes. Some dinosaurs were smaller than a chicken. Others weighed as much as 100 tons—more than 10 times as much as the largest elephants.

Dinosaurs did not have any hair. Their skin had a bumpy or pebbly surface. Some scientists believe that dinosaurs were gray or green in color. These colors would have helped the dinosaurs blend in with their surroundings. Other scientists think that dinosaurs were very colorful. Bright colors would have helped males get the attention of females.

Scientists have divided dinosaurs into two large groups. The groups are based on the way a dinosaur's hip bones were shaped. One group is the Ornithischia, or bird-hipped dinosaurs. Members of this group are called ornithischians. The other is the Saurischia, or lizard-hipped dinosaurs. Members of this group are called saurischians.



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Ornithischian Dinosaurs

The ornithischians had hips shaped like the hips of today's birds. Despite this similarity, however, today's birds are not related to the ornithischians.

The ornithischians were plant eaters. They walked on either two or four thick, sturdy legs. Ornithischians generally had flat teeth to grind tough plants. They also had an extra bone at the tip of the lower jaw. This bone joined the two halves of the lower jaw together. It also helped to form a horny beak that made it easier for the dinosaurs to bite plants.

Many of the ornithischian dinosaurs had special features. Some, such as Triceratops, had horns like a modern rhinoceros. Euoplocephalus had a huge club at the end of its tail. Stegosaurus had large, triangular bony plates sticking out of its back.

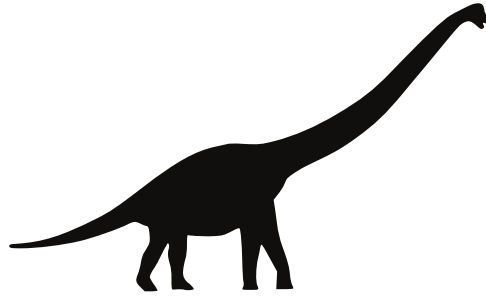
Saurischian Dinosaurs

The saurischians had hips that look like the hips of today's reptiles. But they also had some features in common with today's birds. In fact, scientists believe that the saurischians are more closely related to birds than to some other dinosaurs. The earliest bird, *Archaeopteryx*, was a saurischian. The saurischians are divided into the meat-eating theropods and the plant-eating sauropods.

Theropods

The theropods include all the meat-eating dinosaurs. Among them is the fierce *Tyrannosaurus rex*, which weighed as much as 8 tons. *Giganotosaurus* and *Spinosaurus* were even larger. Theropods walked on their two back legs. Most of them were built to hunt. They used their short front arms to catch and tear prey. Their fingers and toes had long, sharp claws. They had powerful jaws and sharp teeth for tearing flesh.

Theropods normally hunted alone. They caught and ate smaller, plant-eating dinosaurs. Sometimes they hunted in groups and attacked larger dinosaurs.



Sauropods

Sauropods were not only the largest of all dinosaurs. They were also the largest land animals that ever lived. Sauropods were plant eaters that walked on four legs. Brachiosaurus, Diplodocus, and Apatosaurus are examples of sauropods.

Sauropods had a very small head and brain when compared to their huge body. But they had a long neck, which let them reach leaves on even the tallest trees. They had thick, strong legs, like those of an elephant. Many sauropods probably could stand up on their back legs to reach even higher into the trees. They used their long, muscular tail to balance themselves when standing. Some sauropods also might have used the tail as a whiplike weapon.

Life Cycle

Most, if not all, dinosaurs laid eggs. Some dinosaurs built large nests to keep their babies together. Young dinosaurs grew very fast. Many reached full size in seven or eight years. Large dinosaurs might have lived almost 100 years.

Extinction

The last dinosaurs died out about 65.5 million years ago. Scientists still do not agree about why this happened. Some scientists think that dinosaurs died out because the temperature on Earth got too hot or too cold for them. Others believe that a huge asteroid collided with Earth. The collision could have produced dust that blocked the Sun's heat and light for months or even years. Plants would have stopped growing, and plant-eating dinosaurs would have died from lack of food. So would have the meat eaters that hunted them.

Some animals lived through the time when the dinosaurs disappeared. The ancestors of today's frogs, turtles, lizards, and snakes found a way to survive. Birds also survived. Scientists do not know why some animals lived but the dinosaurs did not.

Name: _____

Note-Taking

Directions: Use this organizer to take notes on the essay about Jamestown

list key words

words I need to define

summary of main points

timeline of key events

questions I have