

Fossils and Their Secrets

A Scavenger Hunt through the Talisman Energy Fossil Gallery

TRAVELING THROUGH TIME:

Welcome to the Talisman Energy Fossil Gallery. Look down at your feet and find the spiral geologic time scale on the floor. Can you figure out which Era was dominated by Dinosaurs and which Era was dominated by Mammals?

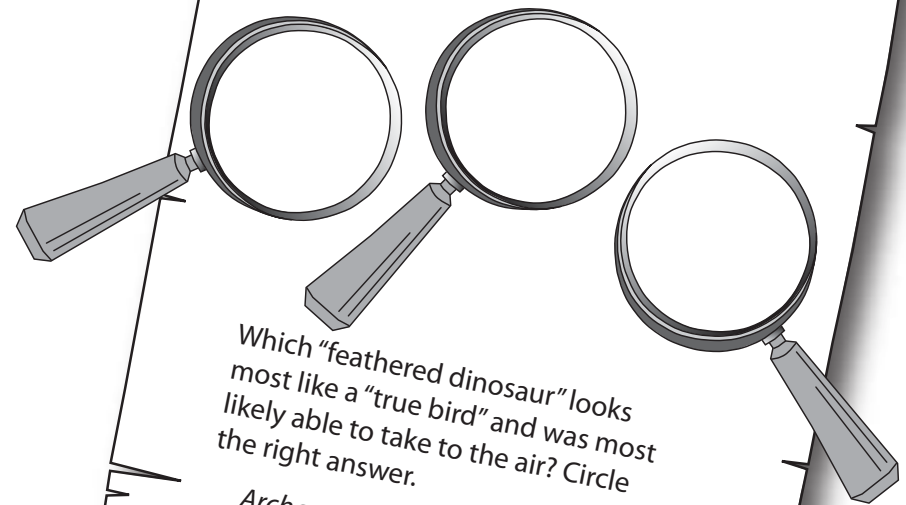
Paleozoic	Mammals
Mesozoic	Neither
Cenozoic	Dinosaurs

Bonus question: in which ERA did both dinosaurs and mammals live together? _____

SPOT THE FLYING DINOSAUR!

Did dinosaurs ever fly? Are there still "dinosaurs" around today?

Draw 3 characteristics that feathered dinosaurs share with modern-day birds.



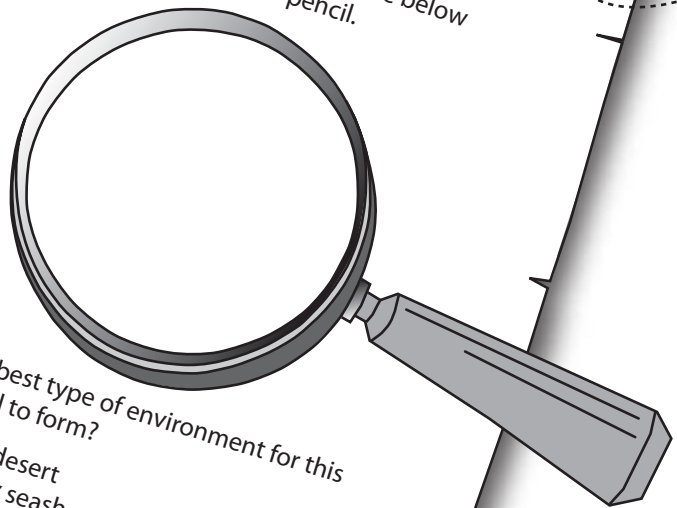
Which "feathered dinosaur" looks most like a "true bird" and was most likely able to take to the air? Circle the right answer.

Archaeopteryx Sinosauropteryx

Sinornithosaurus

LEAVING AN IMPRESSION:

Find the kind of dinosaur fossil that was not a bone. Think you've found it? Now trace its impression in the circle below using the side of your pencil.



What's the best type of environment for this type of fossil to form?

- a) Dry sandy desert
- b) windy rocky seashore
- c) muddy silty floodplains
- d) chalky dried up lakebed

What kind of dinosaur left the most fossil impressions of this kind?
Can you find an example of such a dinosaur?



DINOSAURS OF ALL KINDS:

Not all mammals are the same. You wouldn't like it if someone said you looked just like an orangutan, right? The same can be said of dinosaurs... there were all kinds of them and they surely didn't all look alike!

In one column, you will find the name of a variety of dinosaurs; in the other column you will find descriptions for them. Your task is to link the right dinosaur with the right description! Do this by drawing a line between them (we've done one for you already as an example).

- | | |
|--------------------------------|----------------------|
| <i>Ankylosaurus</i> | Theropod Dinosaur |
| <i>Chasmasaurus Irvinensis</i> | Feathered Dinosaur |
| <i>Daspletosaurus</i> | Horned Dinosaur |
| <i>Edmontosaurus</i> | Armoured Dinosaur |
| <i>Sinosauropteryx</i> | Duck-Billed Dinosaur |

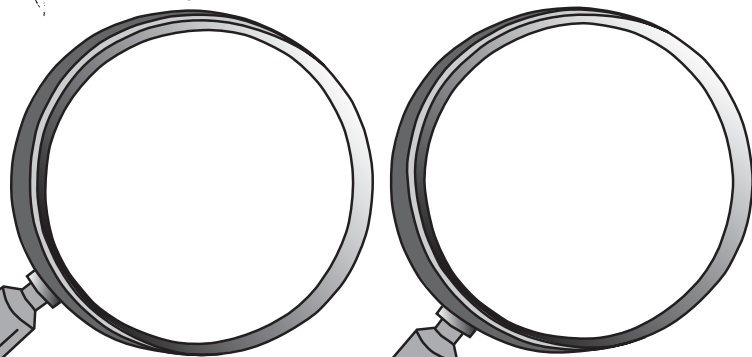
A TALE OF TAILS:

What's so special about the *Ankylosaurus*' tail (in other words, what does it "entail")?

- a) It's the longest tail of all the dinosaurs.
- b) The club at the end of its tail can be used in self-defense.
- c) It's the smallest tail of all the dinosaurs.
- d) It's a retractable tail

FACING OFF!

Can you draw the main characteristics of a **Centrosaurine** dinosaur and of a **Chasmosaurine** dinosaur? Try to find an example for each.



FLOWERS AND DINOSAURS:

Flowering plants are referred to by scientists as angiosperms. Can you find out when flowers and the insects that pollinate them first made their appearance in geological time?

While you're here, why not take the time draw your own version of what the first flowering plant and the first pollinating insect might have looked like?



Flowering Plant



Pollinating Insect

ROLE-PLAYING IN THE LATE CRETACEOUS:

Head past the arches at the end of the hall and turn to your right... Don't worry, you haven't just stepped out of a time machine! You're still in the Talisman Energy Fossil Gallery at the Canadian Museum of Nature, even if it's hard to believe...

As you can see, a showdown of sorts is happening right here in the gallery! We're kind of worried about the walls and the furniture so we'd like you to investigate further and tell us what you think might happen in the next 15 minutes so we can take the proper precautions.

First things first! There are 3 kinds of dinosaurs in this scene; can you help us identify them?

Next, can you figure out whether they are herbivores (plant eaters) or carnivores (meat eaters)?

- _____ Herbivore | Carnivore
- _____ Herbivore | Carnivore
- _____ Herbivore | Carnivore

Great! Now that you've gathered this vital information, you can fill in the blanks in these action-packed potential outcomes of the next 15 minutes...

- a) The _____ ambush the _____ and succeed in capturing the weakest among them. The rest are forced to flee to save their lives. The _____ wait patiently to get their share of the captured _____ .
- b) The _____ set up in a circle formation and stand their ground with their crenellated heads pointed down, showing off their large nasal horn. The _____ feel outnumbered and go away, still feeling hungry. Meanwhile, the _____ are doing their best to hide and to protect their eggs.
- c) The _____ attack but sustain injuries as the _____ are successful at defending themselves. The _____ are forced to retreat and instead pounce on the nest of _____ eggs for an easy meal.

Finally, circle the scenario that you think is most likely to happen... Let's hope the Gallery is not destroyed in the next 15 minutes! Good luck!