

CRETACEOUS ALBERTA

1. This exhibit is based on a discovery made in *Dry Island Buffalo Jump Provincial Park.*
2. What type of dinosaur was found at this site and how many individuals were there?
Albertosaurus; 22 individuals were found in this bonebed.
3. What other animals lived in Cretaceous Alberta along with the dinosaurs?
Insects, fish, turtles, salamanders, champsosaurs, crocodiles, mammals.

SCIENCE HALL

Changing Earth

1. Match the era or period on the left to the type of creatures that appeared during that time.

A Precambrian	<u> F </u> first birds appear
B Cambrian	<u> H </u> Age of Humans
C Devonian	<u> D </u> first flying insects
D Carboniferous	<u> A </u> single cell organisms
E Triassic	<u> C </u> Age of Fishes
F Jurassic	<u> G </u> dinosaurs rule the land
G Cretaceous	<u> B </u> soft-bodied creatures
H Quaternary	<u> E </u> first true mammals

What is Palaeontology

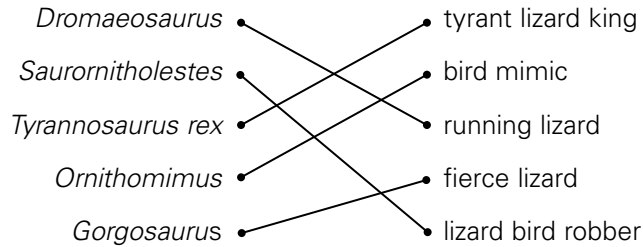
1. What do palaeontologists study? *Ancient life through the fossil record.*

Changing Time

1. How old is planet Earth? *About 4.6 billion years.*
2. How long has life existed on Earth? *For approximately 3.9 billion years.*

LORDS OF THE LAND

Draw a line to match the name of the dinosaur with its meaning.



CONTINUE UP THE NEXT RAMP AND PROCEED TO THE RIGHT, THROUGH THE TIME TUNNEL.

THE BURGESS SHALE

Match the definition on the left by writing its letter beside the correct answer on the right.*

DEFINITIONS

- A** The Burgess Shale yielded more than this number of fossils.
- B** The Burgess Shale creatures are enlarged this many times.
- C** The animals lived in shallow seas of the Cambrian Period, this many years ago.
- D** This is possibly our oldest known relative.
- E** This is the largest predator in the Burgess Shale
- F** This animal has a head like an insect and a body like a fish.
- G** This is the author of *Wonderful Life – The Burgess Shale and the Nature of History*.
- H** This is the most common of the Burgess Shale creatures and had feathery legs.

TERMS

- D *Pikaia*
- H *Marrella*
- E *Anomalocaris*

- B 12
- C 505 million
- A 200,000
- F *Nectocaris*

- G Stephen J. Gould

* The information for this section is found in writing before the Burgess Shale glass floor and in the study hall just beyond the glass floor. Some answers are repeated during the recording in the glass-floored area.

PALAEOZOIC ERA

Circle the correct answer - A, B, or C.

1. The deposits in the Devonian Reef are responsible for this Alberta resource.

A dinosaur fossils
B coal
C petroleum

GO DOWN THE SPIRAL STAIRCASE

2. Based on the creatures you have seen so far, life first existed in

A water
B land
C air

3. What progressed first onto land?

A plants
B amphibians
C insects

4. Invertebrates, or animals without backbones, were the first animals on land.

An example of an invertebrate is a

A frog
B cockroach
C mouse

5. The first vertebrates, or animals with backbones, that lived partially on land were

A amphibians
B insects
C reptiles

6. Reptiles were the first animals with backbones that lived entirely on land because

A their eggs had soft shells and were able to survive out of water.
B their eggs had hard shells and were able to survive in water.
C their eggs had hard shells and were able to survive out of water.

7. A reptile that lived during the Early Permian, had a sail on its back and is often mistaken for a dinosaur is

A *Dimetrodon*
B *Ichthyosaurus*
C *Camarasaurus*

MESOZOIC ERA - TRIASSIC GIANT

1. What is the name of the world's largest marine reptile and how large is it?
Shonisaurus sikanniensis 21 metres long.
2. Where was this specimen found?
Along the shores of the Sikanni Chief River in Northeastern British Columbia.
3. How old is this fossil?
220-million-years old.
4. Which two scientists worked together to excavate and study this specimen?
Dr. Betsy Nicholls and Dr. Makoto Manabe.

DINOSAUR HALL

Match the name of the dinosaur on the left by writing its letter beside the correct answer on the right.

- | | |
|------------------------------------|--|
| A <i>Camarasaurus</i> | <u> K </u> "bird mimic" dinosaurs |
| B <i>Allosaurus</i> | <u> H </u> single long horn on nose |
| C <i>Stegosaurus</i> | <u> A </u> a Jurassic sauropod |
| D <i>Euoplocephalus</i> | <u> L </u> tyrant lizard king |
| E <i>Gorgosaurus</i> | <u> F </u> dome-headed dinosaur |
| F <i>Pachycephalosaurus</i> | <u> B </u> three fingers on each front limb |
| G <i>Brachylophosaurus</i> | <u> M </u> largest of the horned dinosaurs |
| H <i>Centrosaurus</i> | <u> C </u> plates on back and spikes on tail |
| I <i>Dromaeosaurus</i> | <u> J </u> nesting site in southern Alberta |
| J <i>Hypacrosaurus</i> | <u> E </u> smaller than its cousin <i>Tyrannosaurus</i> |
| K <i>Ornithomimus</i> | <u> G </u> "short-crested" lizard |
| L <i>Tyrannosaurus rex</i> | <u> I </u> fast and agile |
| M <i>Triceratops</i> | <u> D </u> bony plates and tail club |

CERATOPSIANS: THE HORNED HERBIVORES

Fill in the blanks

1. Ceratopsians (horned dinosaurs) originated in Eastern Asia during the middle to late Jurassic Period, about 157 million years ago.
2. Large ceratopsians, such as *Triceratops*, may have had up to 600 teeth in their jaws at any given time.
3. Which ceratopsian on display is named after a Museum palaeontologist, and where was it discovered? Centrosaurus brinkmani was named after Dr. Don Brinkman and it was discovered in Dinosaur Provincial Park.

ICE AGES

Short Answer

1. During the Pleistocene, the sea level was low, exposing the sea floor between Alaska and Siberia. Why was this, and how did it affect the animals? Water was frozen on land in glaciers. Many species crossed the resulting land bridge known as the Bering Strait.
2. Which new predator to North America may have caused the extinction of many large Pleistocene mammals? Humans.
3. The cause of the Great Extinction at the end of the last ice age is still uncertain. State two of the four questions still debated about the extinction of these mammals.
1) Were the ice age animals so specialized they couldn't adapt to changing environments after the glaciation?
2) Did humans wipe out entire populations with their weapons and hunting techniques?
3) Did animals migrating from Asia outcompete North American species?
4) Did animals entering North America bring new deadly diseases?
4. "Species come and species go." What is the only constant of life? Change