

THE GREAT DISAPPEARANCE



The temperature of the Earth's core is estimated to be 7000°C.

Find the extinction words in the puzzle. Once you've found all the words, the leftover letters make a poem. Take the spare letters, in the order they are written, and fill in the blanks at the bottom of the page. (The very last letter, z, is not part of the poem.)

N D I O R E T S A W H A T B E S
 O C A T M E O E F T H E D I U C
 I N O S E A U R S S I S U P N L
 T K N O W C N A L A L T E H A I
 A T R E M A T I N S E R O F E M
 I T H E I R E O X I N S S T K A
 D E N V O L C A N O E S I C A T
 A E A R E B O N V I E S F D U E
 R O U N D I N A T H C E E A Q S
 T A N O I T A V R A T S N D H T
 N I A R D I C A H E W E S T T T
 T C E F F E E S U O H N E E R G
 H E F O S S I L S D O R E S A T
 C O N C E A L I N G F R O M E A
 L L T H E C A U S E O F T H E I
 R F A L L C R E T A C E O U S Z

WHAT BECAME OF THE
 DINOSAURS IS
 UNKNOWN; ALL THAT
 REMAINS OF THEIR
 EXISTENCE ARE BONES.
 FOUND IN THE EAST
 AND THE WEST, THE
 FOSSILS DO REST,
 CONCEALING FROM ALL,
 THE CAUSE OF
 THEIR FALL.

ASTEROID
 EARTHQUAKE
 VOLCANOES

RADIATION
 CLIMATE
 DISEASE

TECTONICS
 SUPERNOVA
 CRETACEOUS

STARVATION
 GREENHOUSE EFFECT
 ACID RAIN

Grades 9–12 | Earth Sciences Gallery

1. At the entrance to the gallery there is a sculpture on the wall.

What do you think the artwork represents? It represents a geological time line. The centre represents the earth's beginning. As it circles outwards it shows different geological periods and what was forming on earth at the time. It ends with a footprint symbolizing the appearance of man.

2. The gallery starts off with Saskatchewan in the Cretaceous Period but there are many millions of years of history before that. Judging by the location of Saskatchewan during the Jurassic Period, what do you think the landscape of Saskatchewan would have been like? What types of plants and animals do you think were living at that time? What evidence would you use to support this? What natural resource was a result of these organisms buried in the sea?

Saskatchewan was under water, rocks from this time period include deeply buried shales, sandstones and limestones formed in the sea. The organic materials and rocks resulted in the forming of oil traps in the Swift Current area. Oil is the natural resource from this time period.

3. What area of North America was covered by the shallow, warm ancient sea in the Cretaceous Period? _____

From the Arctic Ocean to the Gulf of Mexico.

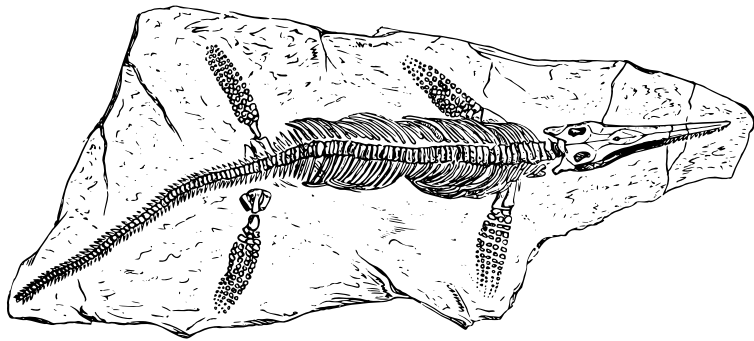
4. In the mososaur diorama, what ancient creature resembles a modern day creature? Great white shark

5. Look at how the colouring of the Mosasaur and the Plesiosaur has been done in this exhibit. Since we don't know for sure the colours or patterns on marine reptiles from long ago why do you think the colours shown were chosen? Why are these creatures darker and mottled on their backs and lighter on the underside? _____

Colours represent an interpretation of how these marine reptiles may have looked to enhance camouflage. Lighter coloured underneath to mimic sunlight coming through the water, and darker to look like water and marine plants. These were based on colour patterns found in modern sea creatures.

6. If you were a palaeontologist and found the *Thescelosaurus*, would you be able to identify it immediately? When palaeontologists uncover a complete skeleton that has remains in the same position as when the animal died, they call it an "articulated skeleton." Is this an articulated skeleton? What steps would you take to identify this skeleton? _____

Scientific comparison to other fossils examples, modern day animals.



7. What has to happen for a bone to become a fossil? _____
It has to be buried quickly and minerals have to
replace the original bone material.

8. Why does *Triceratops* have a chunk gone from its frill? _____
Possibly a fight with another triceratops during
mating season.

9. After the disappearance of the dinosaurs came the Tertiary (now called Paleogene) Period. What natural occurrences took place in Saskatchewan to lead to the growth in size and numbers of the mammals? (hint: Palaeontologists aren't even certain of the reason for this). _____
Possibilities include change in
climate, landscape and types of plants and the
mammals no longer had the dinosaurs as large
predators and main consumers of food sources.

10. How tall was the early horse? 50 cm (20 inches) tall.

11. The ancestors of the mastodon entered North America 14 million years ago from Asia. How did they cross into North America?

Asia and North America were part of the same
land mass; they had not yet split apart. The Mastodon
simply travelled over to North America on foot.

12. How can one determine the direction of ice movement by looking at a drumlin? _____
The pointed end points in the direction
of the ice movement.

13. What did the South Saskatchewan river originate as? _____
Glacial spillway.

14. Push the start button on the glacier diorama and answer the following question: What other glacial feature, other than drumlins, shows the path of ice flow? _____
Fluting fields.