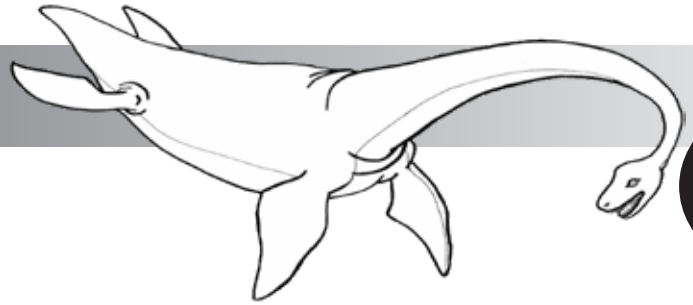


I'm a plesiosaur. You can find me opposite the mosasaur in the Earth Sciences Gallery.

PUZZLING PAST

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

BRONTOTHERE
COPROLITE
CRETACEOUS
DEVONIAN
DINOSAURS
DISCOVERY
EARTH
EXTINCT
FOSSIL
GEOLOGY
GLACIERS
HISTORY
MAMMALS
MAMMOTH
METEOR
MINERALS
MUSEUM
OIL
PREHISTORIC
ROCKS
SCIENCE
SEDIMENTARY
TERTIARY
TRILOBITE

Fill in the leftover letters from the word search, in the order they are found, to find the secret message!

IN 1868, ONE OF THE LONGEST RUNNING FEUDS IN MODERN SCIENCE GOT OFF TO A ROUSING START WHEN A PALAEONTOLOGIST RECONSTRUCTED A PLESIOSAUR SKELETON WITH ITS HEAD ON ITS TAIL RATHER THAN ITS NECK.

RSM ROYAL SASKATCHEWAN MUSEUM

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. All dinosaurs went extinct 66 million years ago except for the avian dinosaurs (birds). Look around the CN *T. rex* gallery and gather evidence that T.rex and other theropod dinosaurs are related to birds. Here is a hint: can you make a wish on a *T. rex* like you might on a certain turkey bone? Wish bone, feathers, similar feet

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.

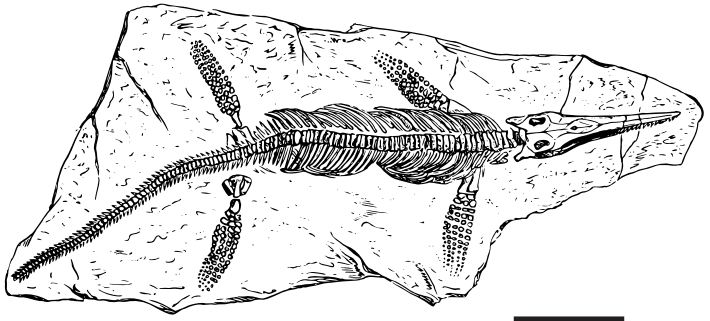
4. In the mososaur diorama, what ancient creature resembles a modern day creature? Great white shark

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 now 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 remained 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? This is not an articulated skeleton. Carefully uncover and remove the fossil. Arrange fossil in a more articulated way. Use scientific comparison to other fossil examples and 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.



RSM ROYAL SASKATCHEWAN MUSEUM

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? 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. What resource formed during the Paleocene Epoch and what was the source of the resource? What mammal can be seen in the mural from this time period? Coal swamps of southern Saskatchewan during the Paleocene Epoch are the source of lignite coal deposits. The mammal is Multituberculate Ptilodus kummae.

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

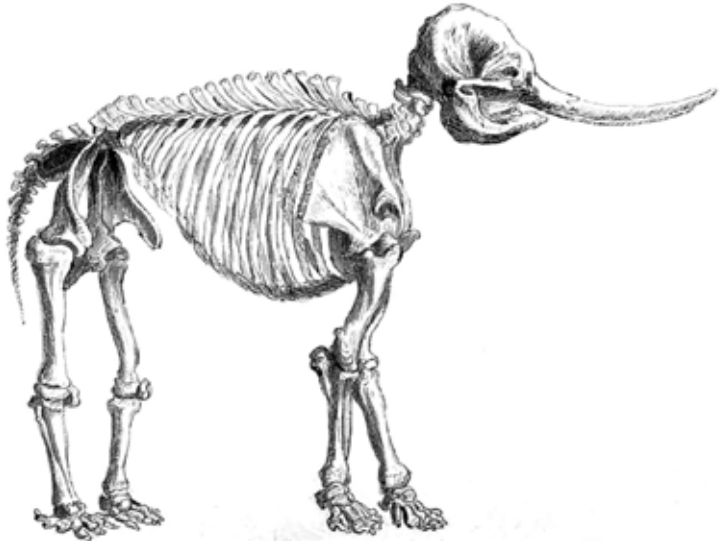
12. The ancestors of the mastodon entered North America 14 million years ago from Asia. How did they cross into North America? The ancestors of mastodon travelled to from Asia to North America by foot while they were connected by land.

13. 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.

14. What do all major rivers in southern Saskatchewan originate as? Glacial spillway.

15. What is a prairie pothole and how do they form? How do prairie potholes impact Saskatchewan's wildlife today? Prairie potholes formed when ice blocks were buried within glacial deposits. When they melted the sediments above collapsed forming a hole. Today they fill with water in spring and provide nesting habitat for waterfowl.

16. Compare the fossil molar from the mastodon (located across from the mastodon diorama) and the fossil molar from the mammoth. How do their differences indicate a difference in diet? The mastodon molar had large bumps and was good for eating woody twigs and shrubs. The mammoth molar has much smaller ridges and was good for eating grasses.



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