ERTH 2401 (Dinosaurs)
Canadian Musem of Nature Field Trip Exercise

Name: _____ Student Number: _____

1. Compare the lower jaws of carnivorous and herbivorous **dinosaurs** to the fossil **mammals** displayed across from ***Chasmosaurus*** in the dinosaur gallery.

a) What features of the jaw do the herbivorous animals have in common?

b) What feature of the jaw do the dinosaurs have in common? (Hint: look at the number of bones that make up each jaw)

2. Pathological bones (such as the left **humerus** of the gallery's ***Daspletosaurus***) often have lumpy growths or parts that look eaten away, and provide us with a record of injury and infection in fossilized animals. Where do you see a possible example of pathology in the mounted skeleton of ***Hypacrosaurus***?

3. The skeleton of ***Thescelosaurus*** was only partially complete when found. Which part(s) of the skeleton do you think were sculpted based on related species to complete the display?

4. What is unusual about the quality of preservation for the hadrosaur ***Edmontosaurus***?

5. Dinosaur hindlimbs were driven by powerful muscles that attached to the side of the tail. A recent study nicknamed one species a **"dinosaur speed demon"** because the unusual shape of the tail ribs- long, pointing upwards, and with hooked tips- was interpreted as a specialization to increase the size of these muscle attachments. Which of the dinosaurs in the CMN gallery was this study referring to?

6. Ceratopsid (horned) dinosaurs are largely classified by characteristics of their cranial ornamentation. Complete the following table with your observations of ***Triceratops, Styracosaurus, Anchiceratops*** and ***Chasmosaurus irvinensis*** (also known as ***Vagaceratops***).

	RELATIVELY SHORT, ROUNDED FRILL	**RELATIVELY LONG, RECTANGULAR FRILL**
NO HORNS OVER EYES		
LONG HORNS OVER EYES		

7. Examine the skeletons of the turtle ***Archelon***, the mosasaur ***Platecarpus*****,** and the **elasmosaurid plesiosaur**.

a) What feature(s) do these distantly related marine reptiles have in common?

b) What feature(s) suggest a difference in swimming styles?

8. Sketch and label the pelvis of

a) ***Hypacrosaurus*** or ***Edmontosaurus***

b) ***Carnotaurus*** or ***Daspletosaurus***

c) Which is a **saurischian** and which is an **ornithischian**?

9. Restoring disarticulated fossils to a lifelike position can be quite open to interpretation and debate. This photo shows the forelimb of a ***Chasmosaurus*** skeleton mounted at the Royal Ontario Museum (Toronto). How does the way the bones are assembled differ from the mounted ***Chasmosaurus*** here in Ottawa, and what affect does this have on the dinosaur's posture?