## 22.1 Earth's Past



Summarize main points from each video.

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# Topic Introduction



## Summarize your understanding of each paragraph.

The geologic time scale (GTS) uses several unfamiliar words. With it,

time can be understood from the largest and most general intervals, to the smallest, most specific intervals.
Eons are the largest interval units into which Geologic Time is divided and represented. There are four Geologic Eons. The first three (Hadean, Archean, and Proterozoic Eons) are frequently lumped together – and just referred to as the Precambrian.
The Phanerozoic Eon began 540 Million Years Ago and continues into the Present. The Rocks deposited during the Phanerozoic Eon contain evidence of fossilized hard body parts of modern living things.
Eons are divided up into Eras. Eras are divided up into Periods. Periods are divided up into Epochs. As an example, the Paleozoic Era has seven Periods beginning with the Cambrian Period. Interestingly this is where <u>Pre</u> cambrian got its name – BEFORE Cambrian.

Adapted from: <a href="https://imnh.iri.isu.edu">https://imnh.iri.isu.edu</a>

# Read/Summarize Text

- 1. Read the passage.
- 2. Underline key expressions in each sentence.
- 3. Re-write each word (or expression) you underlined.
- 4. Summarize the passage.

Re-write words you underlined

#### **Quaternary Period**

Since the outset of the Quaternary, whales and sharks have ruled the seas, topping a food chain with otters, seals, fish, squid, crustaceans, and plankton filling in the descending rungs.

On land, the chilliest stretches of the Quaternary saw mammals like mammoths, rhinos, bison, and oxen grow massive and don shaggy coats of hair. They fed on small shrubs and grasses that grew at the ever moving edges of the ice sheets. About 10,000 years ago, the climate began to warm, and most of these so-called megafauna went extinct. Only a handful of smaller, though still impressively large, representatives remain, such as Africa's elephants, rhinoceroses, and hippopotamuses.

https://www.nationalgeographic.com/science/prehistoric-world/quaternary/

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# Read Text for Comprehension

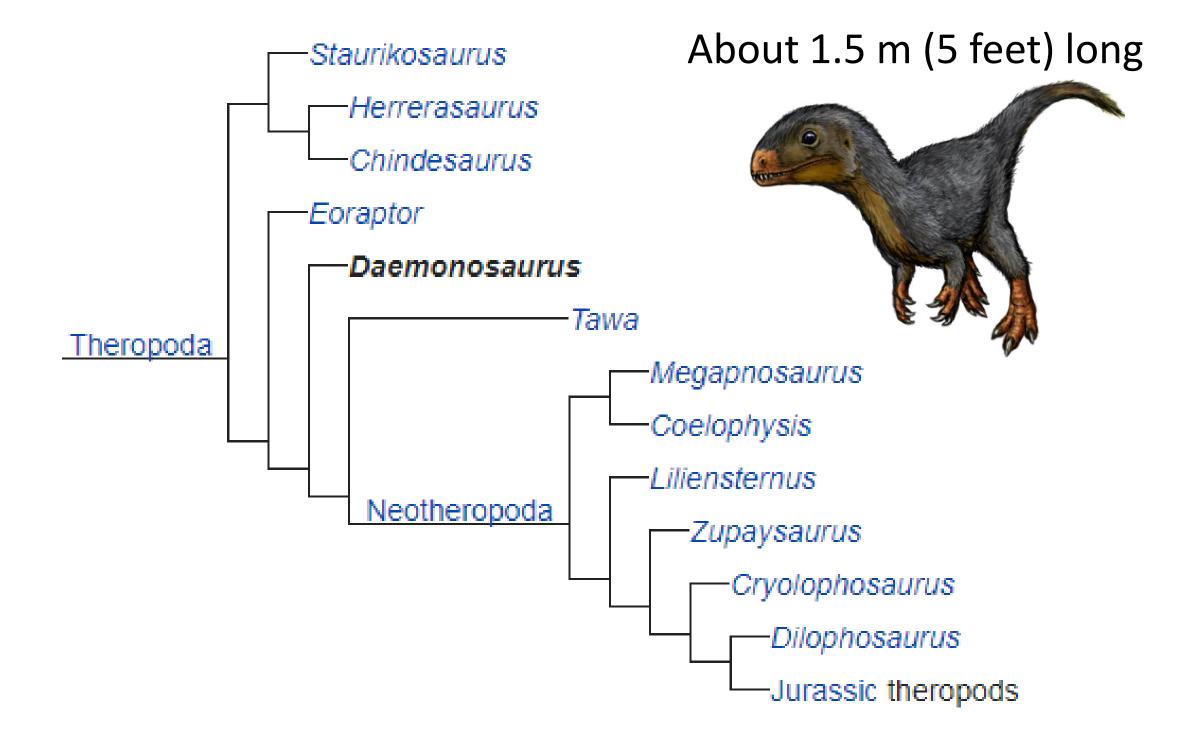
Read this article for deeper understanding. No summary is required, although you may want to circle, underline, or mark key ideas and words.

### Daemonosaurus

Daemonosaurus (pron.:"DAY-mow-no-SORE-us") is an extinct genus of theropod dinosaur from the Late Triassic of New Mexico. Fossils have been found from deposits in the Chinle Formation, which is latest Triassic in age. While theropods had diversified into several specialized groups by this time, Daemonosaurus is a basal theropod that lies outside the clade Neotheropoda. Daemonosaurus is unusual among early theropods in that it had a short skull and long protruding teeth.

Daemonosaurus is a basal theropod that lies outside the clade Neotheropoda, a group that includes more advanced Triassic theropods like Coelophysis and their descendants. With such a basal position, it represents a lineage that extended from the earliest radiation of dinosaurs in the Middle Triassic with forms such as Eoraptor and Herrerasaurus from South America. A phylogenetic analysis conducted in its original description found Daemonosaurus chauliodus to be closely related to Tawa hallae, a theropod that was described from Ghost Ranch in 2009.

This is a cladogram based on the phylogenetic analysis conducted by Sues et al. in 2011, showing the relationships of Daemonosaurus:



https://en.wikipedia.org/wiki/Daemonosaurus

# Draw Illustration



## Copy and Label the Illustration in the Space Provided

C	Cenozoiz Era	Quaternary
	65 Million Years Ago To Present Day	Tertiary
	Mesozoic Era	Cretaceous
Eon	248 to 65	Jurassic
Million Years Ago	Triassic	
Phanerozoic	Paleozoic Era 540 to 248 Million Years Ago	Permian
		Pennsylvanian
		Mississippian
		Devonian
		Silurian
		Ordovician
		Cambrian

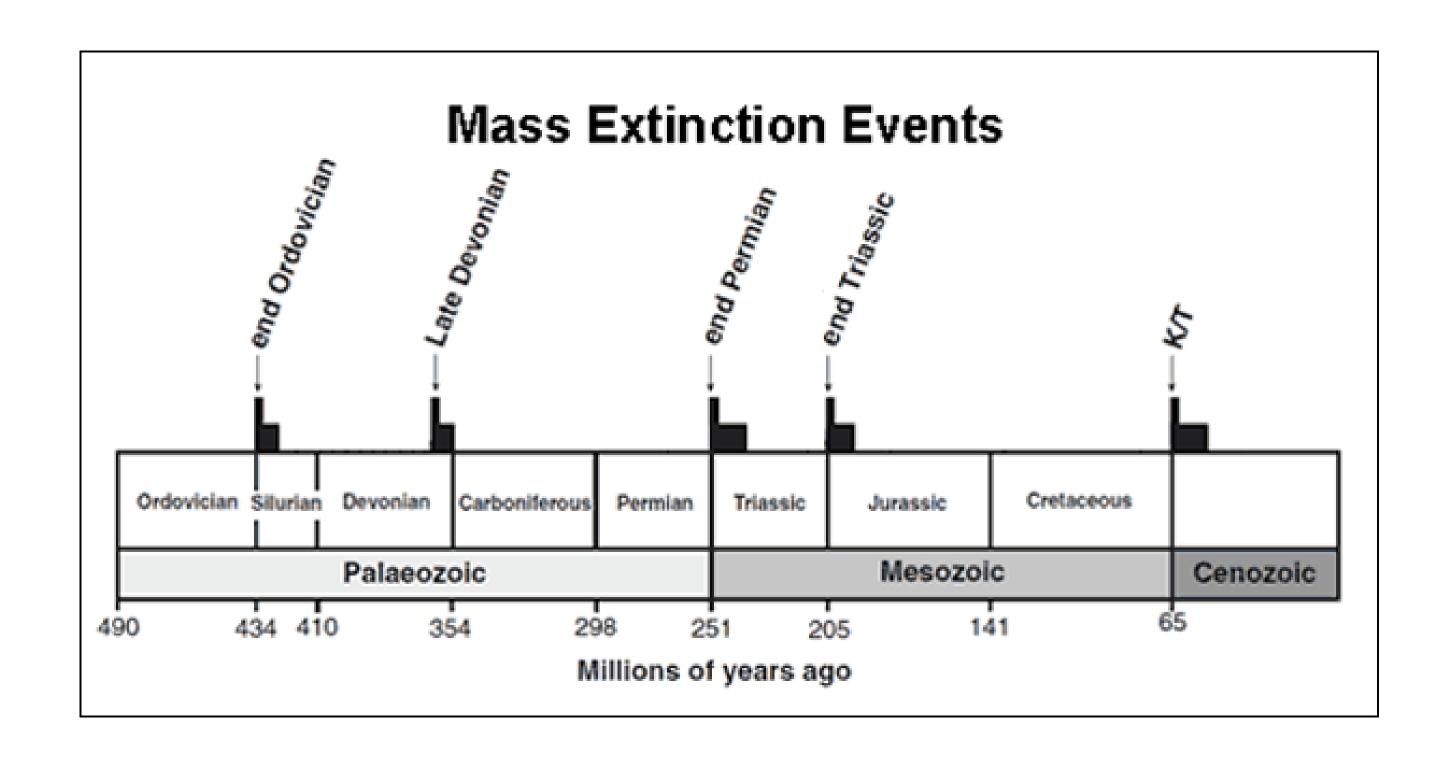
Draw (Copy) the Illustration Here

# Interpret a Graph



Write the title of the	graph		
Circle the type of cha	art this repres	sents	
Bar Chart	Line Chart	Pie Chart	Other
If applicable, What does tl	he X-axis repr	esent	
What does tl	he Y-axis imp	ly	<del></del>
Summarize what this	s graph repres	sents or conv	eys

http://www.earlyearthcentral.com/extinctions\_page.html



# **Show-Off Your Smarts!**



### **Instructions**

- Complete as an individual or small group.
- Discuss your ideas/answers/responses in a small group.
- Select one person to present your responses to the class.

<b>Q1.</b>	Why do Earth scientists need a geologic time scale?
<b>Q2.</b>	Why are some units of the geologic time scale longer and some shorter?
Q3.	Why are "Ice Ages" significant to identification of time periods in the Geological Time Scale?

## Find the Words

#### **Eons and Eras**

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ARCHEAN
NEOARCHEAN
PROTEROZOIC
CHAOTIAN
MESOARCHEAN
NEOPROTEROZOIC
ZIRCONIAN
HADEAN
MESOPROTEROZOIC
PALEOARCHEAN

## **Periods**

X Μ E N K N 0 Ν  $\mathbf{E}$ U A A U A  $\mathbf{z}$ X K A K R I  $\mathbf{T}$ L U N A S O H G E A U H A N A N G G P A N F N 0 X  $\mathbf{N}$ M A V AALBAR A N R V BMULO C H ACASTAN
EDIACARAN
ISUAN
PONGOLAN
VAALBARAN
COLUMBIAN
EUKARYIAN
METHANIAN
RODINIAN
CRYOGENIAN
OXYGENIAN
SIDERIAN