

# HISTORY OF LIFE ON EARTH

2015

UNIVERSITY OF CALIFORNIA  
CLIMATE PROTECTION FUND  
"BIOLOGY EDUCATION"

# OBJECTIVES

- 1. To identify the dates and sequence of the periods in the geologic time scale;**
- 2. To identify the major events in each major period.**

A view of Earth from space, centered on the African continent. The landmasses are shown in shades of green and brown, while the oceans are a deep blue. The background is a black void filled with numerous small, bright white stars.

**WHAT IS THE AGE OF THE  
EARTH?**

**ANSWER: 4.6 BILLION YEARS**

**WHAT WAS THE EARTH A  
MILLION YEARS AGO?**





When did man first appear on Earth?

**1 MYA**

# CLASS MISSION

- You will be given random pictures and you are tasked to arrange them chronologically according to which came first.



# ANSWER THE FOLLOWING QUESTIONS

- 1. What were the 4 analogies used to understand the earth's age according to the film?
- 2. Why is it hard to create a timeline of events chronicling Earth's history?
- 3. What are the 4 eras of Earth's Time mentioned in the video? Describe it briefly.

**GROUP YOURSELVES!**  
**PREPARE 1 WHOLE SHEET OF PAPER PER**  
**GROUP!**



WATCH THIS VIDEO 😊

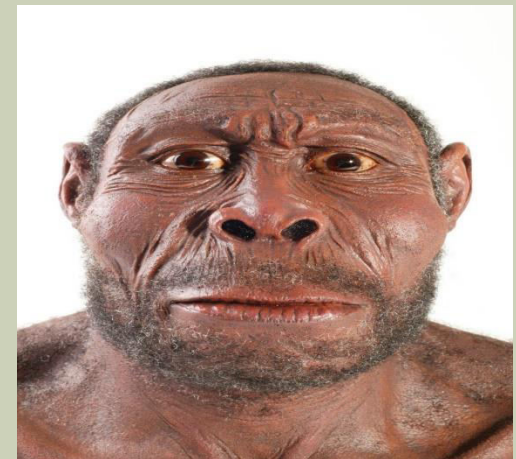
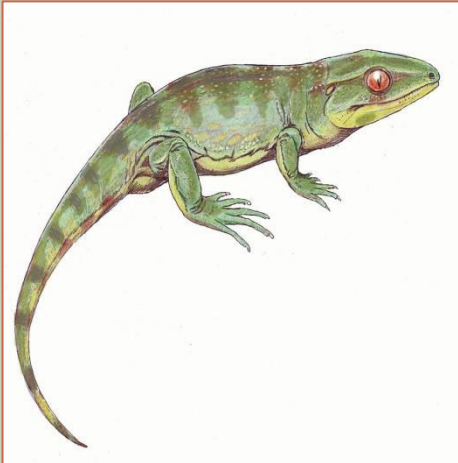
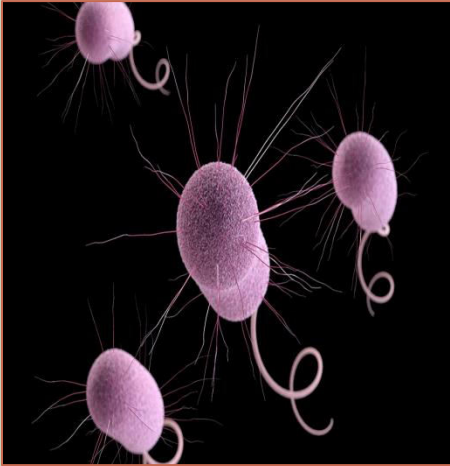
1.GEOLOGICAL TIME  
SCALE

2.FOUR WAYS TO  
UNDERSTAND THE  
EARTH'S AGE

# **COLLABORATE NOW!!**

- **YOU ARE GIVEN 15 MINUTES TO DO THIS!  
TIMER STARTS NOW!**

# THE CORRECT ANSWER...




**LET US DISCUSS YOUR  
ANSWERS! 😊**

# ORAL RECITATION

**How does  
understanding the  
past help us  
understand the  
present?**



A person's head and shoulders are shown from the back, looking out over a vast, hazy cityscape. The person's head is in the foreground, and their torso is visible. The background is a dense, sprawling city with many buildings and green spaces, all visible through a hazy, atmospheric lens. The person's head is positioned at the top center of the frame, and their shoulders are at the bottom center. The cityscape is visible through the person's head and shoulders, suggesting a connection between the person and the city.

What must we humans  
do to ensure we will still  
be able to exist longer for  
many generations?



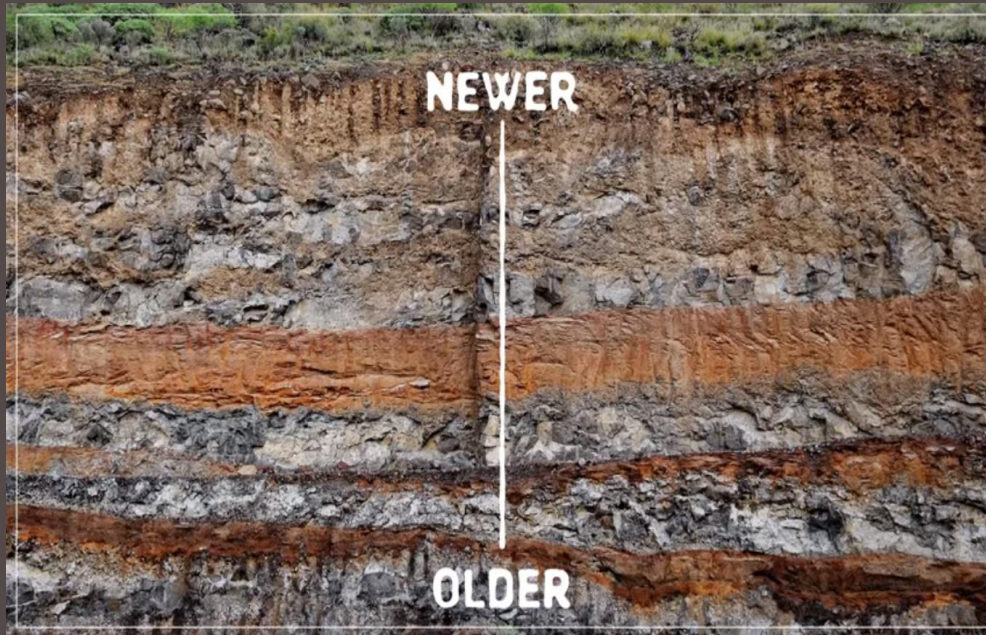
# LECTURE

**The Geologic Time Scale (GTS) is a system of chronological dating that relates geological strata (stratigraphy) to time. It is used by geologists, paleontologists, and other Earth scientists to describe the timing and relationships of events that have occurred during Earth's history.**

# NICOLAS STENO (1669)

## 1<sup>ST</sup> LAW OF STRATIGRAPHY

Science interpreting the strata or layers of rocks in the earth's outer surface.



# WILLIAM SMITH (1990)

**FOSSILS! FOSSILS! FOSSILS!**

Comparing the remains of ancient organisms from different rock formations. Thus, could match their ages regardless of how far apart they were.



# FOUR MAJOR DIVISIONS OF GEOLOGIC TIME SCALE

## **EON**

Largest division of the geologic time scale; spans hundreds to thousands of million years ago. (MYA)

## **ERA**

The division in an era that span time periods of tens to hundreds of million years.

## **PERIOD**

A division of geologic history that spans no more than one hundred MYA.

## **EPOCH**

The smallest division of the geologic time scale characterized by distinctive organisms.

# **My Life History**

**Create a timeline of events that happened to you since you were born up to present time. Choose only 5-10 events that you think are the most important.**

# ASSIGNMENT

- Make a table in your notebook of the geologic time scale (GTS) and include the following details;
  1. Major divisions of the GTS
  2. Major events and characteristic organisms