Weather, Erosion & Climate

Earth Science

Summarize main points from each video.

Video Title / topic _____

Video Title / topic _____

Video Title / topic _____

Topic Introduction

Summarize your understanding of each paragraph.

You probably already know this – but, weather and climate are two very different things. Weather is the day-to-day state of the atmosphere, and its short-term variation in minutes to weeks.

People generally think of weather as the combination of temperature, humidity, precipitation, cloudiness, visibility, and wind. We talk about changes in weather in terms of the near future: "How hot is it right now?" "What will it be like today?"

Climate is the weather of a place averaged over a period of time, often 30 years, or more. Earth scientists think of climate in terms of millions of years – even tens of millions of years.

Climate information includes the statistical weather information that tells us about the normal weather, as well as the range of weather extremes for a location.

Extract from nsidc.org/cryosphere/arctic-meteorology/climate_vs_weather

Introduction (continued)

Summarize your understanding of each paragraph.

Earth's erosion, weathering and climate each impact the other. The concepts can be studied independent from each other – or as inter-related phenomena .

Erosion is distinguished by the movement of material from one location to another. Erosion is the action of water flow or wind that removes soil, rock, or dissolved material from one location and transports it to another location.

Weathering is distinguished by the breaking down of material where it is located. It can be seen with rocks, soil, and minerals – but, also with wood and even artificial materials. It happens when objects contact Earth's atmosphere, water, and biological organisms.

Climate changes happens over a long period of time. When large-scale changes take place (such as with glaciations), Earth might experience more frequent and intense weather events. This can increase erosion such as large volumes of sediment in rivers.

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.**

How Are Landslides Caused?

1

2

A landslide is any geologic process in which gravity causes rock, soil, artificial fill or a combination of the three to move down a slope. Several things can trigger landslides, including the slow weathering of rocks as well as soil erosion, earthquakes and volcanic activity.

Landslides are powerful geologic events that happen suddenly and cause devastation in areas with unstable hills, slopes and cliff sides. Each year in the U.S. landslides can cause great damage to buildings and property, in addition to changing the surrounding habitats.

https://www.scientificamerican.com/article/sliding-science-how-are-landslides-caused/.

Re-write words you underlined

3

_____ _____ _____

_____ _____ _____

Using a complete sentence, summarize or rephrase the passage

4

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.

California's gold rush began in 1848. James W. Marshall at Sutter's Mill in Coloma, California is credited with ushering in news of gold. Eventually, 300,000 people relocated near there from the rest of the United States and abroad.

By 1849, the city of San Francisco, California became the hub for commerce related to the gold rush.

Over the next decade, California began settlements and enterprises unrelated to the prospects of gold – through farming, manufacturing and other industries. San Francisco flourished.

Then 1906 happened.

The 1906 San Francisco earthquake rumbled large at 5:12 a.m. on Wednesday, April 18. The earthquake has since been estimated at a magnitude of 7.9.

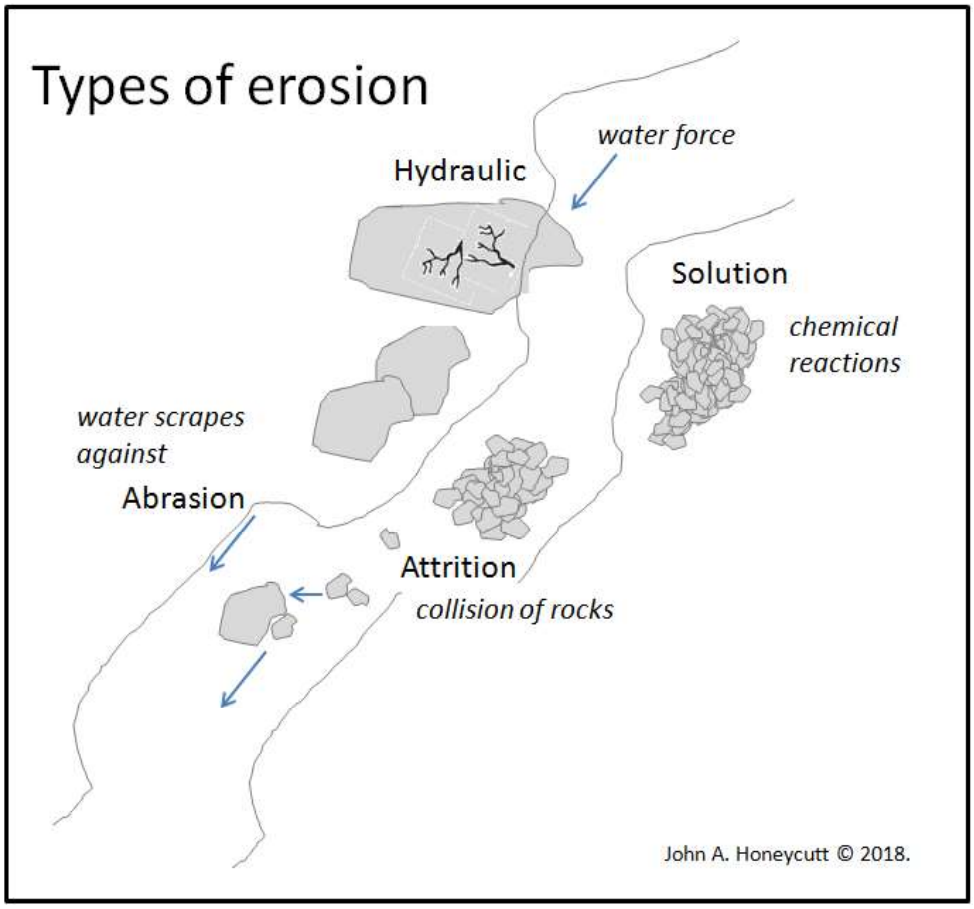
Following the intense force of the earthquake, fires broke out in the city lasting for days. Also, landslides took down businesses, industrial developments, and homes. Still today, the death toll remains the greatest loss of life from a natural disaster in California's history and high in the lists of all American disasters.

Since then, California has experienced no fewer than a dozen more major landslide events: Devil's Slide (still ongoing in San Mateo County); Ferguson landslide; Point Fermin; Portuguese Bend; Truttman Sink; Verdugo Hills Cemetery ; 1982 landslides in San Francisco Bay Area; Yosemite Valley landslide; La Conchita mudslide; Camarillo Springs; Montecito, Santa Barbara County; State Route 1 – Landslides; and 2018 South California landslides.

The gold rush did not bring about the natural catastrophes. The gold rush was, however, the instrumental reason California become so populated and so fast. No doubt the geographic area we no call California has experienced many tens of thousands of such catastrophe's – long before civilization took hold. But, we pay high attention to them – largely because of the damage to life and property these forces of nature can take.

Composite from several sources. (John A. Honeycutt)

Draw Illustration



Draw (Copy) the Illustration Here

Interpret a Graph

Write the title of the graph _____

Circle the type of chart this represents

Bar Chart *Line Chart* *Pie Chart* *Other*

If applicable,

What does the X-axis represent _____

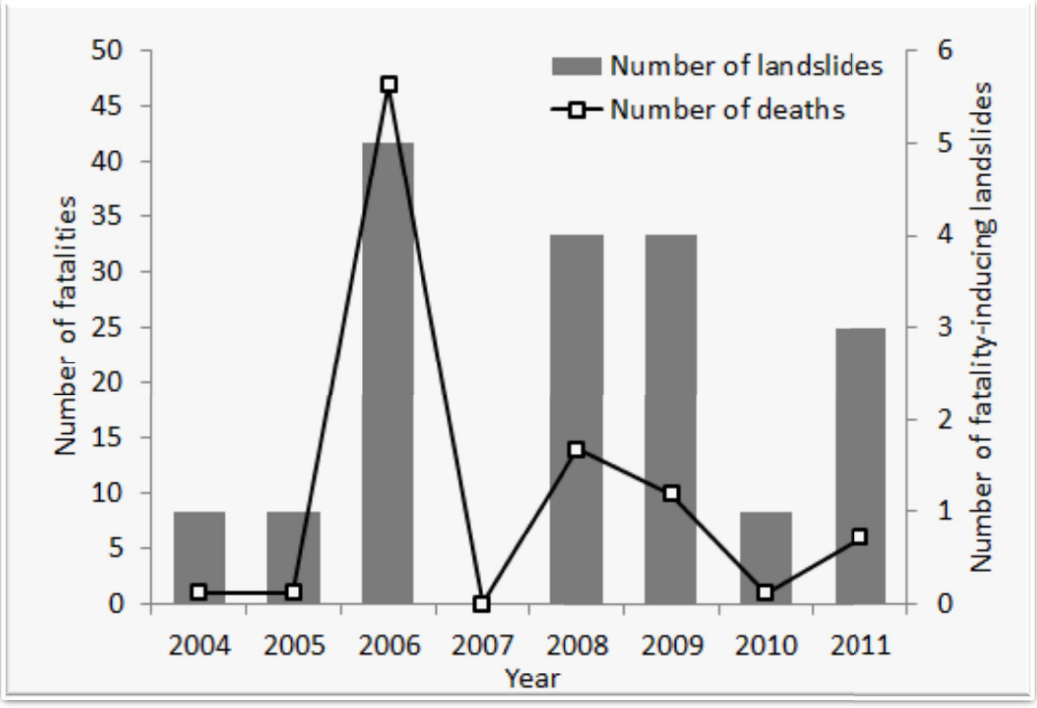
What does the Y-axis imply _____

Summarize what this graph represents or conveys

_____

blogs.agu.org

South Korea's landslides: Fatality-inducing landslides occur often in South Korea. Data shown represents 2004 - 2011.



Show-Off Your Smarts!

Q1. How can information about WEATHER be applied to a your life?

Q2. How can information about CLIMATE be applied to a your life?

Q3. When do scientists need to apply this information? How?

Q4. How would a person from 100 years ago view this information?

Q5. How does this topic connect to other science topics or math?

Write five new or interesting words you encountered during this introduction.

1.
2.
3.
4.
5.

Make a Venn Diagram

Passage "A" Title - Weather

Summarize your research here ...

Passage "B" Title - Climate

Summarize your research here ...

Complete the Venn Diagram.