***A close up of a dinosaur

Description automatically generatedFossils Summary – Student: \_\_\_\_\_\_\_\_\_\_\_\_\_\_***

Fossils are the evidence of life from the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. Without fossils, we would not know as much about **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** as we do today! Fossils tell us what kinds of\_\_\_\_\_\_\_\_\_\_\_\_ and **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** existed on Earth a long time ago, but also how they lived, what they ate and what their **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**looked like. A scientist that studies fossils is called a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. As new fossils are found, we understand more about **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and how we evolved.

Animal fossils give us a lot of clues about an animal's environment. It is hard to know what a dinosaur looked like; we have to **\_\_\_\_\_\_\_\_\_\_\_\_\_** it with animals we have nowadays to understand how prehistoric animals were built.

Fossils are formed from an **\_\_\_\_\_\_\_\_\_\_\_\_\_** organism or from **\_\_\_\_\_\_\_\_\_\_** of an organism, such as a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. Fossils can also be formed by **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, **\_\_\_\_\_\_\_\_\_\_** and **\_\_\_\_\_\_\_\_\_\_\_**.  
  
The best-preserved fossils happen when the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** somehow isolated the organism from **\_\_\_\_\_\_\_\_\_\_**. As more and more layers of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and earth get deposited on top of the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, all the **\_\_\_\_\_\_\_\_\_\_** is squeezed out of it and **\_\_\_\_\_\_\_\_\_\_\_\_\_** from the soil replace the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** found in the organism, turning it into **\_\_\_\_\_\_\_\_\_\_\_\_**. This process is called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**  
  
One of the most important fossil **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** in the world can be found right here in B.C.  
  
It is called the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, located close to the Alberta border in the Yoho National Park. These fossils are from the \_\_\_\_\_\_\_\_\_\_\_ period, over **\_\_\_\_\_\_\_\_** million years ago. These deposits are important because they show the imprints of the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of the animals, in effect producing a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of what the animal looked like.  
  
One of these animals found in the shale was the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, a two-meter-long monster possessing primitive **\_\_\_\_\_\_\_\_\_\_**. The findings enabled paleontologists to come up with the depiction we know today.

The fossils enabled us to understand the life-expanding period known as the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and how all the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** fit together in harmony. It turns out every species had their place in the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, just as they do today.  
  
There were the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_,** the \_\_\_\_\_\_\_\_\_\_\_\_**,** the **\_\_\_\_\_\_\_\_\_\_\_\_\_,** the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. Each one of them had their own job to maintain equilibrium in their environment.

How did these fossils become so well preserved? It turns out a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** happened a long time ago, isolating them from **\_\_\_\_\_\_\_\_\_\_\_** and **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** that would have **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** the organisms. This happened fast; the animals barely saw it coming. Many fossils are formed this way.

These Cambrian animals actually lived far away, near the **\_\_\_\_\_\_\_\_\_\_\_\_**; after millions of years, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** movements displaced the now-petrified **\_\_\_\_\_\_\_\_\_\_**, pushing them up and eventually **\_\_\_\_\_\_\_\_\_\_\_\_\_** them here in B.C.

Not all fossils are found in sedimentary rocks. Sometimes, **\_\_\_\_\_\_\_\_\_** organisms get trapped in **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, just like the movie Jurassic Park. When the resin hardens and turns to **\_\_\_\_\_\_\_\_\_\_\_**, the organism becomes a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.

Some fossils can also be found in **\_\_\_\_\_\_\_\_\_\_\_**. Technically speaking, they have not truly fossilized; they have just become trapped in ice, and so all the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** could not have been replaced by **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, which is why many of the original mammoths found frozen in ice have unfortunately **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** rather quickly. The baby mammoth below is around 37 thousand years old. A well-known mammoth specimen was preserved very well because it was engulfed in **\_\_\_\_\_\_\_\_\_\_\_\_** and **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** from the inside out -- fun fact!

After something dies, it is usually **\_\_\_\_\_\_\_\_\_\_\_** by another organism, or rots away. Very very few organisms become **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, as the conditions have to be perfect. Three conditions must be met for an organism to become a fossil.  
  
1. It must be **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** that prevent other organisms from eating it  
2. Its decomposition has been **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** because there is no **\_\_\_\_\_\_\_\_\_\_\_\_** or the temperature is very **\_\_\_\_\_\_\_\_\_\_**  
3. The material that **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** the organism has turned to **\_\_\_\_\_\_\_\_\_\_** and hasn't moved for thousands or millions of years  
  
The best remains have died near a river bed, or live in the water near the ocean floor.

When the sediment accumulates over time, it is deposited in **\_\_\_\_\_\_\_\_\_\_\_\_**. These **\_\_\_\_\_\_\_\_\_\_\_\_\_** are clues about the **\_\_\_\_\_\_\_\_\_** of the fossils. Just like when you make a cake, the bottom layer gets placed first, **\_\_\_\_\_\_\_\_\_\_\_** fossil layers are usually found below **\_\_\_\_\_\_\_\_\_\_\_\_** fossil layers. This helps paleontologists figure out the order in which **\_\_\_\_\_\_\_\_\_\_\_\_\_** took place.  
  
Knowing which layer comes first helps us understand the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of fossils; it does not tell us **\_\_\_\_\_\_\_\_\_\_\_\_\_** they are in years, but it helps us know how old they are in **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** to each other. Fortunately, there is another way to find out the actual age of a rock or fossil. Many rocks contain tiny amounts of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** elements that change over time. People use specialized instruments to take detailed measurements of these changes, which gives them the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of a fossil. One of the most popular elements is **\_\_\_\_\_\_\_\_\_\_\_\_**. You can measure the age of some fossils using **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.

So, **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is a more **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** way to measure how old a fossil is.

A close up of text on a white background

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Fossils help us understand how life on Earth has changed over millions of years. They provide **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of the earliest organisms on Earth. The oldest fossils that have been found are from the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, and are over **\_\_\_\_\_\_\_\_\_\_\_\_\_** years old. Looking at fossils helps us understand how their environment might have been like. The fossil below was called "Tiktaalik", which means "**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**". Why do you think it got this name? What evidence would you look for to confirm this prediction?

A close up of an animal

Description automatically generatedBesides helping us understand organisms and environment from a long time ago, fossils also provide evidence of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** to species over time.  
In 2017, a new species of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** dinosaur was found in Alberta. Due to a lack of originality, they called it the "\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_." Finding a fossil is easy, but depicting it in an illustration has proven to be very hard. Knowing what you know regarding current birds (the closest we have to dinosaurs), do you think the Albertavenator is more likely to have looked like the image on the left or the one on the right?  
A close up of a bird

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Hint: One of these sells tickets!

Based on **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, Paleontologists have organized the history of life on Earth into a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. This is known as the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. It represents the **\_\_\_\_\_\_\_\_\_\_\_\_** and **\_\_\_\_\_\_\_\_\_\_\_\_** that took place in Earth's past, and shows how these events are **\_\_\_\_\_\_\_\_\_\_\_\_\_**.

The Geologic Time Scale is divided into **\_\_\_\_\_\_\_\_\_** major time periods called **\_\_\_\_\_\_\_\_**, each subdivided into smaller chunks of **\_\_\_\_\_\_\_\_\_\_**.

Fossils provide evidence of species becoming more **\_\_\_\_\_\_\_\_\_\_\_\_\_**, **\_\_\_\_\_\_\_\_\_\_\_\_\_** and **\_\_\_\_\_\_\_\_\_\_\_\_\_** over time. They also provide evidence that most of the species that were ever in the Earth are now **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, or gone forever. Some extinctions happened **\_\_\_\_\_\_\_\_\_\_\_\_\_** while others happened **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. There have been **\_\_\_\_\_\_\_\_** mass extinctions so far, but the most well-known one was caused by a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** and decimated the large (**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**) dinosaurs as well as many other species. After that time, there are no more fossils of those species.

The Geologic Time Scale below shows the five major extinction events. Note the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** increasing and the extinction events marked by the quick **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** of fossils.

A picture containing screenshot

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