Biology A · Unit 7 · Level 2 (modified)

Famous Fossils & Deep Time



TODAY'S PLAN

- 🦴 How fossils form
- 🪨 Rock layers
- 🦣 Washington's famous fossils
- 🕰️ Twine Time
- 🌉 Building Bridges

Review · 5 minutes

Quick Review



🧬 Living things change over time (evolution).

🦴 **Fossils** are our evidence of past life.

❓ Why are whole skeletons rare?

Words to Know

Words to Know



Fossil

The remains or traces of a living thing from long ago, kept in rock.



Rock layers

Layers of rock (strata). Older layers are at the bottom.



Mammoth

The Columbian mammoth is Washington's state fossil.



Extinct

When every member of a species has died.

Words to Know

More Words to Know



🕰️ **Deep time**: Earth is about 4.6 billion years old. Life began about 3.5 billion years ago.

🌳 **Petrified wood**: Minerals slowly replace wood, like at Ginkgo Petrified Forest in Vantage.

🍂 **Imprint**: A fossil shape pressed into mud that turned to rock, like a leaf print.

🌉 **Land bridge**: Land that connects continents so animals can move between them.

Learn

How a Fossil Forms

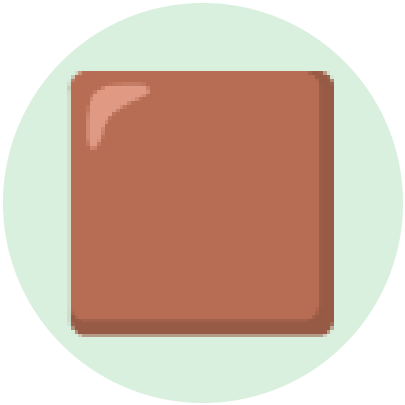


🟫 The organism must be buried **quickly** in **fine sediment** (mud, sand, ash).

🪨 Over a long time, **minerals** replace hard parts like bone, shell, and wood.

🍂 Some fossils are **molds**, **imprints**, or **footprints**.

🃏 Check 1 of 4



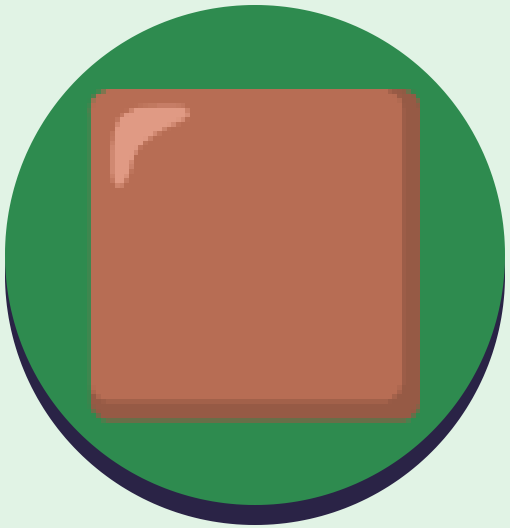
Fossils form best when an organism is…

Hold up 1, 2, or 3:

1️⃣ Left out in the sun

2️⃣ Buried quickly in fine sediment

3️⃣ Eaten by scavengers



Buried quickly in fine sediment

Fast burial protects it.

Learn

Reading Rock Layers

⬇️ **Older** layers are deeper; ⬆️ **younger** layers are on top.

📏 A species shows up as a **column** through the layers.

⏳ When a species goes **extinct**, its column ends.



🃏 Check 2 of 4



At one site, a deeper rock layer is usually…

Hold up 1, 2, or 3:

1️⃣ Younger

2️⃣ The same age

3️⃣ Older



Older

Layers stack up over time.

Learn

Washington's Famous Fossils

🦣 **Columbian mammoth**: state fossil, picked with help from elementary students.

🦖 First WA **dinosaur** bone (a theropod) found in the San Juan Islands in 2012.

🗿 **Clovis** stone tools in East Wenatchee: about 11,000–12,000 years old.



Learn

More WA Fossils



Blue Lake Rhino
a mold in lava rock



Seatac Sloth
a giant plant eater



Ginkgo forest
petrified wood at Vantage



Diatryma
giant bird footprints

Learn

Twine Time

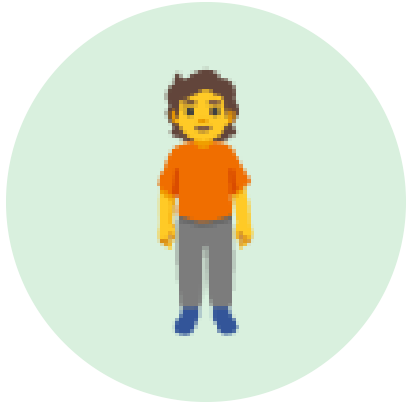


🌍 Earth is about **4.6 billion** years old.

🦠 First life (like algae) about **3.5 billion** years ago.

🧍 Humans are a tiny bit at the very **end** of the timeline.

🃏 Check 3 of 4



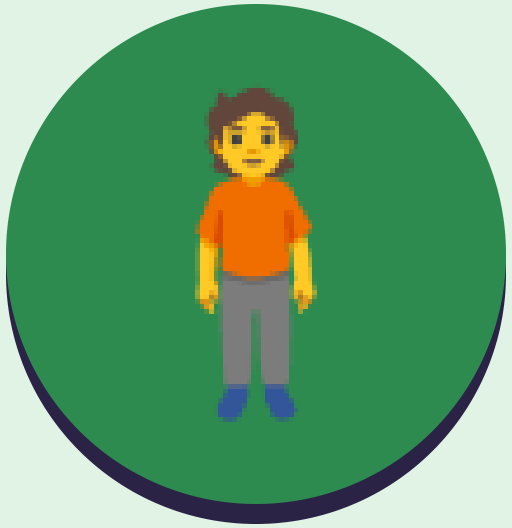
On the Twine Time timeline, humans are…

Hold up 1, 2, or 3:

1️⃣ At the very end

2️⃣ In the middle

3️⃣ At the start



At the very end

Humans are very recent.

Learn

Building Bridges



🌎 North and South America were **separate** for millions of years.

🌋 Plate movement built the **Central American land bridge**.

🦔 Animals crossed: armadillos and opossums came **north**.

🃏 Check 4 of 4



Animals found in only one region are…

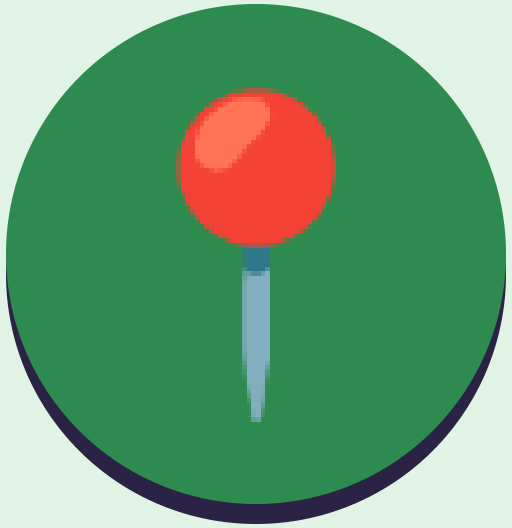
Hold up 1, 2, or 3:

1️⃣ Extinct

2️⃣ Fossilized

3️⃣ Endemic

✅ Answer · Card 4 of 4



Endemic

Endemic = only there.

Wrap-Up

Recap



Fossils
fast burial + minerals



Layers
deeper = older



WA fossils
mammoth, rhino, ginkgo



Land bridge
animals migrate

Wrap-Up

Exit Ticket



1️⃣ What conditions help a fossil form?

2️⃣ Which rock layer is oldest?

3️⃣ Name 2 Washington fossils.