

# SOLVE A SEDIMENTARY LAYERS PUZZLE

Did you know that the history of life on Earth is told through rocks?

Over millions of years, sediments such as sand and silt were laid down and compressed to form sedimentary rock layers. They preserve a record of ancient landscapes, climates, and organisms.

Scientists often determine the correct sequence of sedimentary rock layers using the fossils found within them. They compare the fossils to figure out if two layers are from the same geologic time period, or if one layer is older than the other.

Try reconstructing the layers below using the same strategy!

## 1. Photocopy and cut out the five strips of paper

Each strip represents a sedimentary rock layer formed during a certain time period.

## 2. Put the layers in correct order

Begin by placing B, the “oldest layer,” on the bottom. Then decide which layer comes next. It will have some of the same organisms as the older layer and some new ones. (Hint: Organisms do not disappear for a layer and then reappear.) Place it above. Continue until the layers are in order, with the youngest at the top. Check your answers and write the time period on each layer.



Dinosaur fossils have been discovered on every continent, even Antarctica.

## Explore More!

Look at the fossils within each layer. What plants and animals lived during the same time period? Then compare the layers to explore the changing plant and animal groups throughout Earth’s history. Which organisms survived from one time period to the next? Which ones went extinct? Could *Tarbosaurus* have hunted *Seismosaurus*? What organisms survived the mass extinction at the end of the Cretaceous Period?

<b>A</b>	gingko	dragonfly	sharks	dyrosaurs	birds	flowering plants	horses			
<b>B</b>	gingko	dragonfly	sharks	ammonites	ichthyosaurs	Postosuchus	pterosaur	Coelophysis	Effigia	<b>OLDEST LAYER</b>
<b>C</b>	gingko	dragonfly	sharks	ammonites	dyrosaurs	birds	ichthyosaurs	flowering plants	pterosaur	Tarbosaurus bataar
<b>D</b>	gingko	dragonfly	sharks	birds	flowering plants	horses	Homo sapiens			
<b>E</b>	gingko	dragonfly	sharks	ammonites	birds	ichthyosaurs	pterosaur	Seismosaurus	Stegosaurus	

Answers: Order of layers from top to bottom: D (Quaternary Period, 2 million years ago to present), A (Tertiary Period, 65-2 mya), C (Cretaceous Period, 145-65 mya), E (Jurassic Period, 200-145 mya), and B (Triassic Period, 250-200 mya).