LA COUNTY LIBRARY

DIY Library Program

BECOME A PALEONTOLOGIST

DINOSAUR BONES PUZZLES

Recommended for Ages 5 – 10

What is Paleontology? And what does a Paleontologist do?

Paleontology (pey-lee-*uh* n-**tol**-*uh*-jee) is the scientific study of plants and animals that lived long ago. In order to learn about plants and animals that are no longer around, **paleontologists** study the remains of plants, animals, and other living creatures which have been preserved beneath the earth and turned into minerals over time. These remains are called **fossils**. Fossils are the bones, or sometimes footprints, paleontologists use to figure out what the animal may have looked like and how it may have behaved. Studying ancient life helps us understand more about the long history of the Earth and the many plants and animals that have lived here in the past but are not here anymore.

To learn more about this scientific field of study, we are going to play the role of a paleontologist and see if we can piece together the fossils we just discovered. We've been incredibly lucky to discover a complete skeleton (something very rare in paleontological research!) but all of the bones seem to have moved around over time. Our job will be to carefully "excavate" the fossilized bones and try to put them back together in the arrangement we would have seen if the animal were still alive. Don't worry, you've got the scientific findings of all the paleontologists that came before you and can rely on other identified fossils and related research to guide your way.

Questions for Discussion:

- What is the science of paleontology?
- How do scientists study animals who lived long ago?
- How are fossils created? Why are they important in the study of paleontology?
- How long ago did the dinosaurs live?

DINOSAUR PUZZLES ACTIVITY

Materials Needed:

- Computer and printer with paper
- Scissors
- Glue stick
- Paper (to glue dinosaur bones onto)
- Optional: Markers/colored pencils/crayons

Follow these instructions to excavate your own paper dinosaurs!

1. **Adult caregivers:** Print copies of the dinosaur bones puzzles found below. Set aside the completed skeleton images to check the assembled skeletons after completion.

2. Review the eBooks and other resources below to familiarize yourself with dinosaurs and paleontology. Keep the resources nearby as they may be helpful in deciding how to arrange the dinosaur bones.

3. Have children begin cutting out the dinosaur bones. Have them examine each one as they cut it out and discuss whether the bone is easily identified (such as the skull or tail). As they cut each piece, place it on the paper in the position they think it might belong, but don't glue it down yet (they may change their mind later after they excavate all of the bones and begin arranging them).

4. Prompt children during this process to consider different aspects of the dinosaur's anatomy. Does this dinosaur walk on two legs or four? Does it look like it might spend most of its time on the ground, in the air, or underwater? Are there bones that resemble horns/spikes? What do the teeth look like and what can that tell us about the dinosaur?

   If children have difficulty, try returning to the resources to review some of the images. The resources included have a variety of illustrations depicting the animals as they may have appeared and behaved while alive as well as photographs of their fossilized skeletons (or replicas typically displayed in museums). Prompt children to compare their own dinosaur bones to the existing fossil record to look for similarities or differences. Remember to consider how dinosaurs physical characteristics relate to their likely behaviors as discussed in the resources.

5. Once children have decided how they want to arrange their dinosaur, have them glue it down to the paper to keep the pieces in place. Optionally, they can use crayons, markers, or other craft materials to draw what they think the dinosaur might look like on the outside. Scientific knowledge of dinosaurs' appearance is incomplete (as is the fossil record

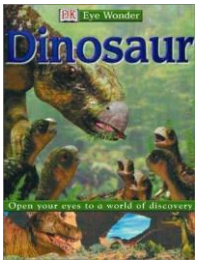
generally), so take the opportunity to be creative. Prompt children to explain why they made particular design decisions and relate this to the physical appearance of other animals they are familiar with. Does the dinosaur need camouflage to hide from predators or better hunt its prey? Are bright colors helpful to attract other members of its species or perhaps scare away potential predators?

6. Display the assembled dinosaur on the refrigerator or elsewhere in the house where everyone can admire the excellent work of your paleontologist.

RESOURCES AVAILABLE THROUGH LA COUNTY LIBRARY

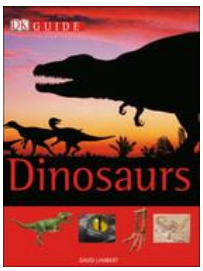
eBooks & Audiobooks

LA County Library offers numerous resources that can help you learn more about dinosaurs and the animal kingdom. Here are just a few, all of which are available as eBooks on OverDrive, Libby, and our Kids Virtual Reference Library.



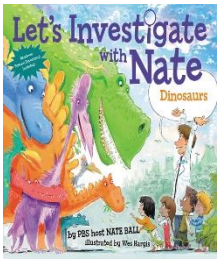
Eye Wonder: Dinosaur **by Dorling Kindersley**

Explores the world of dinosaurs from the ferocious Velociraptor to the gentle giant Barosaurus.



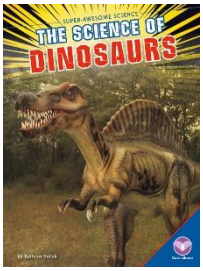
DK Guide to Dinosaurs **by David Lambert**

Learn how dinosaurs lived and died and explore topics such as habitats, size, hunting techniques, self-defense, courtship, and family life.



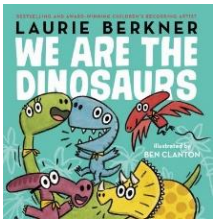
Let's Investigate with Nate #3: Dinosaurs **by Nate Ball**

If you have ever wanted to go back in time to meet dinosaurs, this book is for you. Join Nate as he travels back in time to dig up fossils, meet dinosaurs face-to-face, and discovery why dinosaurs are extinct.



The Science of Dinosaurs (Super Awesome Science) **by Kathryn Hulick**

Starting with little more than bones and rock, scientists have pieced together an amazing array of details about the lives of dinosaurs. The Science of Dinosaurs digs into the science behind some of prehistory's biggest, deadliest, and most fascinating creatures.



We Are the Dinosaurs **by Laurie Berkner**

Laurie Berkner's chart-topping, beloved hit *We Are the Dinosaurs* is now a picture book! Featuring an adorable cast of characters and vibrant, playful art by Ben Clanton, *We Are the Dinosaurs* transports readers back in time to when the dinosaurs roamed the earth.

ADDITIONAL RESOURCES

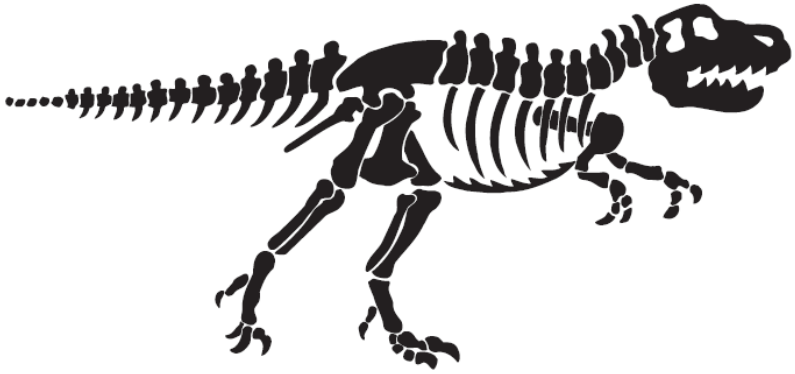
Want more dinosaur activities? You might consider browsing these lesson plans and activity ideas from the American Museum of Natural History. https://www.amnh.org/learn-teach/curriculum-collections/dinosaurs-activities-and-lesson-plans

Interested in visiting a museum from the comfort of your own home? Virtual museum tours are available from The Smithsonian National Museum of Natural History. https://naturalhistory.si.edu/visit/virtual-tour

DINOSAUR PUZZLE SOLUTIONS

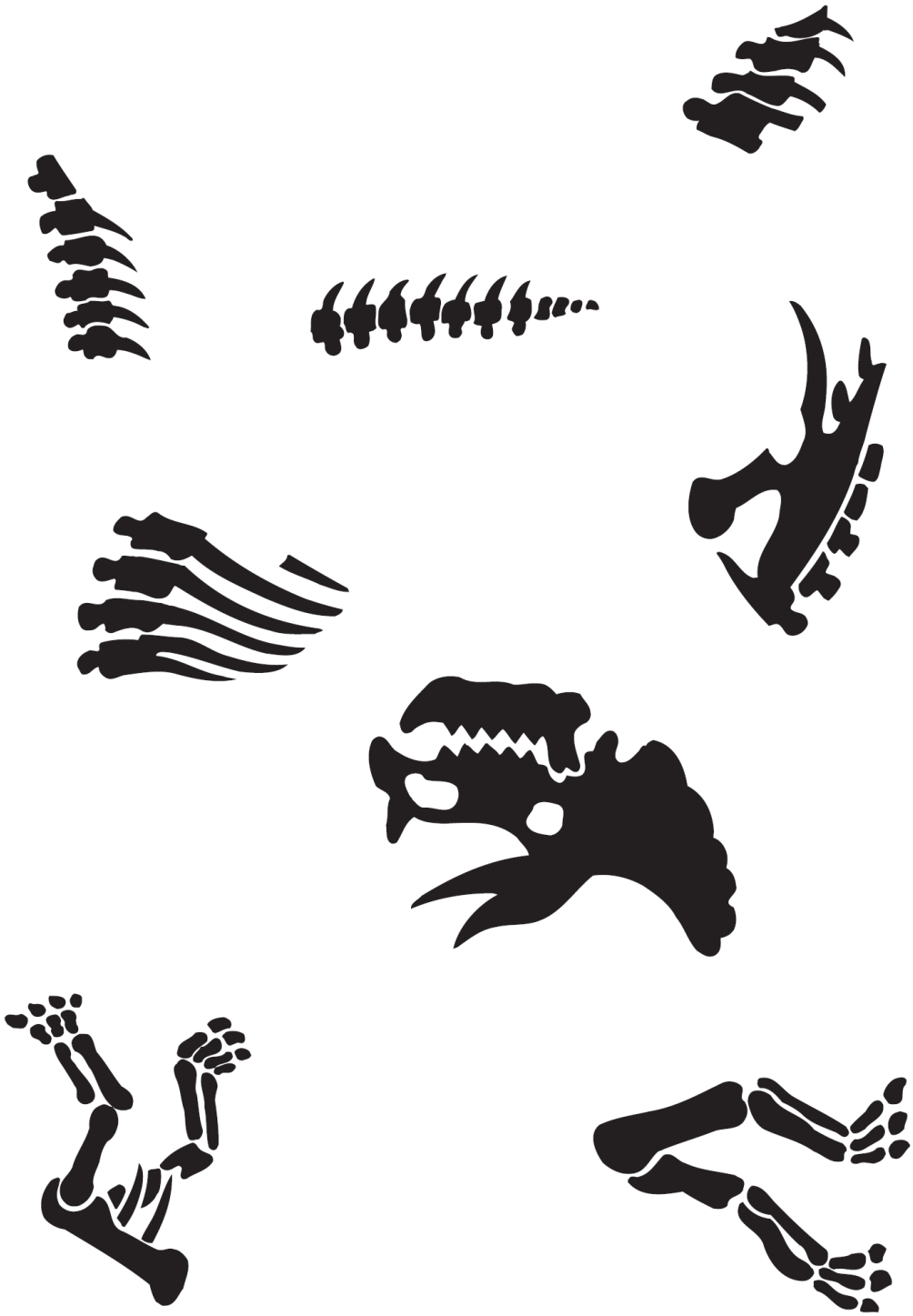
TRICERATOPS

TYRANNOSAURUS REX

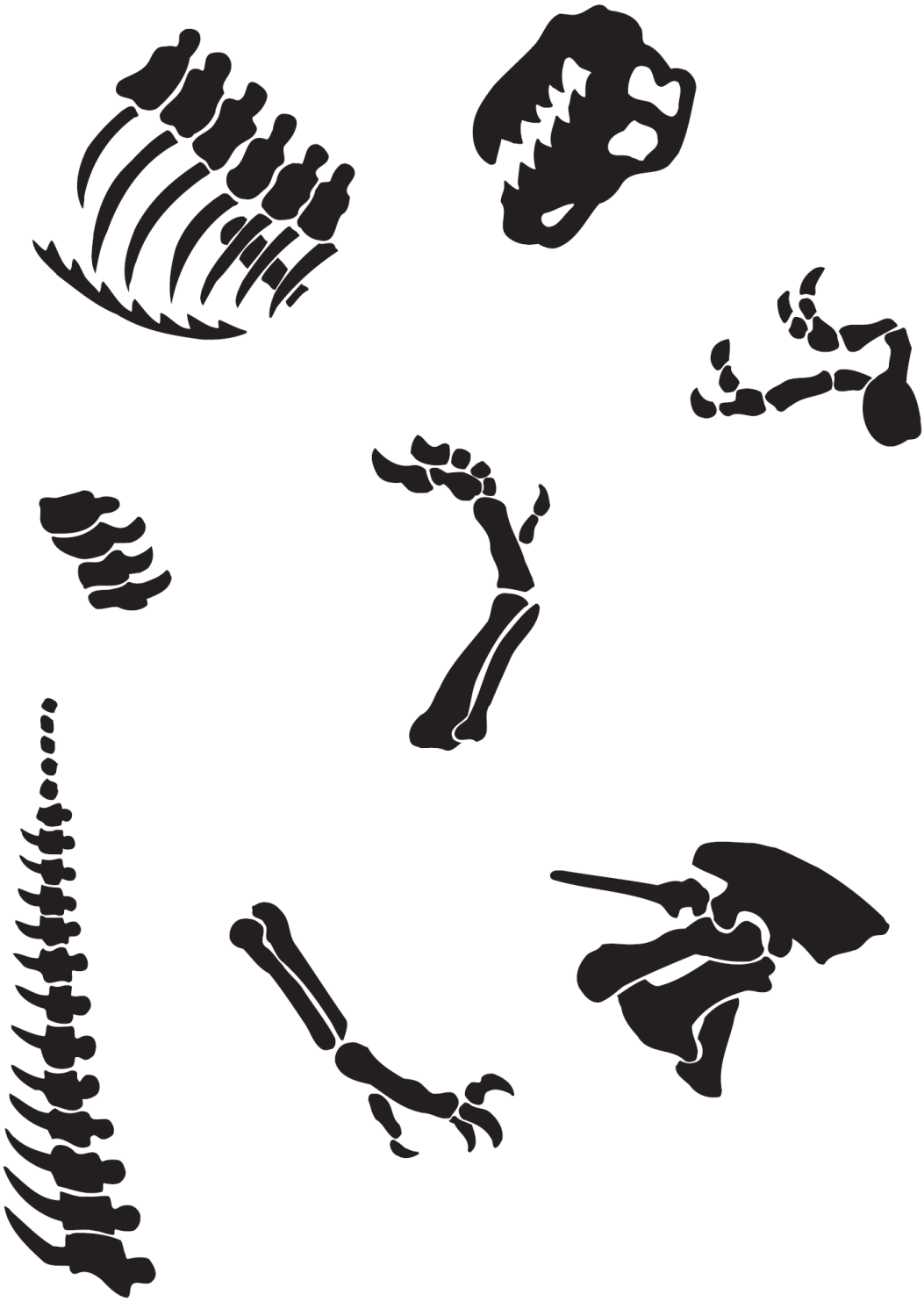


STEGOSAURUS

PUZZLE 1



PUZZLE 2



PUZZLE 3