

Roaming North America

Land of Dinosaurs

Gigantic dinosaurs such as Tyrannosaurus rex (ty-RANoh-SORE-rus RECKS) and Triceratops (tri-SER-uh-tops) ruled western North America 66 million years ago.

Dinosaurs had been roaming the Earth for about 165 million years. And then, in just a few years, all dinosaurs but birds were wiped from the planet.

Much of what we know about these awesome animals and the land they ruled comes from fossil discoveries in one set of rocks, the Hell Creek Formation. This layer of rocks covers parts of Montana, North Dakota, South Dakota and Wyoming. (It is called the Lance Formation in Wyoming.)

In November 2014, the Smithsonian's National Museum of Natural History in Washington, D.C., opened a new exhibit, "The Last American Dinosaurs: Discovering a Lost World." To learn more about this amazing world of dinosaurs, The Mini Page talked with the lead **curator**^{*} of the exhibit.

*A curator builds, cares for and studies collections.



In the background, an Edmontosaurus (ed-MONtoh-SAW-rus) travels through a swamp in the Hell Creek Formation area 66 million years ago. The Edmontosaurus was probably a herd animal. It bit off plants with its bill and used its hundreds of teeth to grind the vegetable matter.

In the foreground, an Acheroraptor (AK-er-oh-RAP-tur) hunts for prey. The Acheroraptor was closely related to the Velociraptor in Asia. It grew up to 10 feet long.

A Pterosaur (TER-uh-sore), a reptile cousin of the dinosaurs, flies above.

It wasn't snowing then

Right now, in the middle of the winter, if you look at the states where the Hell Creek Formation is, it is hard to imagine that in the time of the dinosaurs it was a rainy, subtropical forest. There were no cold winters. It would have been much like southern Florida today.

The Earth was much warmer 66 million to 68 million years ago, at the end of the **Cretaceous** (kruh-TAY-shus) Period. There were no polar ice caps.

The planet's sea levels were much higher than today. The oceans had flooded parts of North America, creating a huge inland sea. Dinosaurs lived to the east and west of the sea.



At the top of the art, Anzu (the pink dinosaurs) roam through the wetlands. while an **Avisaurus** glides above the water (center right).

Famous Hell Creek Dinosaurs

Triceratops

Triceratops were huge planteating dinosaurs. They grew to 30 feet long and weighed between 13,000 and 20,000 pounds. By comparison, the biggest land animal living today, the African elephant, can weigh up to 15,000 pounds.

Compared to a mammal, Triceratops had a small brain in its big head. It was probably as smart as a crocodile.

Decorative, deadly dinos

Triceratops were members of a family of plant-eating dinosaurs with horns, frills or knobs. Some had spikes or horns along the edges of their frills, which may have been brightly colored.

Some had horns above their eyes, and others had a nose horn. The horns and frills probably helped attract mates and scare off enemies. They also used horns in fighting.



Tyrannosaurus rex

The T. rex grew to 40 feet long, stood about 13 feet tall at its hip and weighed 15,500 pounds. It was one of the largest **predators**, or animals that hunted other animals, ever to live on land.

The T. rex had little arms with big claws. Its arms were so short that they couldn't even reach its mouth. Two gigantic dinosaur skeletons loom over the National Museum of Natural History's new exhibit, "The Last American Dinosaurs: Discovering a Lost World." A Triceratops skeleton is in the foreground. A T. rex is in the background. This exhibit will stay on view until 2019, when the museum's updated dinosaur and fossil hall is

scheduled to open.

You vs. a T. rex

Have you ever wondered if you could outrun a T. rex? Experts believe it would have been able to run up to 25 miles per hour, but an average human sprinter can run only about 12 miles per hour. Uh-oh!

The T. rex had powerful hind legs. It may have used its little arms for holding down prey.

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rom The Mini Page © 2015 Universal Uclick Ready Resources



The Mini Page provides ideas for websites, books or other resources that will help you learn more about this week's topics.

On the Web:

- mnh.si.edu/fossil-hall/last-american-dinosaurs
- bit.ly/1vZosD0
- pbs.org/wgbh/nova/nature/t-rex.html

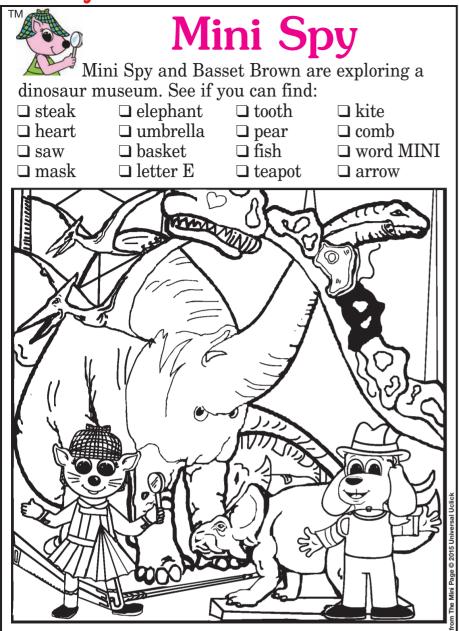
At the library:

- "National Geographic Kids Everything Dinosaurs" by Blake Hoena
- "Dinosaur!" by DK Publishing

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Basset	0	Ρ	Ζ	R	L	Е	L	Τ	S	S	0	F	В	Н	I.
Brown's	R	R	R	U	Ν	А	D	G	Ι	А	Ν	Т	Т	Е	Ν
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Words that remind us of dinosaurs are hidden in the block above. Some words are hidden backward or diagonally. See if you can find: AMERICA, ANZU, BIRDS, CLAW, CRETACEOUS, DINOSAUR, EDMONTOSAURUS, FED, FOSSIL, GIANT, HORNS, MILLION, NORTH, PREY, REX, SEA, THEROPOD, TRICERATOPS, TYRANNOSAURUS, YEARS.

The Mini Page®





from The Mini Page © 2015 Universal Uclick **Jason Sangha**

Few collegiate athletes have experienced success like Lynn University's Jason Sangha. Lynn, located in Boca Raton, Florida, has become a soccer powerhouse at the Division II level, winning the national championship in 2012 and 2014, and finishing second in 2011.



Height: 6-1 Age: 24 Hometown: Southampton, England

Jason, a defender, earned All-America honors in each of his four seasons with the Fighting Knights. A threeyear captain, Jason led a smothering Lynn defense that surrendered fewer than one goal per match, while allowing an average of just three shots on goal. A native of England, Jason was one of 21 international students on the 26-man Lynn roster last season.

In the 2014 national semifinals held in Louisville, Kentucky, the Fighting Knights defeated Quincy (Illinois) University 4-1 before holding off the University of Charleston (West Virginia) 3-2 in the finals. The victory gave Lynn's men's soccer team its fifth national title overall and the school's 23rd championship in all sports.

Rookie Cookie's Recipe Corn, Tomato and Avocado Salad

You'll need:

- 1 (16-ounce) package thawed 1/4 cup chopped fresh cilantro frozen vellow corn

 - 1 tablespoon white balsamic vinegar
 - 2 teaspoons olive oil • Salt and freshly ground black pepper
- 2 cups diced tomato • 1 cup diced avocado

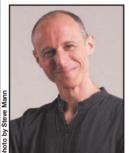
What to do:

- 1. In a large bowl, combine corn, tomato, avocado, cilantro, vinegar and oil. Toss to combine.
- 2. Season to taste with salt and pepper. Serve or refrigerate until ready to serve. Serves 4.

You will need an adult's help with this recipe.

Adapted from "The Robin Takes 5 Cookbook for Busy Families" with permission from Andrews McMeel Publishing (andrewsmcmeel.com). from The Mini Page © 2015 Universal Uclick

Meet Billy Jonas



Billy Jonas' newest album, "Build It Back Again," focuses on staying hopeful. Billy is a songwriter, guitarist, singer and percussionist. He founded the Billy Jonas Band.

He is famous for making instruments out of everyday objects such as paint cans, sewer pipes, garden rakes or egg slicers. He began playing on these "found objects" when he was in summer camp. In high school and college, many of his friends could not play instruments, so they played on pots and pans with chopsticks.

Billy grew up in Chicago and now lives in North Carolina. He took piano, guitar and trombone lessons when he was a kid. He travels throughout the world to study different forms of music and instruments.

Billy has performed at concerts to benefit those working to end conflicts in Palestine and Israel. He also works to help environmental causes. He loves to run with Beeka, his rescue dog.

™ Mighty

Funny's Mini Jokes

All the following jokes have something in common. Can you guess the common theme or category?

> Edmond: Why didn't the omelet laugh? Elsie: It didn't get the yolk!



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Elise: What do we call very, very, very large eggs? Eric: Eggs-tra large!

Ellen: How do monsters like their eggs prepared? Eva: Terrifried!



Last Remaining Dinosaurs

A new discovery

In 2014, fossil hunters discovered a new type of dinosaur, Anzu wyliei (AN-zu WI-lee-eye). Scientists built a skeleton of it from three partial skeletons.

They named it Anzu after a mythological feathered monster. Because it was discovered in the Hell Creek Formation, they nicknamed it the "chicken from hell."

Anzu wyliei was a member of the **Oviraptor** (oh-vih-RAP-tor) family, a group of bird-like dinosaurs. It lived at the time of T. rex and Triceratops.

Living dinosaurs

Birds are **avian** (AY-vee-uhn) dinosaurs. Non-avian dinosaurs were all other dinosaurs. "Avian" means birds or something to do with birds.

Birds are the descendants of small, non-flying dinosaurs called **theropods**. One of the best-known theropods was Velociraptor.



When the asteroid impact led to the extinction of all non-avian dinosaurs, it opened the way for our mammal ancestors to thrive.

art courtesy NASA

Next week, The Mini Page celebrates the life of civil rights leader Rosa Parks.



Gone in an instant

Sixty-six million years ago, a giant asteroid slammed into Earth near what is now Mexico. Within a few years, all dinosaurs except birds had died.

Within seconds after the impact, showers of melted rock shot into the air. Tsunamis sped across the oceans and firestorms swept through the land. Dust and bits of matter hung in the atmosphere for months, blocking out the sunlight and cooling the planet. Acid rain fell over the Earth.

Ecosystems all over the world were destroyed. Besides the dinosaurs, the asteroid helped wipe out about three-fourths of all plant and animal species on Earth. Other hazards, such as giant volcanoes, added to the destruction.

Plant-eating dinosaurs starved, and their deaths were the last blow to the giant meat-eating dinosaurs. Anzu had a long tail and a large crest on top of its head. Its front limbs had long, sharp claws. It did not have teeth, but cut its food with its powerful jaws. It probably ate plants, animals and eggs. It weighed about 500 pounds and was about 11 feet long from beak to tail and about 5 feet tall at the hip.

The sixth mass extinction

Our planet has already faced five mass extinctions. The last one killed off the dinosaurs. Experts believe we are now in a sixth mass extinction. While earlier extinctions have been caused by nature, experts say this one is being caused by humans.

Human actions are harming the environment, destroying habitats and killing huge numbers of animals and plants. Experts say more than 40 percent of all amphibians, one-quarter of all mammals and more than onetenth of all birds are threatened. Species are becoming extinct at much faster rates than normal.

The Mini Page thanks Hans Dieter-Sues, curator, vertebrate paleontology, Smithsonian National Museum of Natural History, Washington, D.C., for help with this issue.

Look through your newspaper for pictures of avian dinosaurs.

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