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Lindsay Zanno: *T. rex Rises*

National Geographic Live Student Presentation Study Guide



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About Lindsay Zanno

Lindsay Zanno is Head of Paleontology at the North Carolina Museum of Natural Sciences and an associate research professor in the Department of Biological Sciences at North Carolina State University, where she oversees the unit's collective research and educational activities, three research collections (paleobotany, invertebrate paleontology, and vertebrate paleontology), and directs the on-exhibit Paleontology Research Lab in the Nature Research Center building. She is one of the world's leading experts on the evolution of theropod dinosaurs.

Zanno has a soft spot for the American West, where she has discovered more than a dozen new species, including Siats, one of the largest meat-eating dinosaurs on the continent, and Moros, North America's tiniest tyrannosaur

[Lindsay E. Zanno - National Geographic Society](#)

More about Lindsay Zanno and his work

[The Rise of the Tyrannosaurus Rex: A Tale of Climate Change and Evolution \(bnnbreaking.com\)](#)

Videos of Lindsay Zanno's work

[What's so special about the Dueling Dinosaurs? \(North Carolina Museum of Natural Sciences, Facebook\)](#)

Dr Lindsay Zanno, talking about the 100% complete T. rex specimen!

[Discover Dinosaurs with Nat Geo Live \(National Geographic Society, Facebook\)](#)



ROARING T.rex Terminology

Word	Definition
Albertosaurus	Alberta Lizard
Archosaurs	Sometimes called “ruling reptiles,” this group of ancient animals included dinosaurs and pterosaurs (flying reptiles).
Badlands	A type of dry terrain where softer sedimentary rocks and clay rich soils have been extensively eroded
Carnivore	An animal that feeds on meat
Ceratopsians	Herbivorous dinosaur of a group found in the Cretaceous period, including triceratops. It had a large beaked and horned head and a bony frill protecting the neck.
Cretaceous	A geological period that lasted from about 145 to 66 million years ago (Mya). It is the third and final period of the Mesozoic Era,
Curator	A keeper or custodian of a museum or other collection
Dinosaur	Prehistoric Reptiles
Drumheller	A town on the Red Deer River in the Badlands of east central Alberta, named after Samuel Drumheller
Extinction event	A widespread and rapid decrease in the biodiversity on Earth. Such an event is identified by a sharp fall in the diversity and abundance of multicellular organisms.
Hadrosaurs	A large, herbivorous, mainly bipedal dinosaur of the middle to late Cretaceous period, with jaws flattened like the bill of a duck. Also called duck-billed dinosaur.
Herbivore	An animal that feeds on plants.
Hoodoo Rocks	A tall, thin spire of rock that protrudes from the bottom of an arid drainage basin or badland. These unusual rock formations began forming over 100 million years ago when the T-Rex roamed the earth.
Invertebrates	A type of animal without a backbone or spine, jelly fish, spiders and shrimp are good examples of invertebrates.
Jurassic	A geologic period that makes up the middle period of the Mesozoic Era and is named after the Jura Mountains, where limestone strata from the period were first identified.



Word	Definition
Mesozoic era	The second-to-last era of Earth's geological history, lasting from about 252 to 66 million years ago, comprising the Triassic, Jurassic and Cretaceous Periods.
Omnivore	An animal that feeds on both plant and meat.
Paleontologist	A person who studies or is an expert in the branch of science concerned with fossil animals and plants. A person who studies ancient life.
Plesiosaur	Long-necked marine animals (often described as similar to the Loch Ness monster).
Pterosaur	Winged flying reptiles that ranged from the size of a sparrow to the 36-foot-long Quetzalcoatlus.
Raptors	Small- to medium-sized feathered dinosaurs equipped with single, long, curving hind claws on their hind feet—were among the most fearsome predators of the Mesozoic Era.
Royal Tyrell Museum	Named after Joseph Burr Tyrrell, a Canadian geologist, The Museum is Canada's only museum dedicated exclusively to the study of ancient life. In addition to featuring one of the world's largest displays of dinosaurs, they also offer a wide variety of creative, fun, and educational programs that bring the prehistoric past to life.
sauropods	Huge long-necked, long-tailed vegetarian dinosaurs (such as the Apatosaur).
Therapod	Two-legged carnivorous dinosaurs, including raptors and Tyrannosaurus Rex.
therapsid	A group of ancient reptiles that later evolved to become mammals.
Triassic	A geologic period is the first and shortest period of the Mesozoic Era. Both the start and end of the period are marked by major extinction events.
Tyrannosaurus Rex	Tyrant Lizard King
Vertebrates	A type of animal that have a backbone or spine inside their body.



What we got wrong in Jurassic Park

[Everything we thought we knew about T. rex is wrong | Nature of Things \(cbc.ca\)](http://www.natureofthings.com/2015/05/12/everything-we-thought-we-knew-about-t-rex-is-wrong/)

- T. Rex lived in the Cretaceous period, not the Jurassic period
- In popular movies the T. Rex was FASSSSSSST but they were a little on the slower side- mostly due to their size.
- We've all seen the movies where the dinosaurs ROAR, it's what makes them so very scary, but scientists suspect they would have had less roar and more rumble. Using scans of the T.Rex skull and comparing the call to a modern Chinese alligator they have proposed that the sound would have been a far more frightening, low, growl- one that you could hear AND feel.
- In popular movie cultures, dinosaurs are scaly lizards, but scientists believe that dinosaurs had much more style- sporting tiger-like stripes and leopard-like spots. In addition to their stripes and spots, they also had feather-like bristles along their back and shoulders, much like a lion.

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Websites to learn more

[Home | Royal Tyrrell Museum](#)

[3 Ways to Become an Expert on Dinosaurs \(wikiHow\)](#)

[Life Paleontology and dinosaurs for kids: Tips for teaching STEM concepts \(parentingscience.com\)](#)

[Dinosaurs: Activities and Lesson Plans | American Museum of Natural History \(amnh.org\)](#)

OTHER WAYS OF KNOWING AND UNDERSTANDING FOSSILS (GRADE 8+)

[Fossil Legends Of The First Americans by Adrienne Mayor \(2005, Princeton Press, nomegallery.com\)](#)