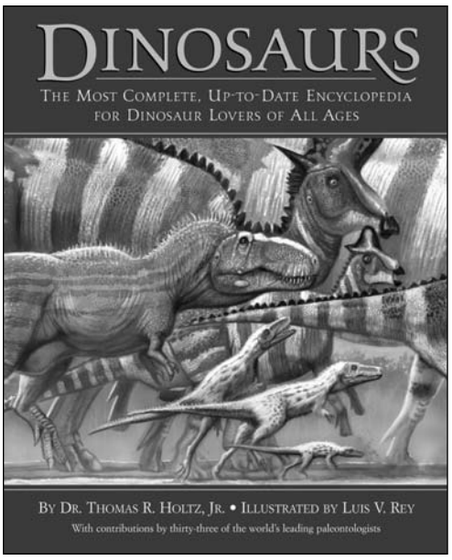
DINOSAURS

CLASSROOM ACTIVITIES



Grades 7 up
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DINOSAURS . . .

- Covers the discovery, diversity, anatomy, and lifestyle of all known Mesozoic dinosaurs.
- Contains sidebars by 33 of the world's leading paleontologists.
- Includes dozens of dinosaurs never written about or previously seen in any trade book.

TIME LINE TRAVELER

Science • Social Studies • Math • English

SUPPLIES

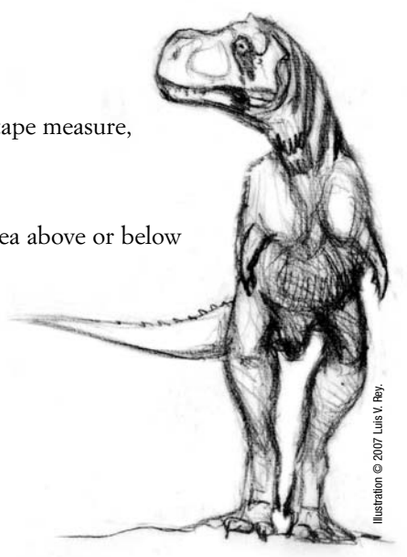
Roll of Craft Paper
Markers, Colored Pencils
Pencils
Meter Sticks or Yard Sticks, Rulers
Calculators
Measuring Tape
Student Journals

TIME LINE

Time period: From 251 to 65.5 million years ago—a total of 185.5 million years representing the Mesozoic Era and the following periods and epochs: Early, Middle, and Late Triassic; Early, Middle, and Late Jurassic; and Early and Late Cretaceous.

Divide your class into partners and assign the following tasks:

- Using a roll of craft paper, create a time line using the following conversions: 1" = 1 million years. Write the scale (1" = 1 million years) on the paper and label the time line.
- Pre-calculate the exact number of inches for each time period and epoch.
- Draw a straight line 185.5" on the craft paper in pencil.
- Indicate each of the three time periods as indicated above, using your calculations and a tape measure, meter stick, or ruler.
- Indicate the epochs for each time period.
- Choose two examples of dinosaurs from each time period. Illustrate in the appropriate area above or below your time line. Include the scientific name.
- Be creative! Add any other details about each time period and epoch that would enhance your time line. Add color, etc. to make the time line more visually interesting.
- Once completed, hang the time line on the wall for easy access.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TIME TRAVEL JOURNAL

Assign the pairs the following tasks:

- Choose one epoch from your time line that you would like to visit via a time machine.
- Label your journals Day 1, Day 2, etc.
- Using your knowledge and imagination, create a five-day journal documenting your time travels. Write about what you see, hear, smell, taste, and feel.
- Describe in detail the plants, animals, and terrain you encounter on your journey back in time. Do you interact with the animals? If so, how?
- What are your discoveries? Do they match what paleontologists have inferred from their studies of fossil evidence?
- Using the "Five Ws" method, describe the Who, What, When, Where, Why, and How of your journey.
- Include your reactions to what you experience. For example: "I was amazed and dazed by what I saw on Day Two when we encountered an *Iguanodon* . . ."
- **Refer to DINOSAURS: THE MOST COMPLETE, UP-TO-DATE ENCYCLOPEDIA FOR DINOSAUR LOVERS OF ALL AGES for specific details on flora and fauna from your time period.**

DINOSAURS

CREATE AND DEBATE

Science • Language Arts • Fine Art

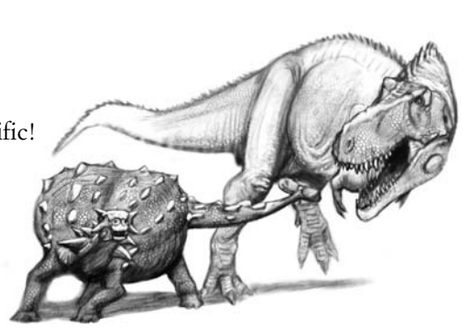
Write the names of the following geologic time periods on separate slips of paper: Middle Triassic, Late Triassic, Early Jurassic, Middle Jurassic, Late Jurassic, Early Cretaceous, and Late Cretaceous. Put the slips of paper into a bowl. Divide the class into seven equal groups, and have each group draw a slip of paper to choose their specific time period.

Create a large interactive class chart following the example below:

Time Periods	(1) Example from Book	(2) Location of Find	(3) Detailed Physical Description	(4) Predator or Prey?	(5) Carnivore, Herbivore, or Omnivore?	(6) Habitat	(7) New Scientific Name	(8) Meaning of Name
Middle Triassic								
Late Triassic								
Early Jurassic								
Middle Jurassic								
Late Jurassic								
Early Cretaceous								
Late Cretaceous								

Introduce the following scenario to the groups: You are a group of paleontologists on a dig. You discover fossilized evidence of a new species of dinosaur! The only thing that you know for certain is the time period that this dinosaur existed on Earth. Using **DINOSAURS: THE MOST COMPLETE, UP-TO-DATE ENCYCLOPEDIA FOR DINOSAUR LOVERS OF ALL AGES** as a reference, complete the following:

1. Find an example of an already-documented dinosaur from your time period.
2. Where did you find your dinosaur? Which continent and modern-day country?
3. Describe the physical characteristics of your newly discovered dinosaur; be specific!
4. Is your dinosaur a predator or prey, or both? Explain.
5. Is your dinosaur a carnivore, herbivore, or omnivore? How can you tell?
6. What was your dinosaur's habitat?
7. Using scientific taxonomy, name your animal.
8. What is the meaning of your name?



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Have each group present their "find" to the rest of the class. As they fill in the interactive class chart, each group will provide details about their dinosaur. Students must justify their descriptions and scientific name by comparing their find to documented animals from that time period. As they defend their choice to the rest of the class, they will need to use specific examples from the book.

EXTENSION ACTIVITIES

Challenge students to take this activity a step further:

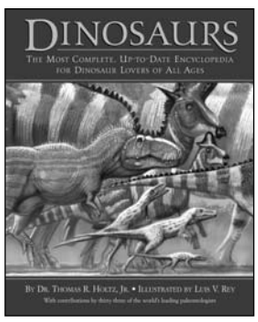
- Draw your new dinosaur in four stages: skeleton only; skeleton with muscles and tendons; skeleton with muscles, tendons, and skin; and skin texture based on fossils. (Refer to pages 38–41 in the book for a sample of this process.)
- Create a three-dimensional model of your new dinosaur.
- Write a narrative from the first-person point of view. You are the dinosaur. Using your new knowledge acquired through the Create and Debate Activity, take the reader through a typical day in the life of your newly discovered dinosaur. For example: "Today I woke up to the sound of a brachiosaur in the distance. It was a hot, humid day . . ."

Name: _____

Dinosaurs

Dino-Cross Puzzle

Directions: Solve the following crossword puzzle. Stuck on a word? Look in **Dinosaurs: The Most Complete, Up-to-Date Encyclopedia for Dinosaur Lovers of All Ages** for answers!



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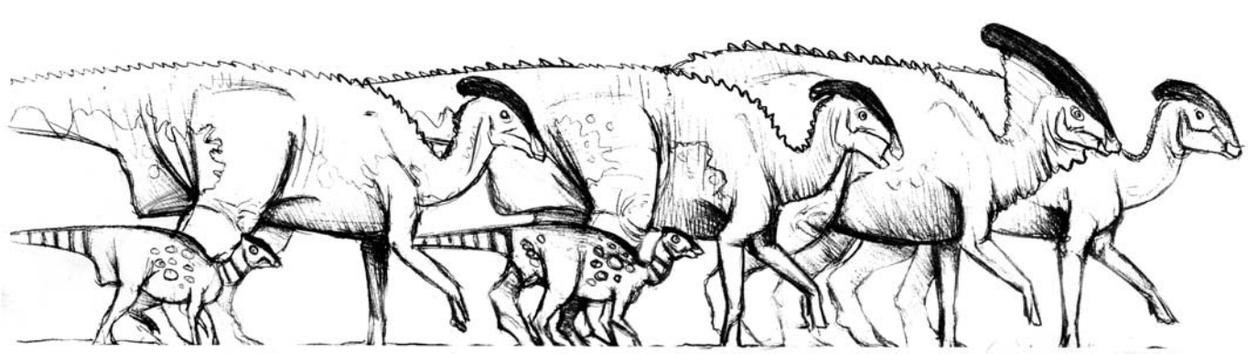
EDUCATORS: Reproduce this activity sheet to use with your class.



NAME:

DINOSAURS

DINO-CROSS PUZZLE CLUES

ACROSS

1. Remains of living things or traces of their activities recorded in sedimentary rock.
3. A period from 199.6 to 145.5 million years ago; part of the Mesozoic Era.
6. A smaller interval on the geologic time scale. A period is divided into two or more of these.
7. What a predator hunts and eats.
8. A group with an ancestor and *all* of its descendents, even if they differ in form from their ancestral condition.
11. The study of ancient living things that are preserved as fossils.
13. Number of epochs in the Cretaceous Period.
15. Beginning of a "natural" or "unnatural" biological group.
19. Part of the respiratory system of Archosaurs used to move air, cool their bodies, and retain moisture.
20. Warm-blooded vertebrate that produces milk for its young.
22. Meat-eating animal.
25. Bone covered in keratin sticking out of a dinosaur's head; characteristic of Ceratopsids.
26. Type of fossil showing activities of a prehistoric animal—e.g., footprints, burrows, and droppings.
28. When organic matter decays, it can also be said to do this.
29. Communities of plants that grow at the same place and the same time.
32. The smallest category of living things recognized in taxonomy. All have two-word names.
40. Used to describe a species that has entirely died out.
41. A period ranging from 251 to 199.6 million years ago; part of the Mesozoic Era
43. An era ranging from 251 to 65.5 million years ago; includes Triassic, Jurassic, and Cretaceous Periods.
44. Largest division of time on the geologic time scale composed of multiple eras.
45. In taxonomy, a one-word name commonly used when talking about dinosaurs—e.g., *Triceratops;* all contain one or more species.
46. A group of dinosaurs nicknamed the "duck-billed" dinosaurs

DOWN

1. An adaptation that allowed some prehistoric animals to hunt from the air.
2. Dinosaurs characterized by paired plates and spikes on their backs and a thagomizer at the end of their tail.
4. The only surviving members of Dinosauria; composed of modern-style birds.
5. This type of animal must get most of its heat from outside its body. An example from today would be reptiles.
9. Scientific theory that living things change over periods of time.
10. Animal with an internal skeleton and a backbone.
12. System of rules and procedures for giving names to groups of living organisms.
14. Ancient super continent including what is present-day North America, most of Asia, and Europe.
16. Dome-headed dinosaurs.
17. Primitive beaked dinosaur.
18. Lizard-hipped dinosaurs.
21. Inherited information passed on by DNA from parent to offspring.
22. Fossilized feces.
23. Can be used to describe birds of prey—e.g., an eagle that hunts using talons—and also dinosaurs that use claws to capture and kill their prey.
24. Any animal that eats both plants and other animals.
27. A period from 65.5 to 23 million years ago; part of the Cenozoic Era
30. Describes animals that eat only plant material
31. A period from 1,806 million years ago to the present.
33. A period from 416 to 359 million years ago; part of the Paleozoic Era.
42. Group of maniraptorans containing modern birds and their closest relatives.
43. A place to exhibit collections such as fossils and re-creations of dinosaur skeletons.

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EDUCATORS: Reproduce this activity sheet to use with your class. Be sure to cover the solution with a piece of paper before photocopying.

For more educators guides and activity sheets visit **www.randomhouse.com/teachers**

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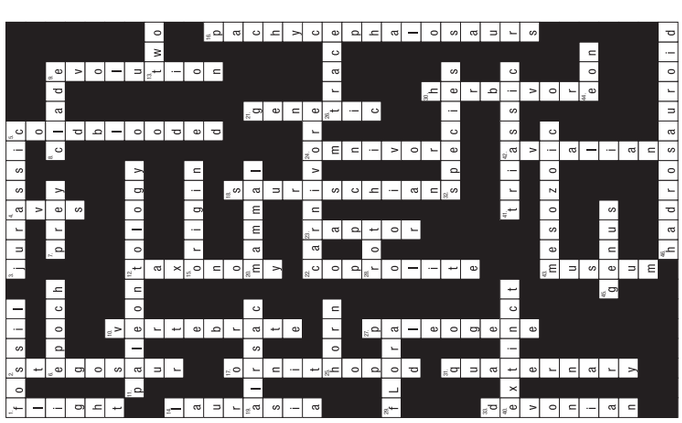

ANSWER KEY