



CRETACEOUS CAMOUFLAGE

HEAD START DOMAINS/EARLY CHILDHOOD LEARNING OBJECTIVES

Language Development: listening and understanding, speaking and communicating

Literacy: phonological awareness, early writing

Mathematics: geometry and spatial sense, patterns and measurement

Science: scientific skills and methods, scientific knowledge

Creative Arts: art

Social and Emotional Development: self-concept, self-control, cooperation

Approaches to Learning: initiative and curiosity, reasoning and problem-solving

Physical Health and Development: fine motor skills

LEARNING GOALS/OBJECTIVES

- Understand that different dinosaurs lived at different times in different habitats
- Be able to identify three different Cretaceous dinosaurs
- Recognize camouflage, defense, and lifestyle adaptations of Cretaceous dinosaurs

BACKGROUND INFORMATION

Dinosaurs ruled the Earth for more than 120 million years. Different dinosaurs lived at different times. Jurassic dinosaurs lived before Cretaceous dinosaurs and included *Allosaurus* and *Stegosaurus*. Cretaceous dinosaurs included *Tyrannosaurus rex* and *Triceratops*. This lesson will introduce the concept of **camouflage** by having the students create a Cretaceous **habitat** for their dinosaurs.

Unfortunately, no one knows exactly what color patterns dinosaurs had because skin color does not fossilize. Illustrations lend themselves to artistic interpretation, however most lean toward colors and patterns seen in nature today. The Cretaceous dinosaurs listed below are all variations of greens and browns to camouflage themselves with foliage. Illustrated encyclopedias, the Web, and even picture books can further detail any color scheme you need.

WHOLE GROUP CLASSROOM ACTIVITY

Materials

- Various plastic dinosaurs
- Dinosaur pictures with realistic colors
- Crayons
- Markers
- Scissors
- Dinosaur stencil/template for each child to trace
- Bulletin board jungle or grassland scene

Preparation

1. Create a bulletin board with a grassland or jungle scene without animals for the kids to place their colored dinosaurs.
2. Purchase or create dinosaur stencils/templates.



Procedure

1. Choose three Cretaceous dinosaurs—one carnivore and two herbivores—to discuss with the children (see dinosaur descriptions below). Talk about the dinosaur names, what they eat, and characteristics they have in common like color, horns, or an herbivorous diet.
2. Allow the children to pick one of the dinosaurs provided to color. Explain that their dinosaur will go into the grassland or jungle habitat bulletin board.
3. Emphasize camouflage and the environment of each dinosaur habitat before they begin coloring their dinosaurs.
4. Place the children's dinosaurs in the appropriate habitat to see how well their dinosaur's camouflage works.
5. Keep a few dinosaurs for your display.

CURRICULUM INTEGRATION

Activity Center #1—Favorite Features

Materials

- Dinosaur pictures
- Plastic dinosaurs
- Graph paper

Procedure

1. Sort plastic dinosaurs and pictures by common characteristics.
2. Count horns, stripes, and other features as you sort them.
3. Create a graph with numbers running up the y axis and the names of common characteristics along the x axis.
4. Graph the number of each characteristic over the type of characteristic, like horns or plates, to compare and contrast the differences between the dinosaurs.



Activity Center #2—Dino Stamping

Materials

- Dice
- Dinosaur stamps
- Colored paper

Procedure

1. Each student is given an opportunity to roll the dice.
2. Count the number of dots represented on the top surface of the dice.
3. Allow the student to stamp their paper with the number of dinosaurs they rolled on the dice.
4. Just for fun, the kids could stamp the dinosaurs on the paper in the same pattern found on the dice!

Activity Center #3—Walk Like a Dinosaur

Materials

- Music of various tempos
- Dinosaur songs or poems

Procedure

1. Move like dinosaurs to music (fast, slow, agile, clumsily, etc.)
2. Learn dinosaur songs and poems to sing along with as you move.
3. Make sure to use your claws, and grumble and growl while moving to the rhythm of the song or poem.

Songs

***Pretend*, by Nancy Klein**

Spread your arms, way out wide,
fly like a Pteranodon, soar and glide.
Bend to the floor, head down low,
move like a Stegosaurus, long ago.
Reach up tall, try to be,
as tall as Apatosaurus eating on a tree.
Use your claws, grumble and growl
just like Tyrannosaurus on the prowl.

***Colorful Dinosaurs*, original author unknown**

(sung to *One Little, Two Little, Three Little Indians*)

One red, one blue, one green
little dinosaur ...
One orange, one yellow, one white
little dinosaur ...
One pink, one brown, one black
little dinosaur ...
Nine dinosaurs in all!

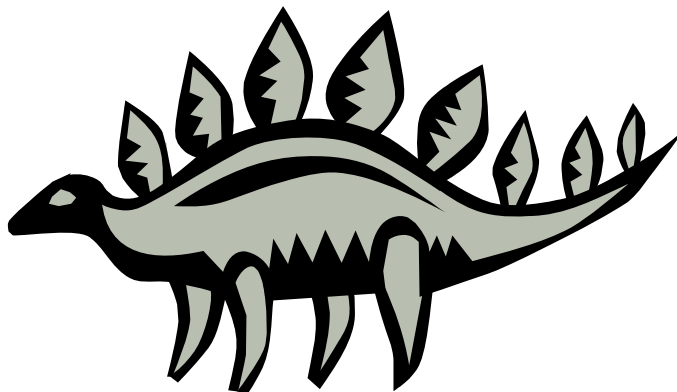
Activity Center #4—Dinosaur Dig!

Materials

- Plastic dinosaurs
- Sand
- Sand table
- Dry paintbrushes

Procedure

1. Put the plastic dinosaurs in the sand table for the “paleontologists” to uncover.
2. Have the students uncover the dinosaurs with paintbrushes.



EVALUATION

1. Have children talk about their dinosaur’s characteristics and how that helps them survive in their habitat.
2. Have students talk about why they chose the colors on their dinosaurs.

RELATED EXHIBITS TO VISIT AT THE MUSEUM

- *Prehistoric Journey* on Level 3

HOME EXTENSION

1. Send home colored paper for kids to create a habitat for their dinosaur.
2. Have families help children list objects that would be camouflaged on the colored paper they take home. For example, peas, frogs, grass, and leaves would be camouflaged on green paper.
3. Discuss findings in class.

VOCABULARY

Allosaurus: the largest and most well-known carnivorous dinosaur of the Jurassic Period

Camouflage: coloring designed to help animals blend into their surroundings

Carnivore: an animal that eats meat

Cretaceous Period: the age when dinosaurs went extinct 65 million years ago

Habitat: the place an animal lives and the other plants and animals that live with it

Herbivore: an animal that eats plants

Jurassic Period: the middle period of dinosaurs when long necks ruled the Earth , and other dinosaurs like *Allosaurus* and *Stegosaurus* lived

Stegosaurus: an herbivorous dinosaur with plates on its back that lived in the Jurassic Period

Triceratops: an herbivorous dinosaur with three horns and a large horny frill at the back of its head to protect its neck that lived in the Cretaceous Period

Tyrannosaurus rex: the largest and most well-known carnivorous dinosaur of the Cretaceous Period

RESOURCES

Children

The Big Book of Dinosaurs. Angela Wilkes. ISBN# 1564587185

Dinos to Go. Sandra Boynton. ISBN# 0689840071

Dinosaur ABC Coloring Book. Llyn Hunter. ISBN# 048625786X

Dinosaur Stomp! Paul Stickland. ISBN# 0525455914

My First Dinosaur Board Book. Beth Landis. ISBN# 0756602815

Teachers

The Illustrated Encyclopedia of Dinosaurs. Dr David Norman. ISBN# 0517468905

Web Sites

www.ghbooks.com

www.zoomdinosaurs.com

Dinosaur Descriptions

Ankylosaurus—“fused-together reptiles,” 16-feet-long, tough skin, spikes, and body armor

Brachiosaurus— “arm reptile,” 74-feet-long, long neck for high browsing

Edmontosaurus —42-feet-long, a thousand teeth for grinding plant material

Oviraptor — “egg thief,” 5 to 6-feet-long, toothless beak-like mouth with strong jaws

Parasaurolophus —33-feet-long, grinding teeth, 3-foot-long crest behind the head (purpose is still debated, but its use as a resonance chamber for calls is widely accepted. Many also believe it could have been a foliage deflector used like a shield while running through brush to escape predators.)

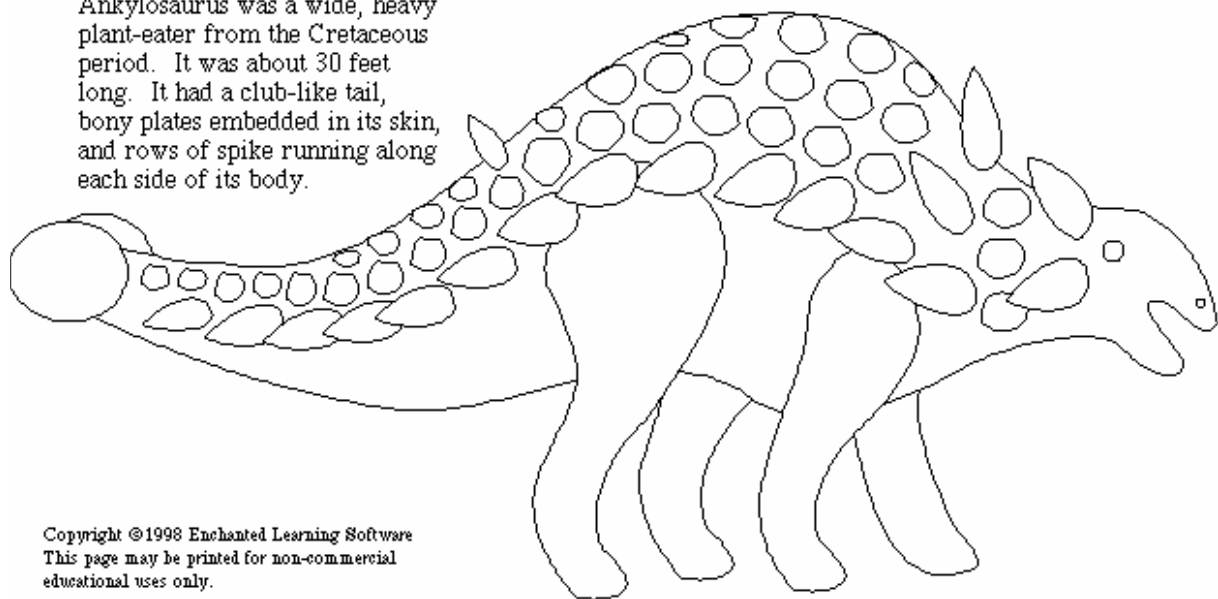
Triceratops— “three-horned face,” 30-feet-long, beak-like mouth with grinding teeth, three horns, and a bony neck frill

Tyrannosaurus—“terrible lizard,” 46-feet-long, serrated teeth and powerful jaws

Velociraptor—6-feet-long, serrated teeth and sharp claws, lithe and fast

Ankylosaurus

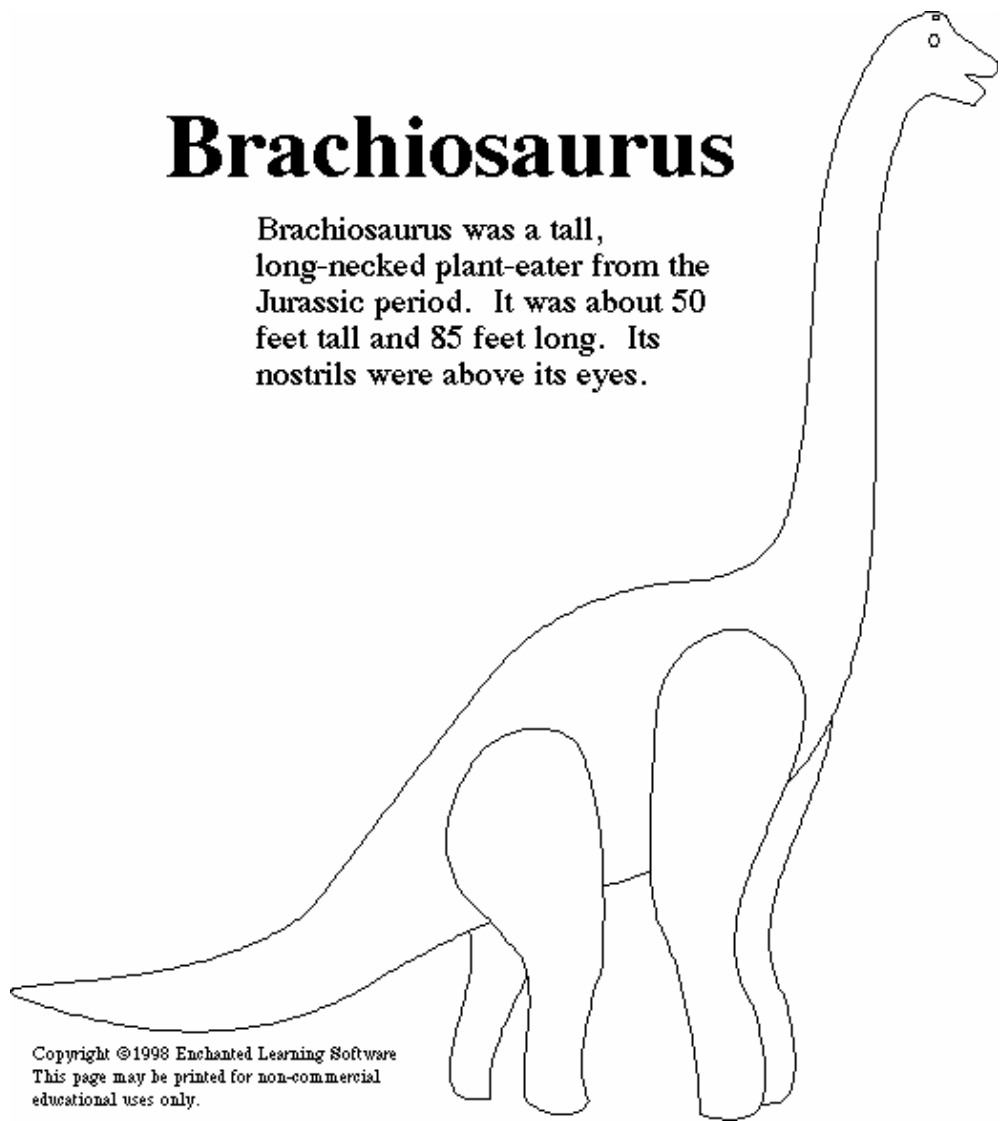
Ankylosaurus was a wide, heavy plant-eater from the Cretaceous period. It was about 30 feet long. It had a club-like tail, bony plates embedded in its skin, and rows of spike running along each side of its body.



Copyright ©1998 Enchanted Learning Software
This page may be printed for non-commercial
educational uses only.

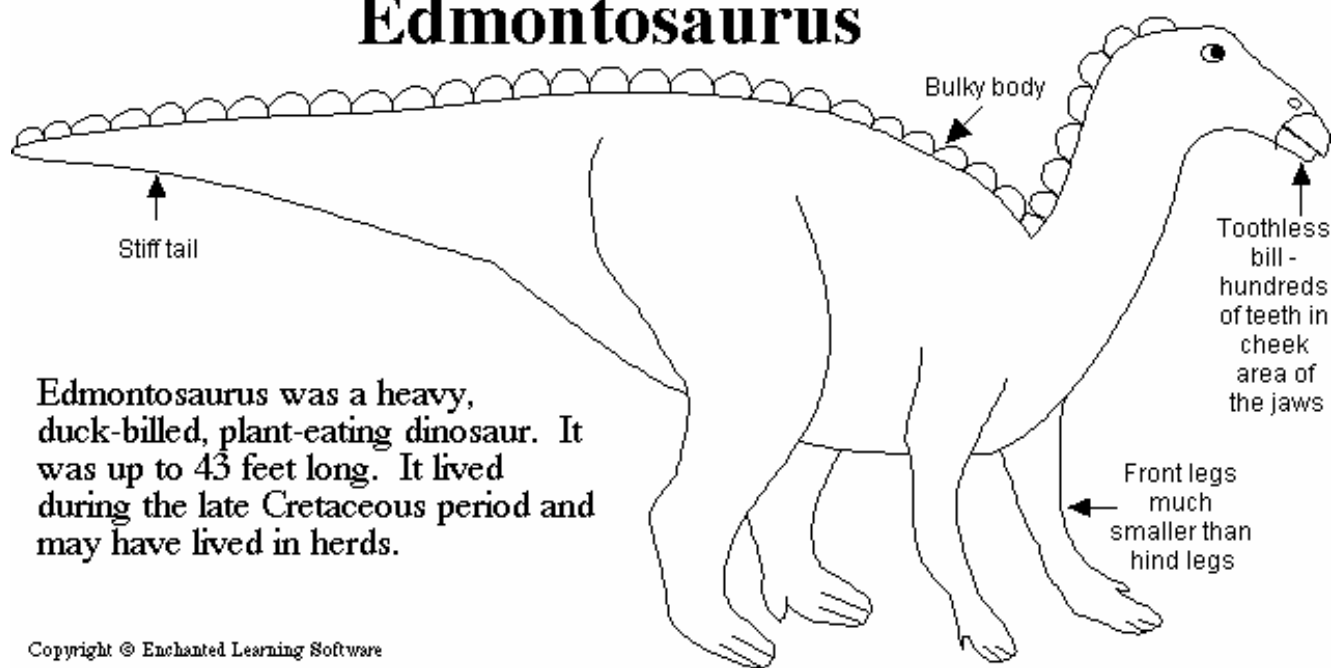
Brachiosaurus

Brachiosaurus was a tall, long-necked plant-eater from the Jurassic period. It was about 50 feet tall and 85 feet long. Its nostrils were above its eyes.



Copyright ©1998 Enchanted Learning Software
This page may be printed for non-commercial
educational uses only.

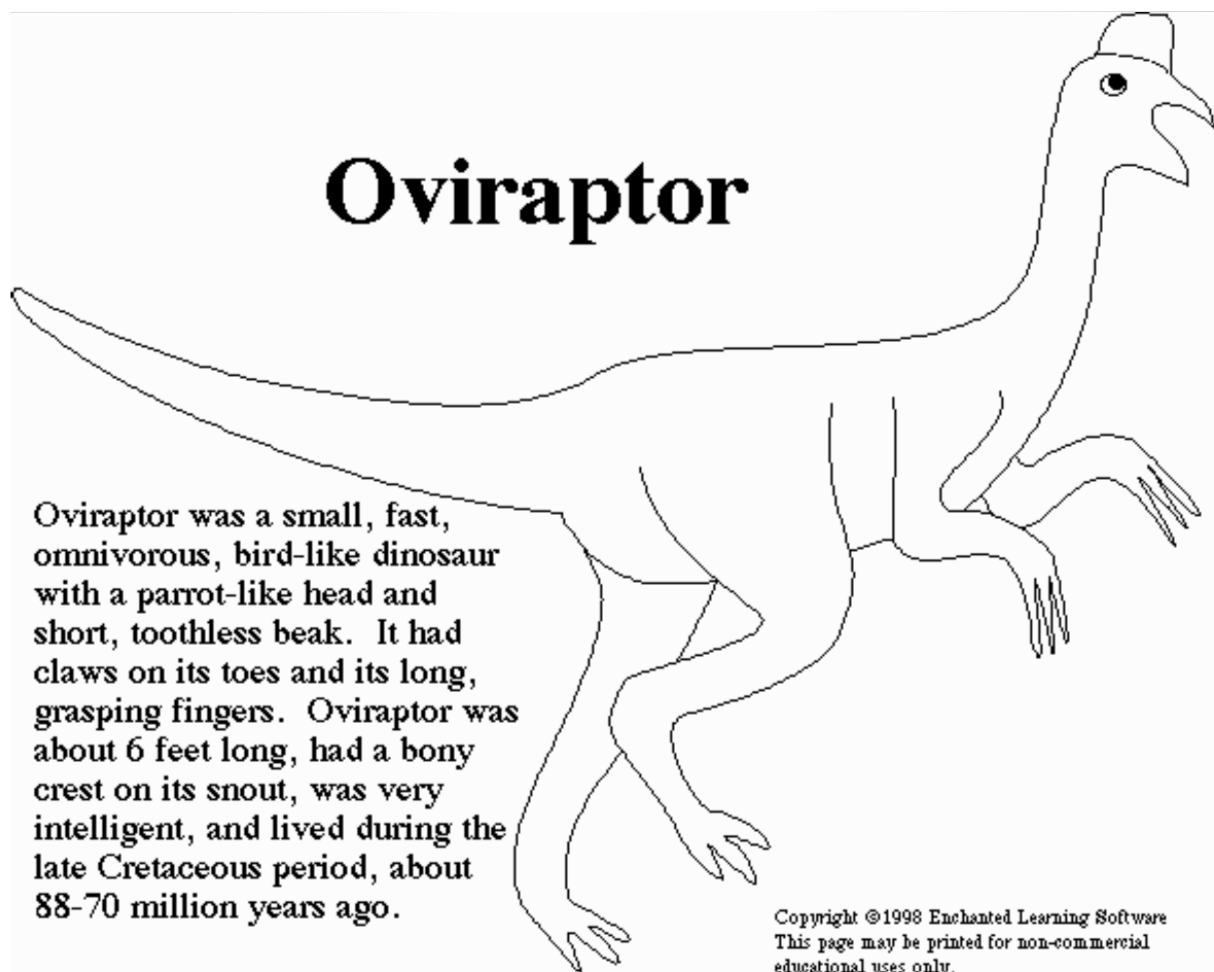
Edmontosaurus



Edmontosaurus was a heavy, duck-billed, plant-eating dinosaur. It was up to 43 feet long. It lived during the late Cretaceous period and may have lived in herds.

Copyright © Enchanted Learning Software

Oviraptor

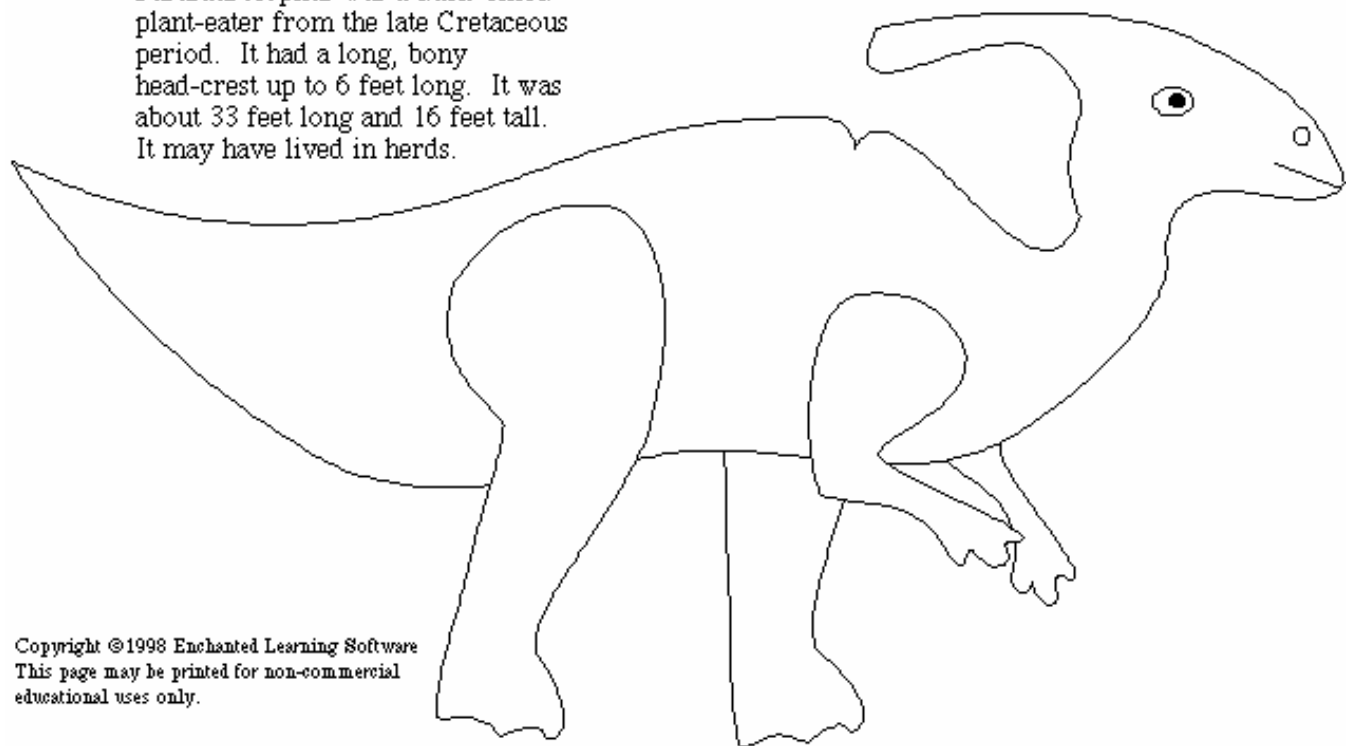


Oviraptor was a small, fast, omnivorous, bird-like dinosaur with a parrot-like head and short, toothless beak. It had claws on its toes and its long, grasping fingers. Oviraptor was about 6 feet long, had a bony crest on its snout, was very intelligent, and lived during the late Cretaceous period, about 88-70 million years ago.

Copyright ©1998 Enchanted Learning Software
This page may be printed for non-commercial educational uses only.

Parasaurolophus

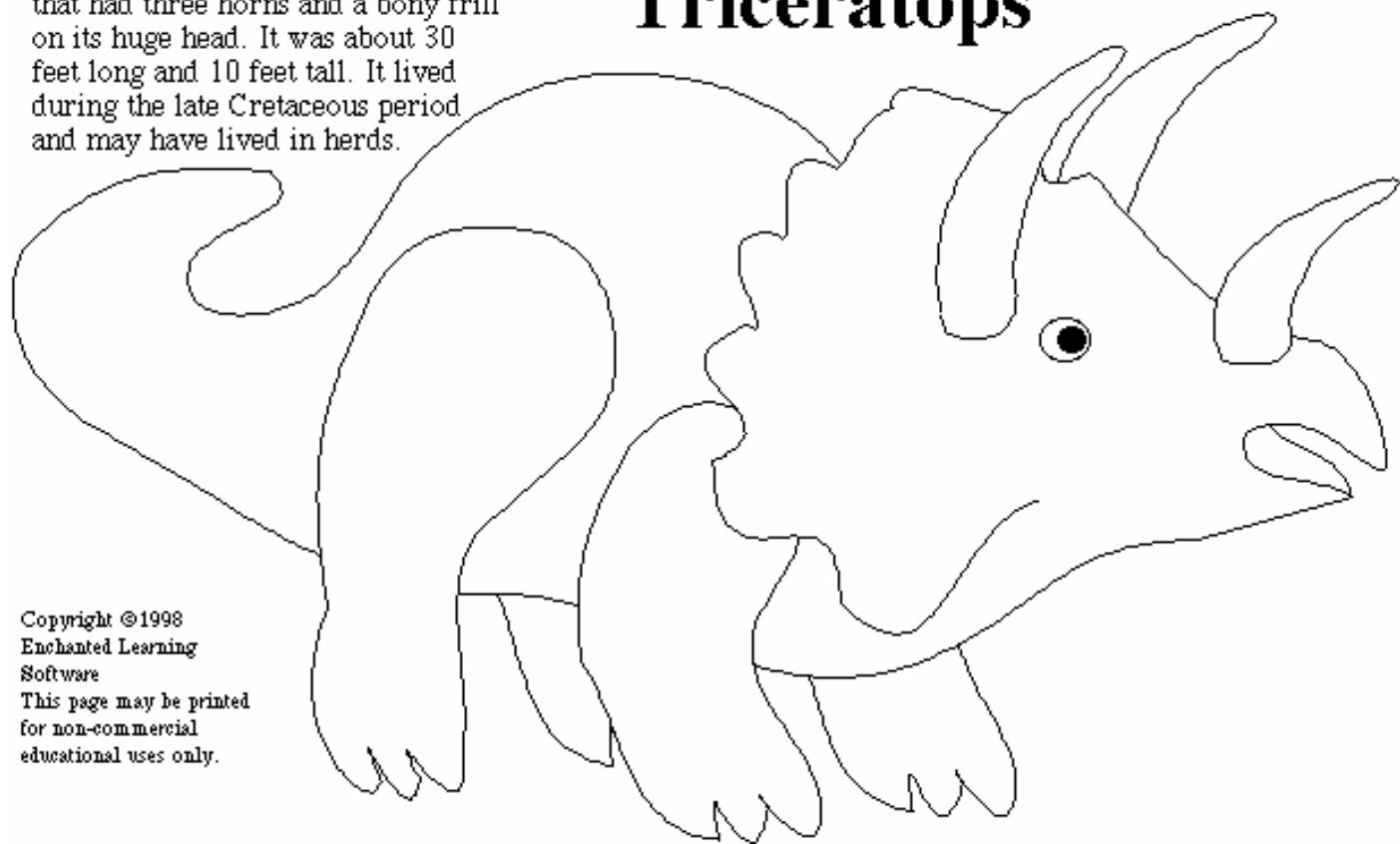
Parasaurolophus was a duck-billed plant-eater from the late Cretaceous period. It had a long, bony head-crest up to 6 feet long. It was about 33 feet long and 16 feet tall. It may have lived in herds.



Copyright ©1998 Enchanted Learning Software
This page may be printed for non-commercial
educational uses only.

Triceratops was a beaked plant-eater that had three horns and a bony frill on its huge head. It was about 30 feet long and 10 feet tall. It lived during the late Cretaceous period and may have lived in herds.

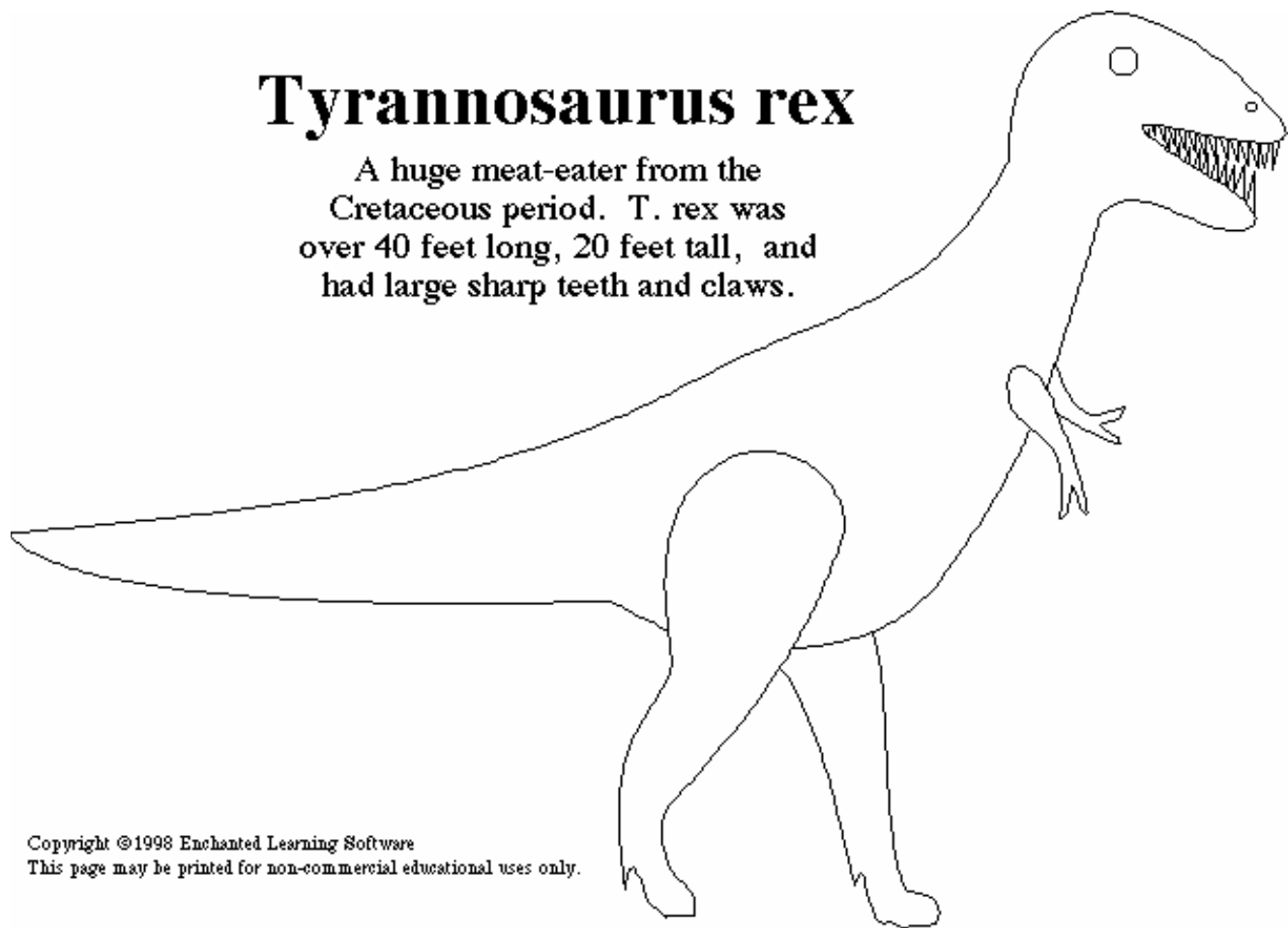
Triceratops



Copyright ©1998
Enchanted Learning
Software
This page may be printed
for non-commercial
educational uses only.

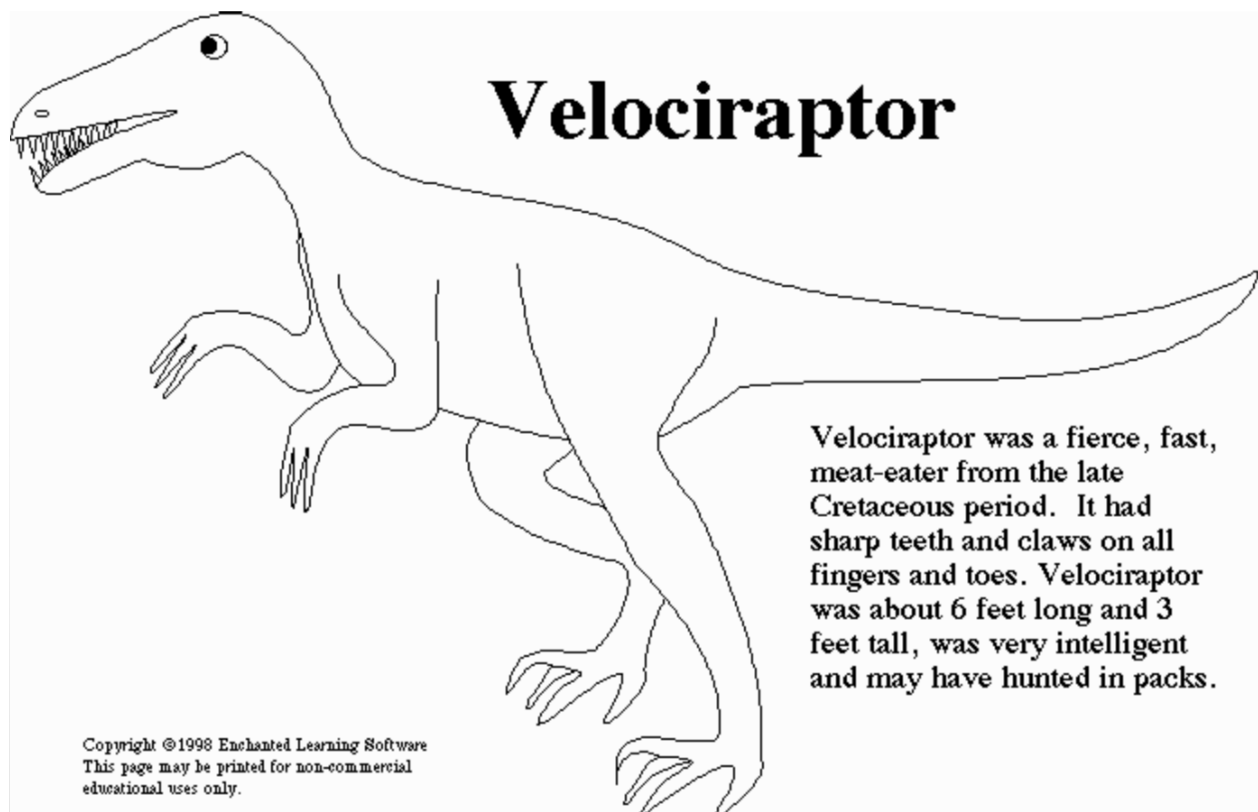
Tyrannosaurus rex

A huge meat-eater from the Cretaceous period. T. rex was over 40 feet long, 20 feet tall, and had large sharp teeth and claws.



Copyright ©1998 Enchanted Learning Software
This page may be printed for non-commercial educational uses only.

Velociraptor



Velociraptor was a fierce, fast, meat-eater from the late Cretaceous period. It had sharp teeth and claws on all fingers and toes. Velociraptor was about 6 feet long and 3 feet tall, was very intelligent and may have hunted in packs.

Copyright ©1998 Enchanted Learning Software
This page may be printed for non-commercial educational uses only.

