

## Vocabulary

<b>Compare</b>	to examine in order to note the similarities or differences.
<b>Contrast</b>	to show differences when compared.
<b>Dinosaur</b>	Although now extinct , dinosaurs were carnivorous or herbivorous, dwelled mostly on land, and varied from the size of a small dog to the largest land animals that ever lived.
<b>Estimation</b>	a rough idea of some measure.
<b>Fossil</b>	a remnant or trace of an organism of a past geologic age, such as a skeleton or leaf imprint, embedded and preserved in the earth's crust.
<b>Hind Legs</b>	the back limbs of an animal.
<b>Measurement</b>	an amount, extent, or size determined by measuring.
<b>Paleontology</b>	the study of the forms of life existing in prehistoric or geologic times, as represented by the fossils of plants, animals, and other organisms.
<b>Predict</b>	to say in advance; to foretell.
<b>Skeleton</b>	a supporting structure or framework for a living creature.
<b>Snout</b>	the projecting mouth and nose part of certain animals.

## Activity: Sing “Suchomimus Was His Name”

Students will sing together a song that gives details about Suchomimus, (pronounced “Sook-o-mime-us”) a species of dinosaur on display at Chicago Children’s Museum.

### Materials

- Copy of the Suchomimus song
- Chart paper
- Markers

### Procedure

1. Review the song, *Suchomimus Was His Name* (see next page). It is sung to the tune of “Old MacDonald Had a Farm.” Write any or all verses of the song on chart paper for the students to read aloud and sing. No more than one or two verses are recommended for pre-kindergarten students.
2. After the song has been sung several times, ask students to think about what new facts they’ve learned about Suchomimus.
3. Make a list of physical characteristics the students remember about Suchomimus from the song. For example, the song mentions the dinosaur had a long snout and a long tail.
4. Then, make a list of other characteristics. Where did Suchomimus live? What did the dinosaur eat?
5. Use the song as a starting point to create a KWL chart with your students. Divide the chalkboard or chart paper into the following three columns:

#### What We Know

Invite students to write or draw things they know about the Suchomimus dinosaur

#### What We Want To Know

Post questions about Suchomimus in the center column. After singing the song, what more do students want to find out?

#### What We Learned

Encourage students to find out the information during the CCM To Go workshop. After the workshop, ask students to write or draw what they learned.

## DINOSAUR DETECTIVES

### Alignment with State Goals

#### Language Arts

##### State Goal 1.B.ECb

Begin to develop phonological awareness by participating in rhyming activities

#### Language Arts

##### State Goal 1.B.ECc

Recognize separable and repeating sounds in spoken language

#### Physical Development and Health State

##### Goal 19.A.ECa

Engage in active play using gross motor skills

## Overview of Song

# DINOSAUR DETECTIVES

Students will sing together a song that gives details about Suchomimus, (pronounced “Sook-o-mime-us”), sung to the tune of “Old MacDonald Had a Farm.”

Let me tell a little story  
‘Bout a dinosaur  
Suchomimus was his name  
Though no person ever saw a dinosaur  
Paleontologist Paul Sereno brought him fame

—With a long snout here...  
And a long tail there  
Here a tooth, there a tooth  
—Everywhere a sharp tooth  
Suchomimus looked just like  
A giant crocodile.

Now in his time, he was a predator  
of the river deep.  
He was longer than a truck,  
Or a car, a van or a Jeep.

With a splish-splash here  
and a splish-splash there  
Here a fish, there a fish;  
—Boy he ate a lot of fish.  
Suchomimus was a king  
Over a million years ago

Now you’ve heard my little tale,  
—Hope you won’t forget  
He was 36 feet long, and walked on his hind legs  
and way too big to be your pet.

With a long tail here  
and a long snout there  
here a tooth, there a tooth  
Everywhere a sharp tooth.  
Suchomimus was his name

Aren’t you glad you know! Aren’t you glad you know!

### Extension Activity

After your students have sung the song several times, link this song to an activity about rhyming words. Ask students to locate the words in the song that rhyme. Then, have the students think of other words that rhyme and have the students write them down if age appropriate; if not, the teacher can add the rhyming words to the chart paper.

## Activity: How Big Were the Dinosaurs?

Students will gain insight into the actual size of dinosaurs and practice making estimations and measurements.

### Materials

- Tape measure or yard stick
- String
- Tape
- Chart paper or chalkboard and markers
- Books and research materials about dinosaurs

### Procedure

1. Use the following information to inspire students to begin thinking about the size of dinosaurs. Write the measurements on the chalkboard or chart paper:
  - **Triceratops:** measured 30 feet, weighed 16,000 pounds
  - **Stegosaurus:** measured 30 feet, weighed 4,000 pounds
  - **Tyrannosaurus:** measured 45 feet, weighed 14,000 pounds
  - **Troodon:** measured 5 feet, weighed 50 pounds
  - **Suchomimus:** measured 36 feet, weighed 10,000 pounds
2. Show students the measurements. For example, “Tyrannosaurus measured 45 feet.” Ask the students to estimate how long 45 feet is and brainstorm familiar objects that are the same length as the dinosaur.
3. Take students into a playing field, or gym, and with a tape measure or yardstick, measure 45 feet of string. Spread the string out in a straight line, taping each end.
4. Once the string is displayed, ask students, “How many students, lying head to foot, will it take to equal the length of a Tyrannosaurus?” Collect predictions. Invite the students to lie down and see which prediction was closest.
5. Try the same activity with several of the dinosaurs listed above. Compare and contrast two different dinosaur sizes, such as the large animal Suchomimus with the smaller animal Troodon.

## DINOSAUR DETECTIVES

### Alignment with State Goals

#### Mathematics

##### State Goal 6.C.ECa

Explore quantity  
and number

#### Mathematics

##### State Goal 6.C.ECb

Connect numbers to  
quantities they represent  
using physical models  
and representations

## Activity: Fossil Dig Site

The most important sources of information we have about prehistoric creatures are the fossil bones that have been found from the numerous dinosaurs that lived millions of years ago. Reconstructing the skeletons of these creatures out of uncooked pasta helps the children to create a greater understanding of the shapes and sizes of the dinosaurs.

### Materials

- Measuring cup
- White glue and potting soil mixture, for each skeleton: 2/3 cup glue, 1/3 cup water, 2 cups potting soil - stir together with spoon
- Uncooked pasta in various shapes and sizes
- Bowls and spoons
- Medium sized foam trays (found at restaurant supply stores)
- Newspaper or other materials to cover desks
- Books with images of dinosaurs

### Procedure

1. Explain to students that paleontologists find out information about dinosaurs by digging up fossils that have been left behind. The fossils are found by digging under the earth, and the location of fossils is often called a dig site. During this activity, students will have the chance to create their own dig site for display.
2. Divide the students into five small groups. Provide each group with a container of dry, uncooked pasta and a foam tray. Help the students fill the tray with the soil mixture. Students can help to pat it down into the tray, so it covers the entire surface.
3. Using pictures of dinosaurs from books and other images students have seen as inspiration, ask each group to create a dinosaur using the dry pasta. Various sizes of pasta can become different body parts. (For example, a flat piece of a lasagna noodle might work well as a dinosaur's jaw or head, and small macaroni noodles will work well to make up the bones of the tail.)
4. Lay the skeleton in the dirt. Carefully press the pasta pieces into the dirt to create the skeleton. The glue will help the pasta pieces to stick.
5. Allow the skeletons to dry overnight. Do not cover.
6. The next day, ask each group of students to share their dig site with the class. Ask students to decide where their skeleton was found, what characteristics the dinosaur had (what did it eat, how big was it, etc.), and whether this is a real or imaginary dinosaur.

## DINOSAUR DETECTIVES

### Alignment with State Goals

#### Language Arts

##### State Goal 1

Read with understanding and fluency

#### Language Arts

##### State Goal 4

Listen and speak effectively in a variety of situations

#### Science State Goal 12A

Identify and describe component parts of living things; describe simple life cycles

#### Fine Arts State

##### Goal 26A

Identify media and tools and how to use them in a safe manner

#### Fine Arts State

##### Goal 26B

Create visual works of art by using manipulation, hand-eye coordination, building and imagination

## Activity: Paper Mache Dinosaurs

Students will observe and reproduce the distinctive physical features (i.e. plates, sharp spikes, long necks, deep jaws, claws) of their favorite dinosaurs with recyclable objects by building their own dinosaur to be displayed and documented.

### Materials

- Recycled objects such as paper towel and toilet paper tubes, egg cartons, yogurt containers, empty margarine tubs, etc.
- Balloons
- Masking tape
- Flour and water mixture (one part flour with 2 parts water until you get a consistency like thick glue.)
- Bowls
- Shredded newspapers
- Paint
- Brushes

### Procedure

1. Show children various recyclable objects and ask them about the shapes and size of the object. Ask how it could be used as part of a dinosaur? (For example, a paper towel roll can be used to make a long neck, egg cartons for plates.)
2. After discussing the many options, display a completed version of painted paper mache dinosaur and demonstrate the process of making it.
3. With prepared materials (plenty of flour and water mixture, shredded newspaper, blown balloons and recycled objects) have students begin creating the structure by taping pieces together. Masking tape works best.
4. Once the skeleton is put together it is time to layer the dinosaur with the paper mache.
5. Let dry over the next day or so, and then paint and decorate.
6. While the pieces are drying, have students write down and/or dictate the names of their dinosaurs and what makes it the same or different from other dinosaurs they have studied.
7. Document and display sculptures and writings together.

## DINOSAUR DETECTIVES

### Alignment with State Goals

#### Science State

##### Goal 13 B 1e

Demonstrate ways to reduce, reuse and recycle materials

#### Language Arts 3

Write to communicate for a variety of purposes

#### Fine Arts State

##### Goal 26A 1e

Identify media and tools and how to use them when constructing

## Extension Activities

There are many different ways to make dinosaur discovery fun in the classroom! Here are just a few ideas...

**Dramatic Play:** Create your own classroom dinosaur habitat or paleontologist laboratory. Have students discuss what those environments might be like. Ask them what props (brushes, shovels, lab coats, plants, books, dinosaur costumes, etc.) can be used to transform the dramatic play area into a dinosaur habitat or paleontology laboratory. The props can be made in the class or students can bring objects from home to share with the group.

**Dinosaur Nests:** If possible, take apart a real nest in class. Sort and classify the materials on a flat table graph. This project can be used at the science center. Extend the idea by asking students how they can make pretend nests using classroom materials for the dinosaurs.

**Leaf Fossils:** Pour plaster of paris in margarine tubs. Spread Vaseline on leaves and lay them flat, vein side down on the plaster. After the plaster hardens, lift off the leaves to reveal the leaf fossils. Paint the fossils, with watercolors and explain that paleontologists have found real leaf fossils on rocks.

**Footprints:** The fossilized footprint of a Tyrannosaurus Rex is about 3 feet long and 3 feet wide at the toes. Make a paper dinosaur footprint in class to show how big that really is. Have the students trace and cut out their own footprints. Ask the children to demonstrate how many of their footprints fit into one of T-Rex's.

**The waking of the dinosaur:** Make up a dance about a dinosaur hatching from an egg. Act out the crackling of the shell, the hatching of the dinosaur, and the growth of the dinosaur. Possible music suggestion: Night on Bald Mountain by Mussourgsky. Listen to the music first and then create an appropriate style dance.

### Facts about Suchomimus:

- Existed approximately 100 millions years ago
- Sucho means "crocodile" Mimus means "mimic"
- 36 feet long and 12 feet high, and walked on its hind legs
- Carnivorous, Ate Fish
- Used its short claws to catch its prey
- Its remains were found in the Sahara desert where it can reach 120 degrees
- Had 100 sharp-pointed teeth used for eating fish
- Was as large as T-Rex

# Resource List

# DINOSAUR DETECTIVES

## Books

- *BBone Poems* by J. Moss
- *Digging Up Dinosaurs, Dinosaur Bones, Dinosaurs are Different, and Fossils tell of Long Ago* by Aliki
- *Dinosaurs Beware: A Safety Guide* by M. Tolon
- *Eyewitness Books: Dinosaur* by D. Norman
- *How Big Were the Dinosaurs?* by B. Most
- *How Do Dinosaurs Eat Their Food?* By J. Yolen
- *How Do Dinosaurs Say Goodnight?* By J. Yolen
- *How Tough was a Tyrannosaurus?* by P. Sereno
- *The Magic School Bus in the Time of the Dinosaurs* by J. Cole
- *Rocks and Fossils* by M. Bramwell

## Websites

[www.skullduggery.com](http://www.skullduggery.com)

This company is a source for high quality fossil replicas and science kits. Many kits are hands-on with a focus on dinosaurs and paleontology.

<http://www.acornnaturalists.com>

This company specializes in the development and distribution of science and environmental education resources.

<http://www.projectexploration.org/>

Project Exploration was founded in 1999 by University of Chicago paleontologist Dr. Paul Sereno and educator Gabrielle Lyon, to make science and paleontology accessible to the public. Look here for activities to do in your classroom as well as information about recent dinosaur discoveries.

<http://school.discovery.com/>

This site offers numerous lesson plan ideas on several topics, including paleontology.

<http://www.preschoolrainbow.org/dinosaur.htm>

Several age appropriate dinosaur activities for Pre-K groups.