Mini 4-H Dinosaurs

All Divisions

Purdue Extension Service of Floyd County
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www.ag.purdue.edu/counties/floyd

Welcome to the Mini 4-H Program! Mini 4-H is designed for youth, age Kindergarten to 2nd grade, to explore a variety of project areas.

As a Mini 4-H parent, your job will be to guide and encourage your child through the activities. Help them, guide them, work with them, and let them do all that they possibly can. The 4-H motto is **"learn by doing"** and is the best educational tool that we can provide for youth. At this age the *PROCESS* of learning is more important than the *PRODUCT*.

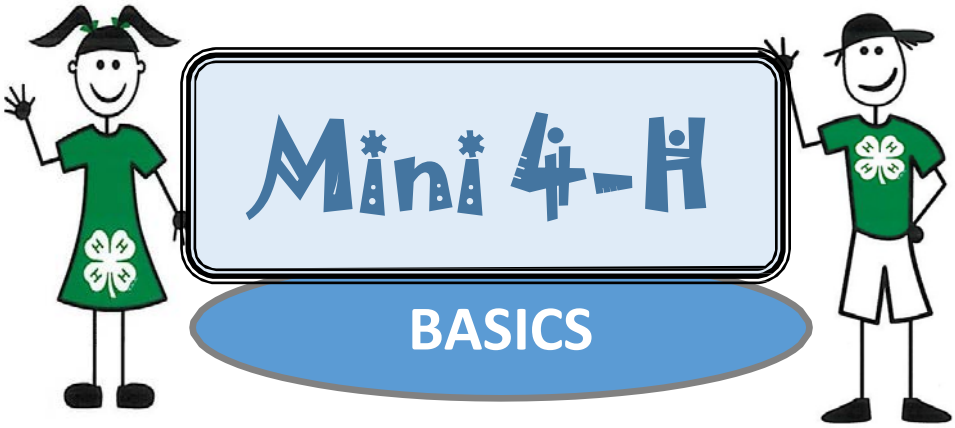
The Mini 4-H program is set up to allow your child to exhibit a project at the 4-H Fair. This is non-competitive, with ALL participants receiving a Mini 4-H blue ribbon.

The 4-H Fair is an exciting time for 4-H members and families. It is a week in the summer that allows community youth to showcase their talents, interests, and enthusiasm for learning. We're excited to see your family there and invite you to take part in the events throughout the week.

If you have any questions regarding Mini 4-H or other 4-H programs, please feel free to contact the Floyd County Extension Office, (812) 948-5470.

Mini 4-H is fun!

www.extension.purdue.edu/floyd

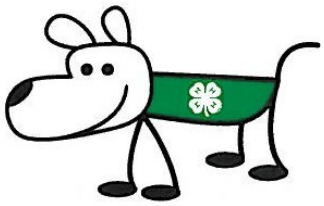


<u>4-H Symbol:</u> A four-leaf clover with an “H” in each leaf “*Head*”, “*Heart*”, “*Hands*”, and “*Health*”

<u>4-H Colors:</u> Green and White

<u>4-H Motto:</u> To make the best, better.

<u>4-H Pledge:</u> I pledge my *Head* to clearer thinking,
my *Heart* to greater loyalty,
my *Hands* to larger service, and
my *Health* to better living,
for my club, my community,
my country, and my world.



What Are Dinosaurs?

Dinosaurs were very large animals that lived on Earth 200 million years ago. We do not know for sure what they looked like. We can guess from their bones and fossils what shape and size they might have been. Most people say that they looked like giant lizards.

The word *dinosaur* means "terrible lizard". Lizards are part of the reptile family. Can you name four types of lizards or reptiles?

1. _____ 2. _____
3. _____ 4. _____

Dinosaurs were not like the lizards or reptiles that we know on Earth today. They were very big. How big? Here is an activity that will help you see how big dinosaurs were.

Activity 1 -- Measure a Dinosaur

You will need these things:

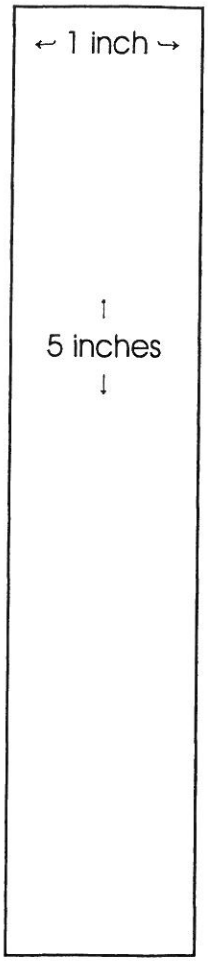
- 50 feet of string
- ruler
- scrap paper
- tape or glue
- scissors

Here is what you do:

1. Cut the scrap paper in rectangles, about 5 inches long and about 1 inch wide. (See example 1)

2. Make a paper chain. To do this, bend the piece of paper into a circle and tape (or glue) the ends.

3. Take another piece of paper, put it through the middle of the first circle, bend the paper to make a second circle and tape the ends. You will now have two circles and it will look like a chain.



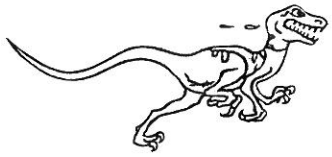
ex. 1

4. Keep going until your chain is 50 feet long. You can use your piece of string to measure your chain. When finished, this will be your dinosaur chain.

5. Make a second paper chain. This time, make it as long as you are tall.

6. If you have time, make another chain or two. Make them as long as your mom and dad are tall.

7. When you are finished with your chains, take them outside. You will need a lot of room. Put the chains next to each other.



Here are some questions:

What was bigger, your chain or the dinosaur chain? _____

_____

If you put together your chain and your mom and dad's chain(s), which one is bigger, your family's or the dinosaur's?

_____

What things do you see around you that are as tall as your dinosaur chain? _____

_____

Fossils

None of us have ever seen a dinosaur. But there are parts of dinosaurs that have been found all over the world. Most of the parts are called fossils.

Fossils are bones, eggs, or dirt that has turned into stone or has made a picture in stone. The special thing about fossils is that they keep their shape. They look like they did millions of years ago.

People are able to make casts from fossils. A *cast* is made of clay of special material. The clay is put around a fossil. The fossil makes prints or spaces in the clay. After the clay is hard, people can study the cast. This helps keep the fossil from breaking.

Sometimes we find fossils that didn't turn into stone, like a leaf or a footprint. The leaf may have fallen in mud millions of years ago. This mud then turn to stone with the print of the leaf on it. The leaf died away, but left a picture for us to see today.

Activity 2 -- Fossil Prints

You will need these things:

- small bones, leaves, shells, buttons or coins
- a big piece of clay

Here is what you do:

1. Take the clay and split it in half. Press both pieces of the clay flat and smooth.

2. Take one piece of clay and put a bone, leaf or other object on the clay.

3. Put the second piece of clay over the items. Press the two pieces together gently.

4. Let the clay dry for a little while. Carefully pull apart the pieces of clay. The prints can be seen in your clay cast.

Here are some questions:

What kind of fossils do we find from the time of dinosaurs? _____

_____

What places can we visit and see fossils? _____

What are some things that are in your house or out in the yard that might be a fossil 200 million years in the future? _____

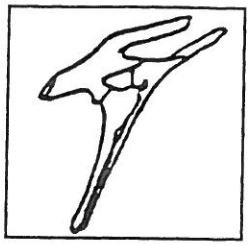
_____

Types of Dinosaurs

There were a lot of dinosaurs. They were different sizes. Some were as small as a turtle and some were taller that 50 feet.

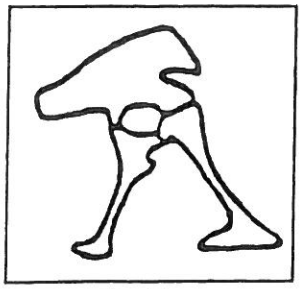
People have found bones and fossils of different shapes and sizes. The shape and size of fossils tell people many things. If a bone was very large, then the dinosaur was large. If footprints were small, then the dinosaur was small.

There were two groups of dinosaurs. One is called "bird-hipped" and the other is called "reptile-hipped". The shape of the hip bone puts a dinosaur in a group.



bird-hipped dinosaur

The bird-hipped dinosaur ate mostly meat. These dinosaurs stood on two feet. The front two feet were very small and looked like hands. They had very long tails which helped them balance. They also had big heads with large mouths and very sharp teeth.



reptile-hipped dinosaur

The reptile-hipped dinosaur ate plants. These dinosaurs stood on four feet. They had long necks which helped them reach the tops of trees. Because they ate plants, they had week teeth.

Activity 3 -- Types of Dinosaurs

You will need these things:

- crayon, colored pencils or markers

Here is what you do:

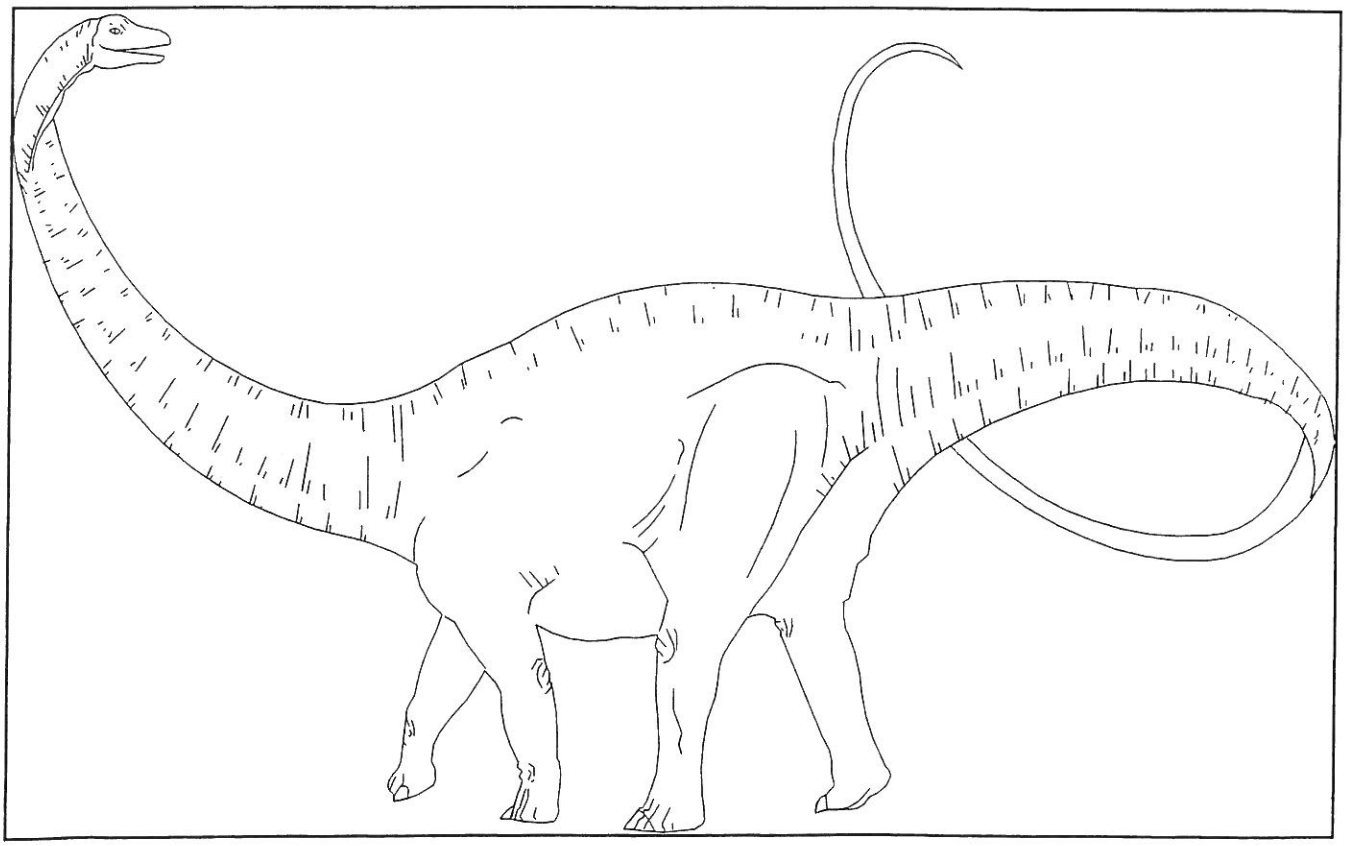
Match the dinosaur with the description and then color them.

Match the type of dinosaur to the picture.

Brachiosaurus (means "great arms") - This dinosaur was the heaviest of them all. It may have weighed 80 tons. It was a plant eater.

Stegosaurus (means "covered lizard) - The Stegosaurus was about 20 feet long with short legs. It was a plant eater. It is known for the 20 tough plates sticking out of its back and the 2-foot long spikes at the end of its tail.

Brontosaurus (means "thunder lizard") - The Brontosaurus was one of the greatest giant dinosaurs. It had legs that were like pillars and round flat feet. It weighed about 30 tons and spent a lot of time in the swamp feeding on soft green plants.



1. _____

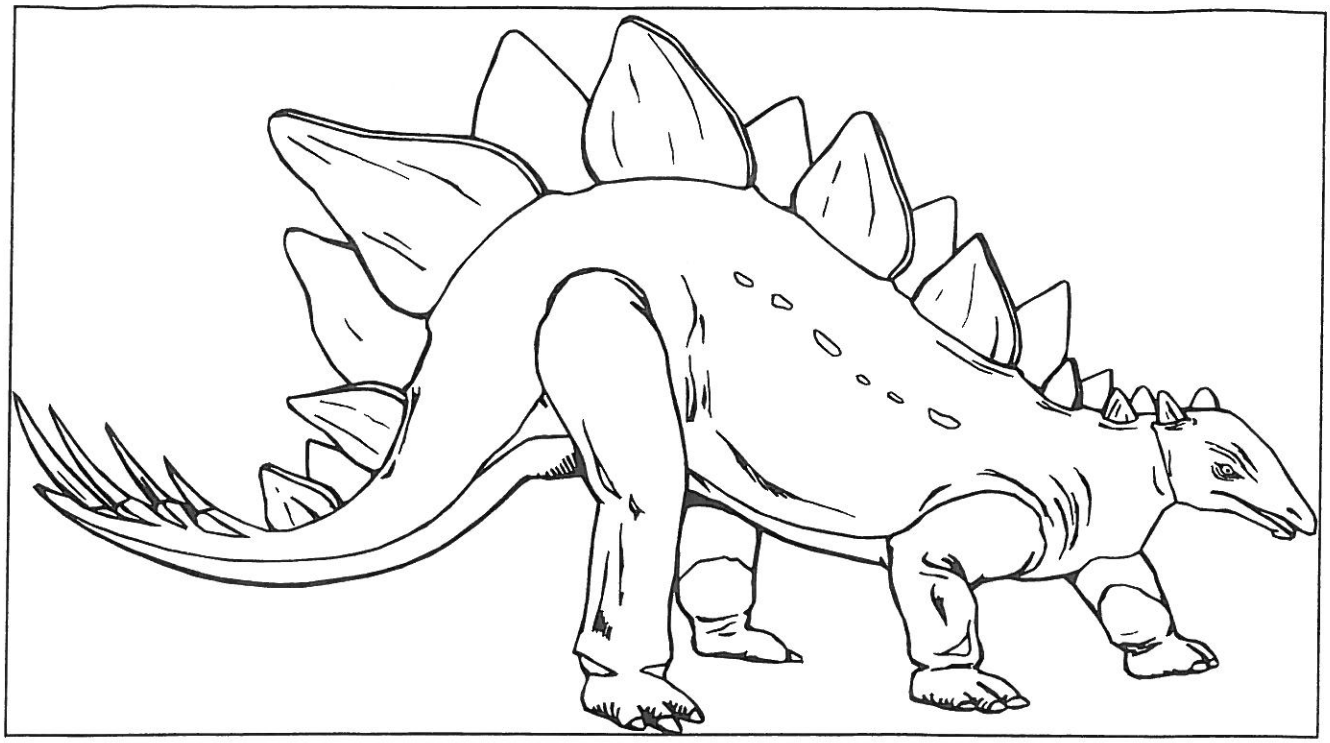
Diploducus
(means double beamed" - This plant eating dinosaur was the longest. It is thought that they were 87 ½ feet long.

Triceratops
(means "three-horn face") - Each horn on this dinosaur was about 2-feet long. This was a part of the heavy shield that was on the skull. This 10-ton animal roamed in herds and was very peaceful. They were probably plant eaters.

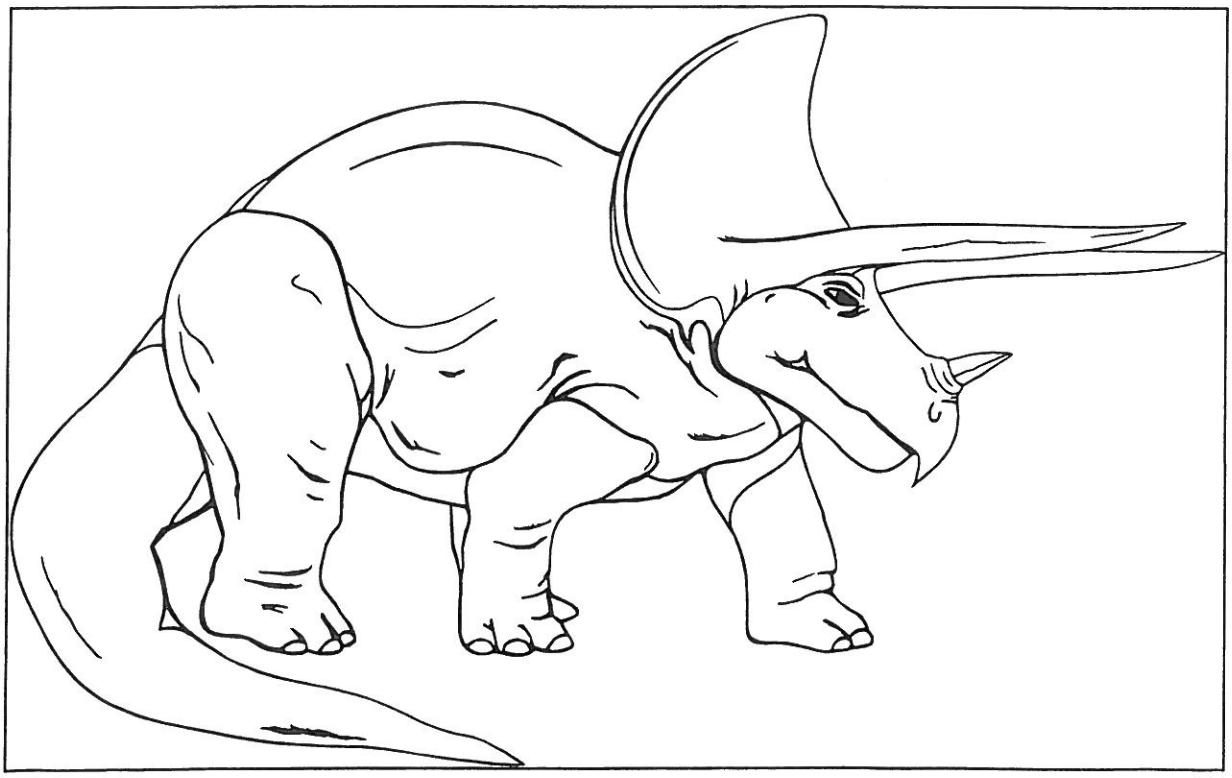
2. _____

Tryannosaurus Rex
(means "king of the tyrant lizards") - The T-Rex was the biggest of the meat eating dinosaurs. It was 50 feet long and stood about 20 feet high. It would kill other dinosaurs for food. People think that the T-Rex ruled the land for 10 million years.

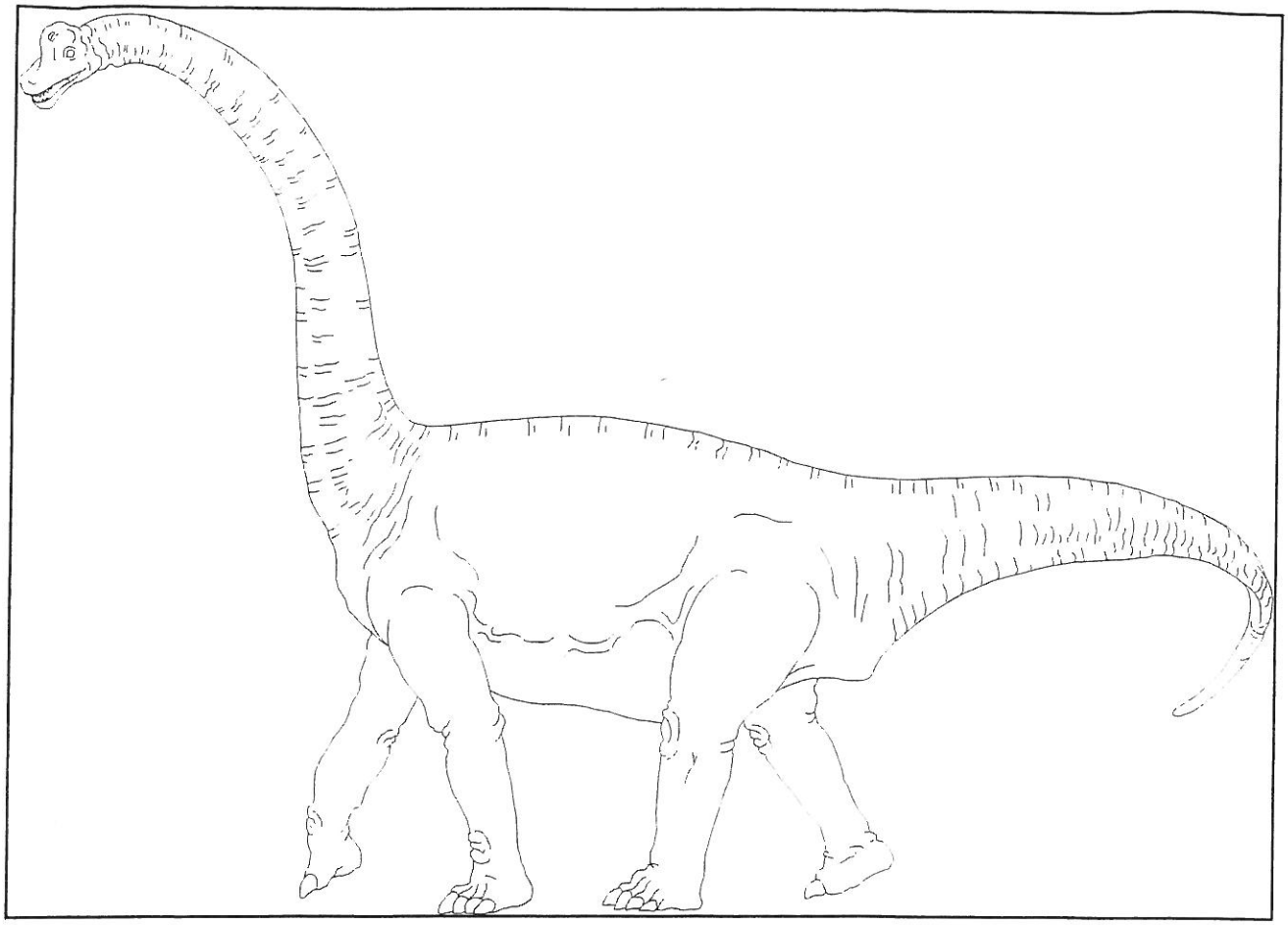
Velociraptor (means "quick predator") - This meat eater had sharp, six inch claws which killed its prey. The Velociraptor would stand on one foot and use its tail to balance while it used its claws. It was 3 feet tall and 10 feet tall. It could run 50 mph or more!



3. _____

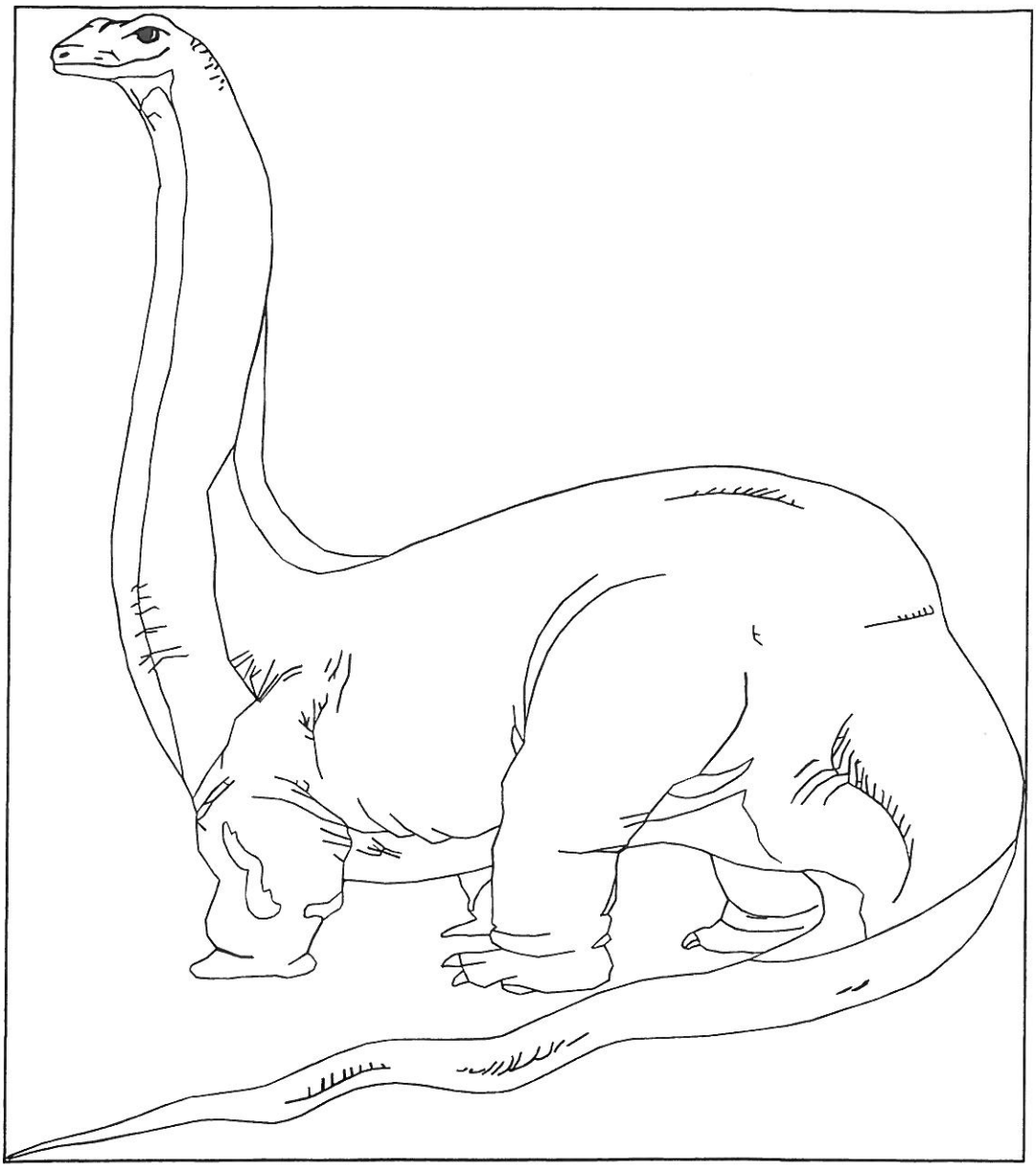


4. _____



5. _____

6. _____



7. _____

Here are some questions:

What is your favorite dinosaur and why? _____

_____

Which dinosaur is the tallest? If a floor is 8 feet tall, how many floors in a building would this be? _____

Which dinosaur is the most famous? why? _____

_____

Where Dinosaurs Lived

Some people believe that maybe dinosaurs lived in the same world as we do now, just millions of years ago. They could have lived where you are sitting right now!

From plant fossils, many people think that the Earth was very warm and humid. There were many seas and swamps. It rained most of the year. The weather would have been very close to the swamps in the Central and South Americas.

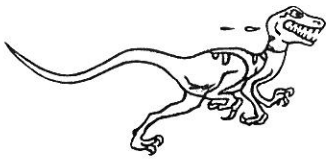
Most of the plants that lived then were ferns, mosses and other smaller plants. The plants were very simple. There were no flowers, fruits or seeds. All plants liked the warm, wet climate. Plants gave a lot of tender, green leaves to feed the large dinosaurs.

People also think that maybe at one time the continents was very close together. Dinosaurs could walk from North America to Europe! But the Earth was changing. There were a lot of volcanoes. The continents began to divide.

Activity 4 -- The Continents Divide

You will need these things:

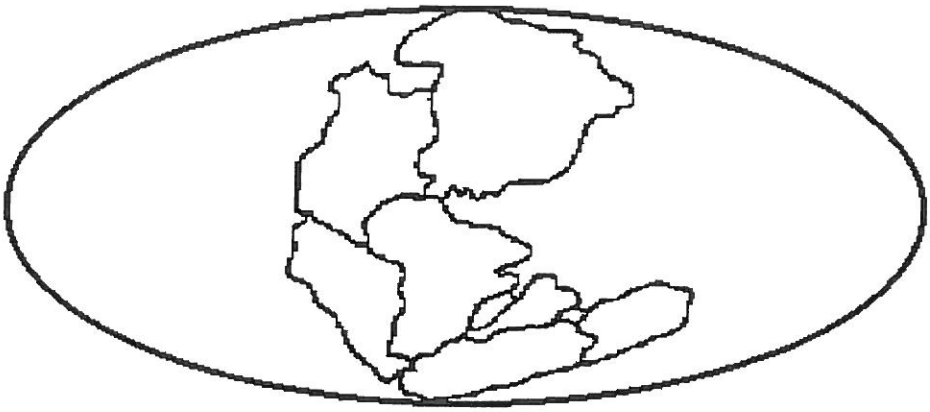
- crayons, colored pencils or markers



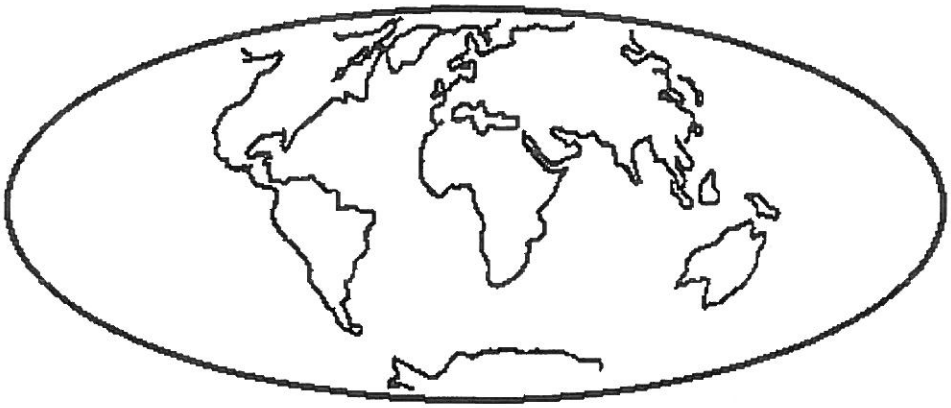
Here is what you do:

1. Draw lines that show how dinosaurs could have moved from one continent to another on the "Pangaea" map.

2. Color the continents. Try to make them the same color on each map. For example, color the continent of North America green on both maps.



Pangaea



Today's Earth

Here are some questions:

What would have to happen for dinosaurs to come back today?

_____

Where would they live? _____

What would they eat? _____

Extinction

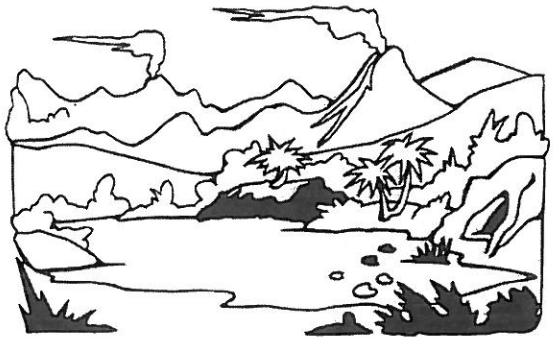
About 65 millions years ago, something happened to the dinosaur. Many people have many ideas about dinosaur extinction. *Extinction* means that a special kind of plant or animal no longer exists or is living.

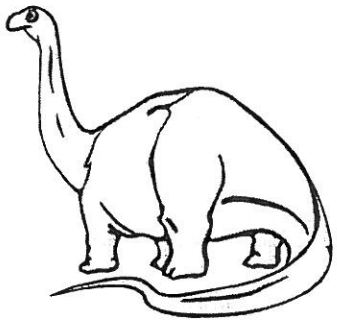
One idea is that the weather on Earth changed. It became colder.

Another idea is that dinosaurs could not find enough food to survive. Other types of animals were able to live on small amount of food and survived.

A popular idea is that a large meteorite (a rock from space) hit the Earth and made a big dust cloud. This cloud blocked out the sun. Because there was not any sun, the plants died and the climate was colder.

There are many other ideas. People still are looking for the answer. What do you think?





Answers to Types of Dinosaurs:
1. Diplodocus, 2. T-Rex, 3. Stegosaurus, 4. Triceratops,
5. Brontosaurus, 6. Velociraptor, 7. Brachiosaurus

Answers to Types of Reptiles: (There are many more!)
1. lizard, 2. turtle, 3. snake 4. alligator,
5. crocodiles

What to Exhibit

Here is a list of projects that can be shown at the 4-H Fair. Pick *one* of the project you would like to exhibit at the fair. You do not need to make the projects in a special order.

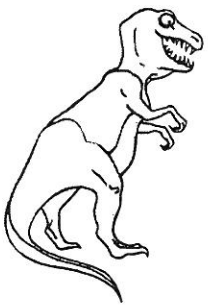
If you have any questions about your projects, please call the Extension Office. There are people there who can help you.

- Make a fossil cast. Use something that will make a fossil that might have been around 200 million year ago. (Example: bones, leaves, and twigs)

- Find four pictures of dinosaurs. Answer these questions for each picture. You can use the dinosaurs in this book. Put the pictures and information in a self-made notebook.
  - Name of dinosaur
  - Size of dinosaur
  - Weight of dinosaur
  - Type of dinosaur

- Make a poster that shows how big dinosaurs were. Draw pictures of yourself, your house, your school, and your favorite dinosaur. Answer these questions for each thing.
  - Name of thing
  - Size of thing

- Make a model of your favorite dinosaur. You can use model materials of your choice.



There's more ....

- Make a dino-time Dinorama.
  - Find a large shoebox.
  - Paint the inside of the box to look like the Earth when dinosaurs were alive.
  - Put soil in the bottom of the box. Put enough in to make hills and swamps. You can use poster board painted blue for water. Collect rocks for your dinorama.
  - Collect small twigs, leaves and other plants.
  - Make models of dinosaurs and put them in your box. You can use poster board to add stiffness. Clay works too!

- Make a model of your favorite dinosaur. Put your model on a flat surface and add other items to make it look like it is standing in a swamp.

- Collect five types of plants that dinosaurs would be able to eat if they lived today. (Hint: the plants that dinosaurs ate did not have flowers.) Put the plants in a self-made notebook. Answer the following questions next to each plant.
  - Name of Plant
  - Why a dinosaur would eat it
  - Where you found the plant

For information on how to label your project, when to enter it in the Fair, and where the project needs to go, please contact your Extension Office.

Have Fun!