

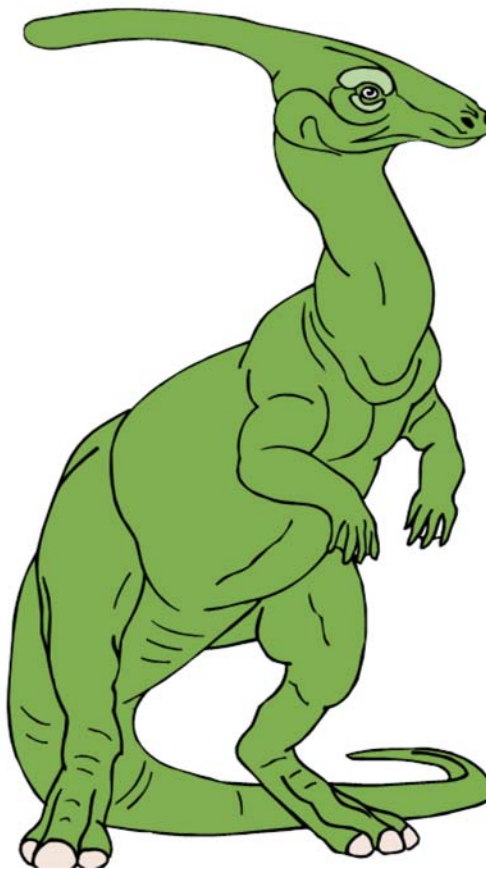


Mini 4-H



Dinosaurs

Divisions 1, 2 & 3



**Developed by
Purdue University Cooperative Extension Service
Area 7 Youth Educators**

(Blackford, Delaware, Fayette, Franklin, Henry, Jay, Madison,
Randolph, Rush, Union, & Wayne Counties)

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Resources and References

Exploring 4-H, Purdue University Cooperative Extension Service
Mini 4-H Dinosaur Manual, Decatur County, Indiana
Dinosaurs, Paso Partners, California (access through Internet)

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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.

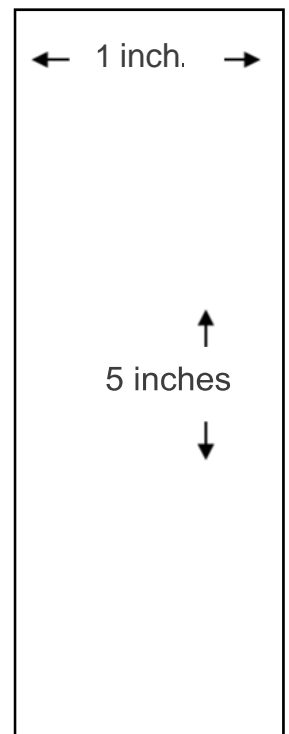
Activity 1 -- Measure a Dinosaur

You will need to find these things around the house:

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

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 turns 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 to find these things around the house or yard:

- 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. Make sure that the clay molds your things inside.
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 than 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.

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.



bird-hipped dinosaur



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 weak teeth.

Activity 3 --Types of Dinosaurs

You will need to find these things around the house:
- crayon, colored pencils or markers

Here is what you do:

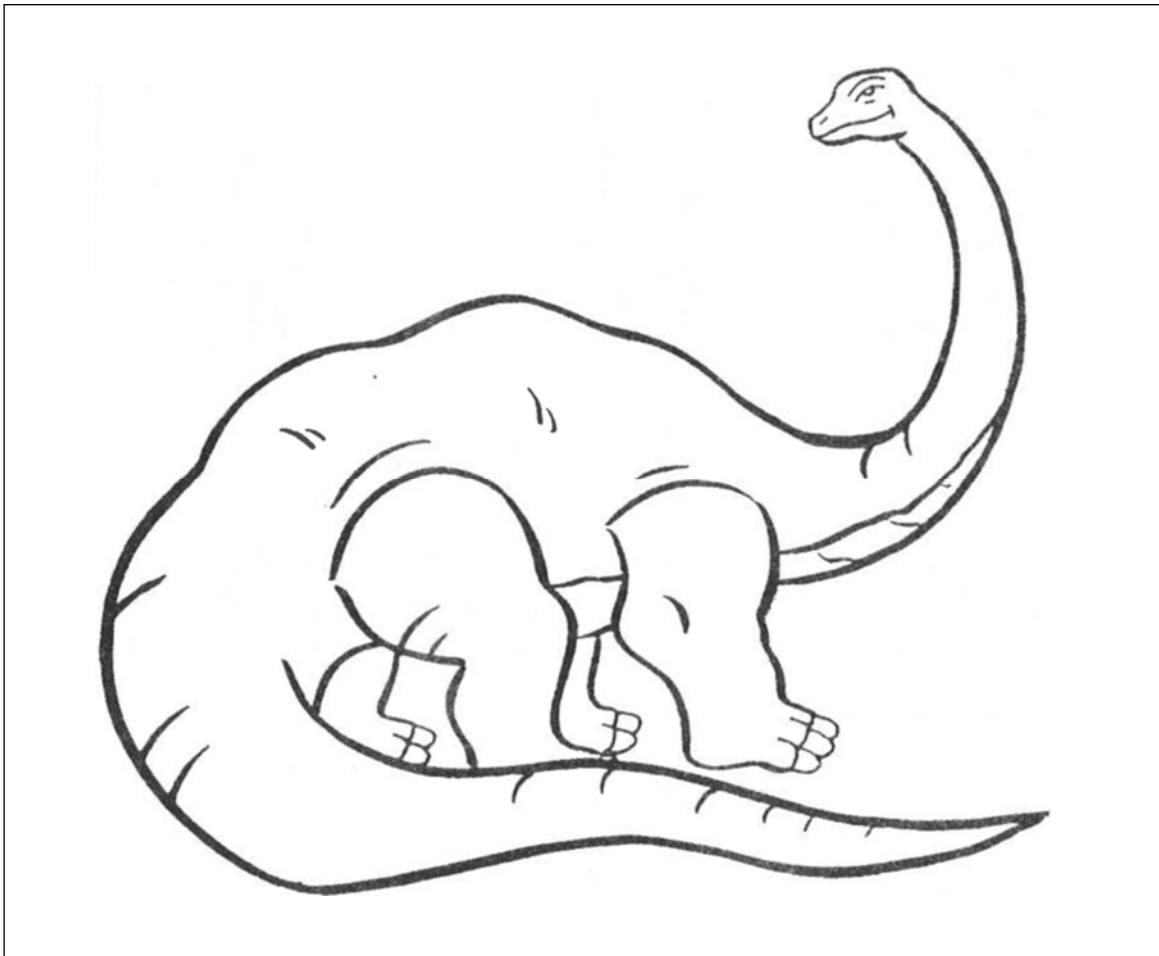
Match the dinosaur with the description and then color them.

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. _____

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

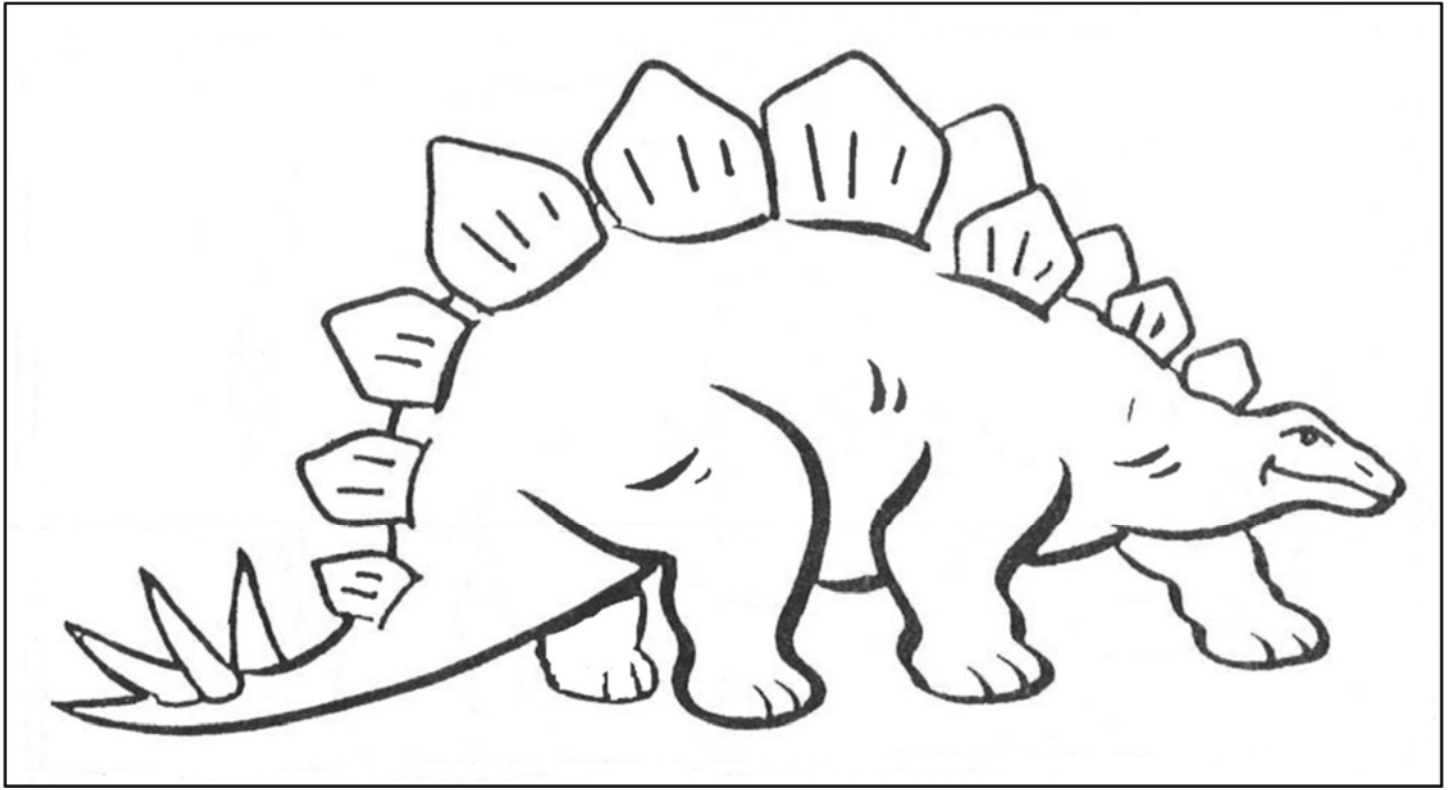
Ankylosaurus (means "curved lizard") - The Ankylosaurus was a peaceful plant eater that was about 15 feet long. It was too slow to run away from the meat eating dinosaur, so it used its special back as a weapon. His back was covered with bony plates that were stronger than a turtle shell. It had a club-like bone at the end of its tail that could crack an enemies leg with one swing.



2. _____

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.

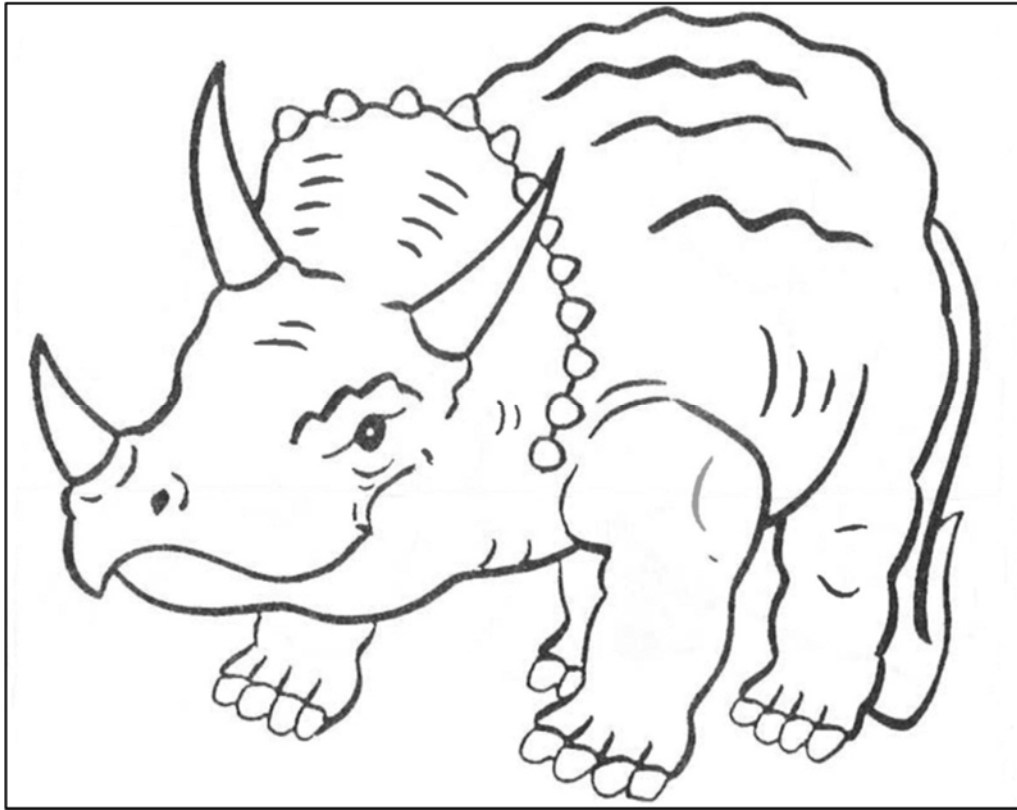
Tryannosaurus Rex (means "king of the tyrant lizards") - The T-Rex was the biggest of the meat eating dinosaurs. It was 50 feet long and stood about 20 feet high. It would kill other dinosaurs for food. People think that the T-Rex ruled the land for 10 million years.



3. _____



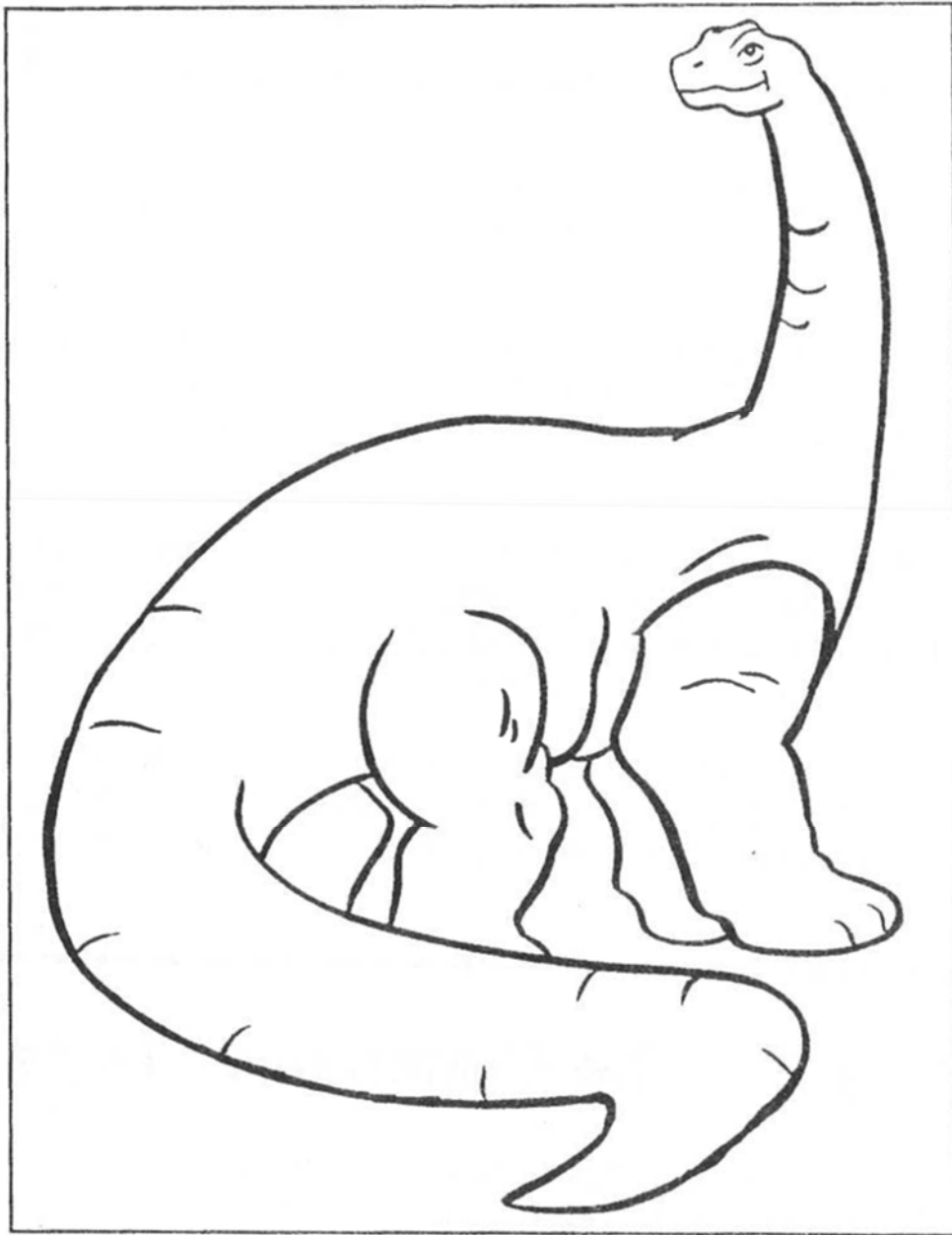
4. _____



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 were 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.

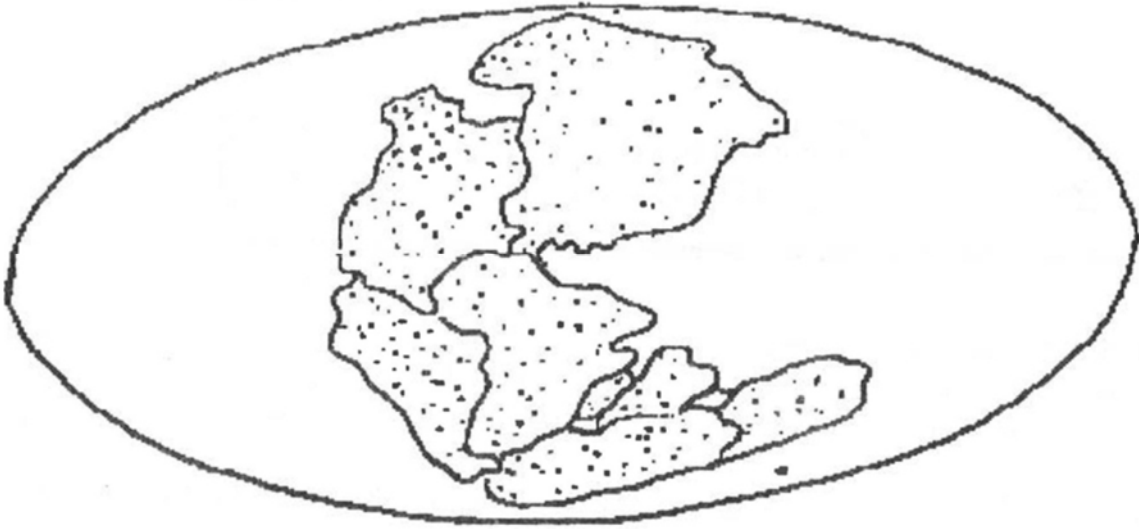
Activity 4 -- The Continents Divide

You will need to find these things around the house:

- 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

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

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



**"DINOSAURS"
RECORD SHEET
MINI 4-H PROGRAM**



Name _____ Grade _____

Address _____

Please answer the following questions. Attach this completed record sheet to your project. See you at the fair!!!

1. Why did you choose this project? _____

2. What is your favorite dinosaur? _____

3. Which activity did you enjoy the most? _____

4. Did you enjoy this project? _____

Parent's signature: _____ Date: _____

WHAT TO EXHIBIT

Choose one:

* Find 3 pictures of dinosaurs. Write the name of the dinosaur next to it. You can use the dinosaurs in this book. Put the pictures in a self-made notebook.

* Find 4 pictures of dinosaurs. Answer these questions for each picture. You can use the dinosaurs in the book. Put the pictures and information in a self-made notebook.

- Name of dinosaur
- Size of dinosaur
- Weight of dinosaur
- Type of dinosaur

* Exhibit an 11" x 14" poster (mounted horizontally with hard backing and covered in plastic) 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

<p>PROJECT EXHIBIT TAG</p> <p>Mini 4-H Dinosaurs</p> <p>Name: _____</p> <p>Grade: _____</p>
