

Noble County Mini 4-H



Dinosaurs

Mini 4-H Page

Mini 4-H'ers have lots of fun! There are many activities for you to explore. You can try new things. You can share them with your friends and family.

Here are some things to know about 4-H.

The 4-H symbol is a four-leaf clover with an "H" in each leaf. Clover is a plant that grows in fields, yards and along roadsides. Most clovers have three leaves. Sometimes, if you look very carefully, you may get lucky and find a special clover with four leaves. A four-leaf clover is used as the symbol for 4-H to let everyone know 4-H is a special kind of group.



The 4-H colors are green and white. The four-leaf clover is green and the "H" in each leaf is white.

A group motto is a saying that tells people what is important to the group. **The 4-H motto** is "To make the best better." When something is better than all the others it is the best. Think about a time when you did your best. Maybe you threw a ball farther than you have ever thrown it before. Now, think about some ways you could do better. You may be able to throw farther by practicing for a while or by watching someone who can throw farther than you, to see how they throw so far. Even if you throw the ball farther than you have ever thrown it before. There are still ways that you can do better the next time. 4-H encourages you to always try to do better, even if you are doing the best you have ever done.

*"To make the
best better"*

The 4-H Pledge

A pledge is a promise you make to yourself and to the people around you. The 4-H pledge is a bold print below.

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 do these words mean?

I Pledge my Head



to clearer thinking, means I promise to use my head to make good choices.

My heart



to greater loyalty, means to use my heart to be a good friend.

My hands



to larger service, and, means to use my hands to do helpful things for others.

My health



to better living, means to take care of my body and to show others how to live in a healthy way.

For my club, my community, my country



and my world, means to help my group, my community, my country and my world be happy and safe for everyone.

Mini 4-H Helper's page

Welcome to the Mini 4-H Program! Mini 4-H is designed for children in grades K-2 to explore a variety of project activity areas and to interact with caring adults and other children.

Children receive this project activity manual when they enroll in Mini 4-H. This manual and the manuals on various other topics will provide fun, age-appropriate learning activities throughout their year(s) in Mini 4-H.

As a Mini 4-H adult helper, your job will be to guide and encourage each child through the activities. A wide range of activities is provided to allow you to choose the ones most appropriate for the children you are working with. It is strongly suggested that you do not complete the activities from Instead help them, guide them, work with them and let them do all that they possibly can. 4-H believes in allowing children to learn by doing. The Mini 4-H project activities are hands-on learning opportunities designed to provide a meaningful educational experience for youth.

Additionally, the Mini 4-H program is set up to allow children to display a project activity that is based upon information in this manual. Some children may want to exhibit at the 4-H Fair. The 4-H Fair is an exciting week that allows community youth to showcase their enthusiasm for learning. Children may choose to display a project activity they did by themselves or one they did with a group. Other children may choose to showcase their work in other ways, such as displaying it in a special place in their own home.

Mini 4-H is fun! Children will certainly enjoy it. You can have fun too, by guiding and helping as children participate in the program. Encourage and praise the children as they have fun learning and sharing with you. If you have any questions regarding Mini 4-H or other 4-H programs, please contact the Extension Office in your county.

Helper's Tips

The Mini 4-H Program can be used with individual children, but it works best when used in a group of 2 or more children. Children working cooperatively in groups develop positive images of themselves and their ideas. Other ways adult helpers can maximize the benefits of Mini 4-H are to:

- **Work on a subject interesting to the child by encouraging children to choose the content area.** Look through this manual and choose the project activities based on the interests and skill levels of the children
- **Relax and have fun.** Some children will want to finish their activities, others may not. There is no need to pressure children of this age to finish an activity, because the real learning takes place while they participate in the activity and interact with others. The finished project should not be the main focus. The knowledge children gain while they explore new areas and experiment with new ideas should be the primary goal.
- **Remain flexible and adapt to the changing needs of the children.** Restlessness or boredom may indicate a need to stop the activity and come back to it later.
- **Encourage children to talk and work with each other.** Children learn best when they are encouraged to freely share their reactions and observations. You may want to ask the children about what they did during an activity, what happened, what was the easiest, and what they like the most.

This manual contains activities for children that allow for a wide range of abilities and provide practice for developing a variety of skills.





Mini 4-H Parent's Page



Welcome to the Mini 4-H Program! Mini 4-H is designed for youth to explore a variety of project areas.

Your child received this project manual when enrolling in Mini 4-H. This manual will provide fun, age-appropriate learning activities throughout their year(s) in Mini 4-H and their interest in this project.

As a Mini 4-H parent, your job will be to guide and encourage your child through the activity. It is highly suggested that you do not complete the activities for them. Instead, 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.

Additionally, the Mini 4-H program is set up to allow your child to exhibit a project at the 4-H Fair. This project is based upon information within this manual.

The 4-H Fair is an exciting time for 4-H members and families. It is a week that allows community youth to showcase their talents, interests and enthusiasm for learning.

Mini 4-H is fun! Your child will certainly enjoy it. You can have fun too, by guiding and helping as your child participates in the program. Encourage and praise your child as he/she has fun learning and sharing with you.

If you have any questions regarding Mini 4-H or other 4-H programs, please feel free to contact your local Extension Office.



Mini 4-Her's Page



Welcome to Mini 4-H! You are now a member of the 4-H family. You are a special person.

Mini 4-Her's have lots of fun! There are lots of activities for you to explore. You can try new things. You can share it with your friends and family.

Mom, Dad or another adult can help you with your project. Bring your project to the 4-H Fair and lots of people will be able to see what you have done. You also get a ribbon made just for Mini 4-Her's.



Here are some things to know about 4-H.

The 4-H Symbol:

A four-leaf clover with an "H" in each leaf



4-H Colors:

Green and White

The 4-H Motto:

To make the best, better.

The 4-H Pledge:

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.

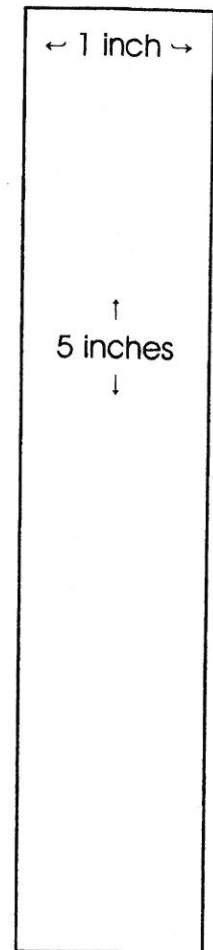
▼ Activity 1 -- Measure a Dinosaur

You will need these things:

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

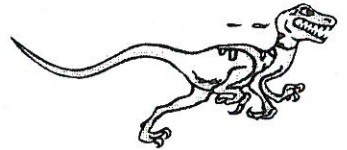
Here is what you do:

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 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

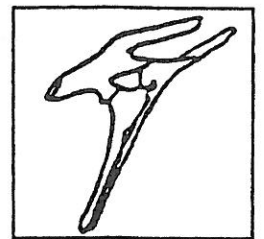


There were a lot of dinosaurs. They were different sizes. Some were as small as a turtle and some were taller than 50 feet.

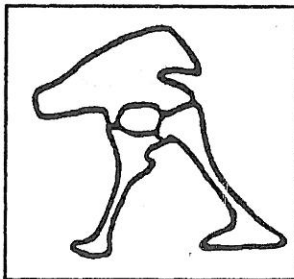
People have found bones and fossils of different shapes and sizes. The shape and size of fossils tell people many things. If a bone was very large, then the dinosaur was large. If footprints were small, then the dinosaur was small.

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 these things:

- crayon, colored pencils or markers

Here is what you do:

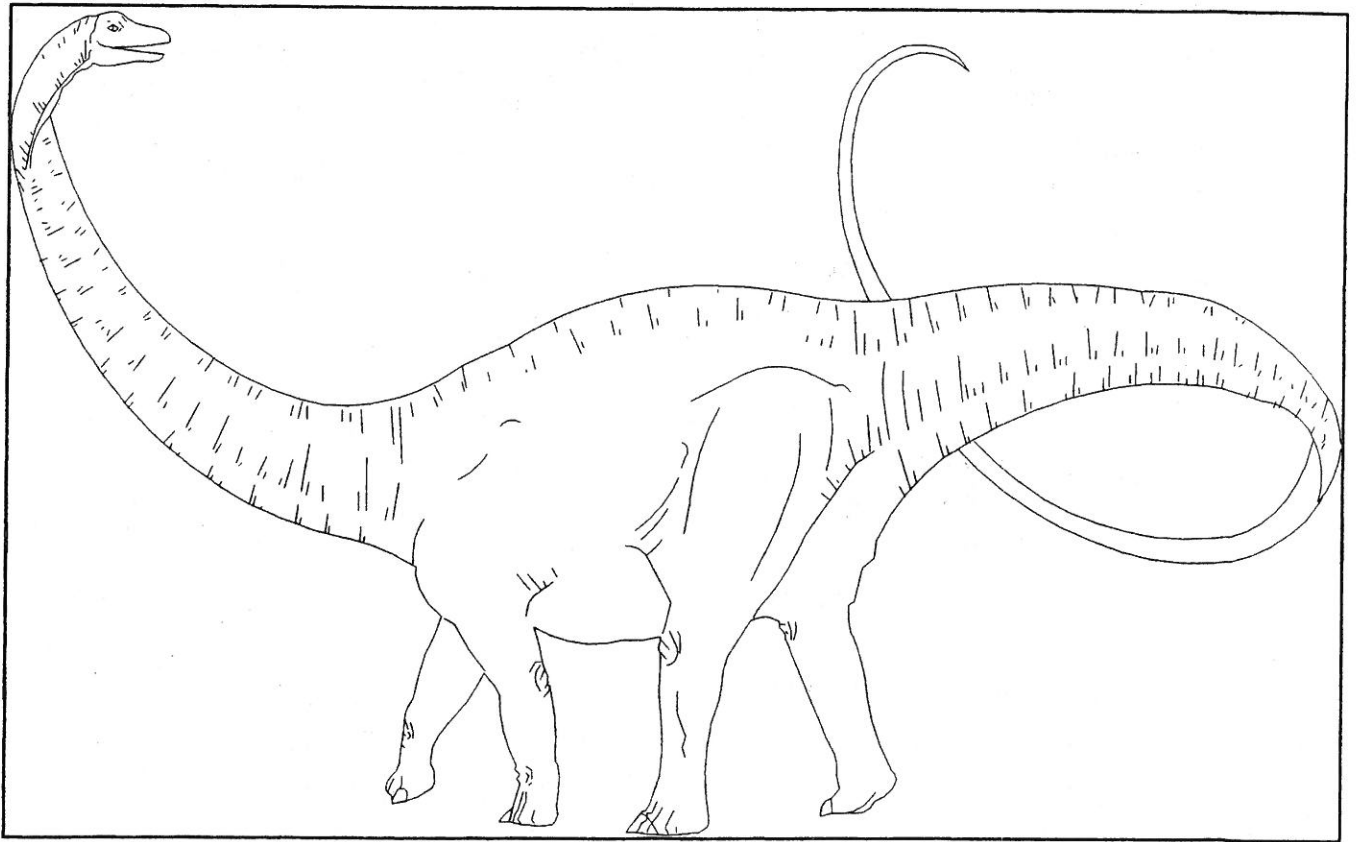
Match the dinosaur with the description and then color them.

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.

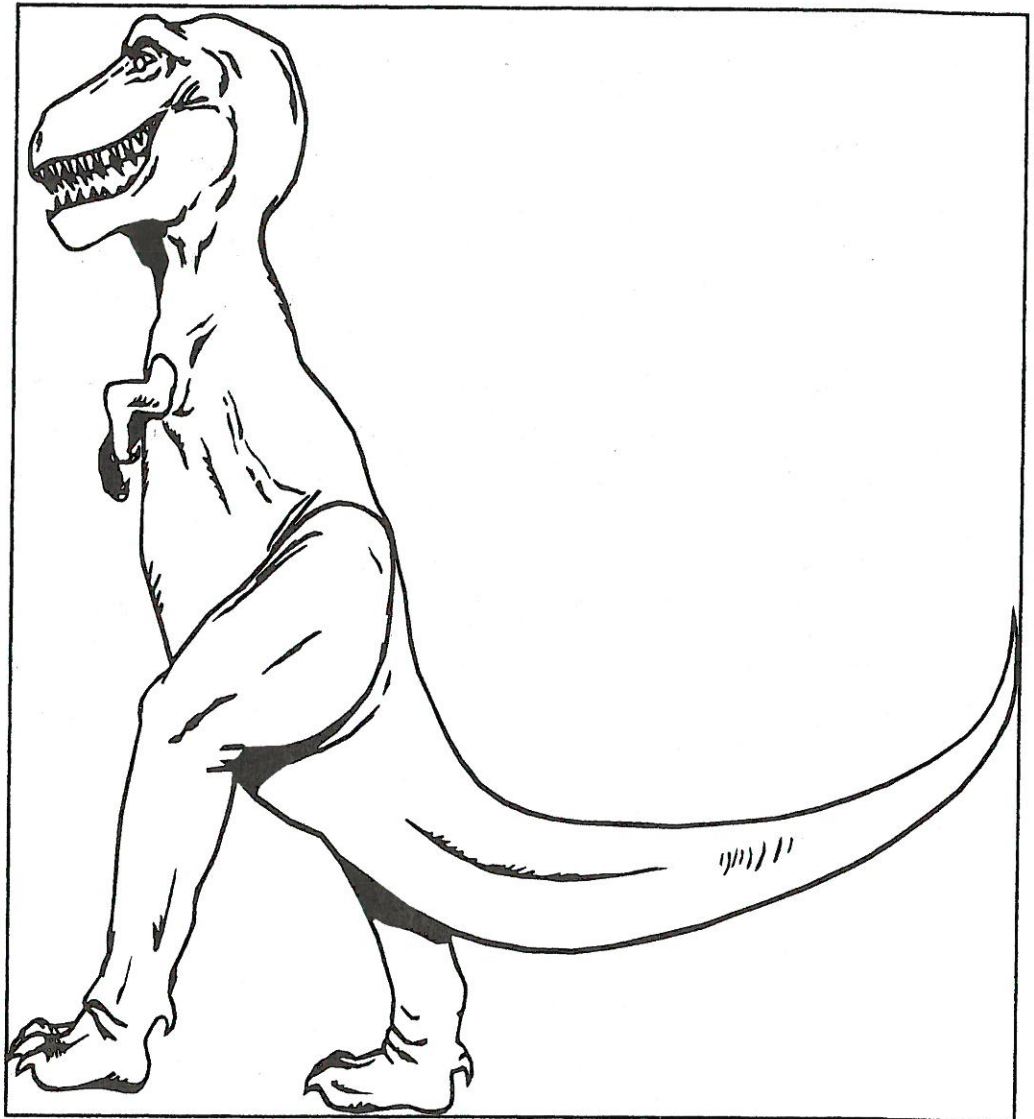
Brontosaurus (means "thunder lizard") - The Brontosaurus was one of the greatest giant dinosaurs. It had legs that were like pillars and round flat feet. It weighed about 30 tons and spent a lot of time in the swamp feeding on soft green plants.



1. _____

Diplodocus
(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.

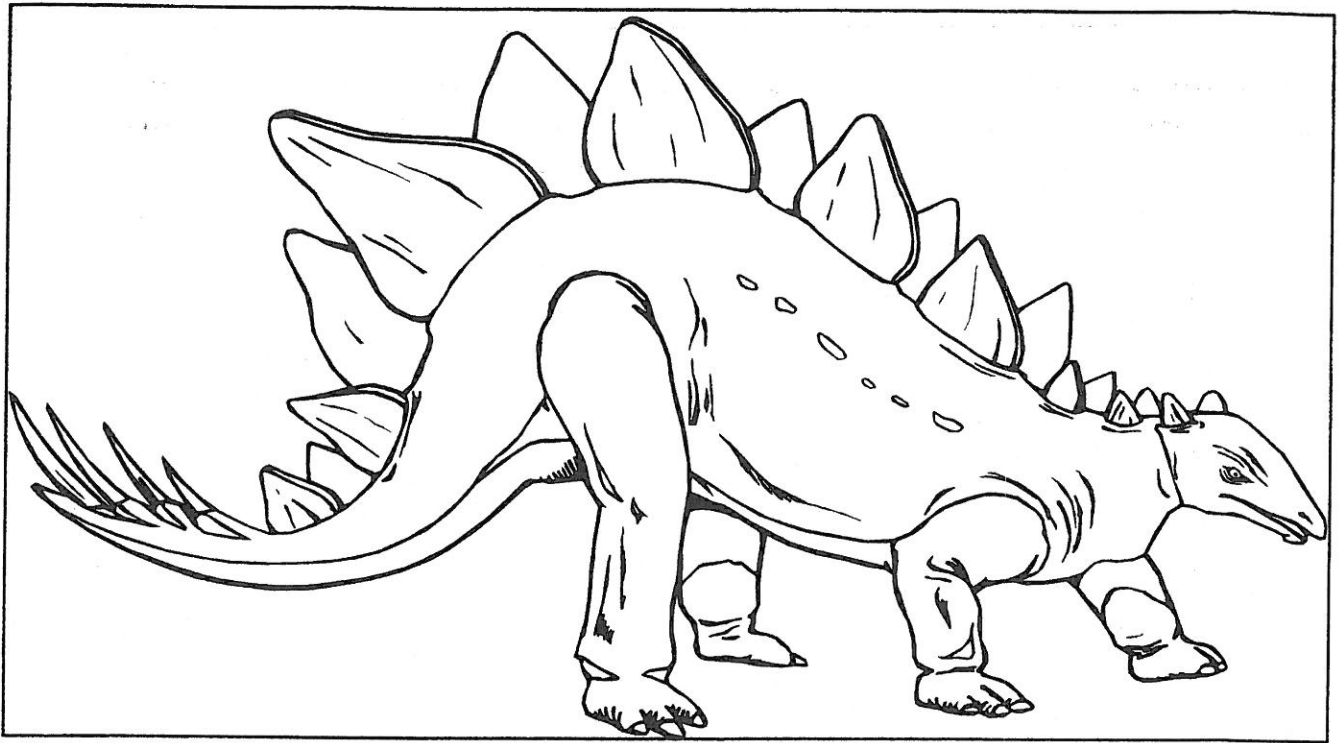


2. _____

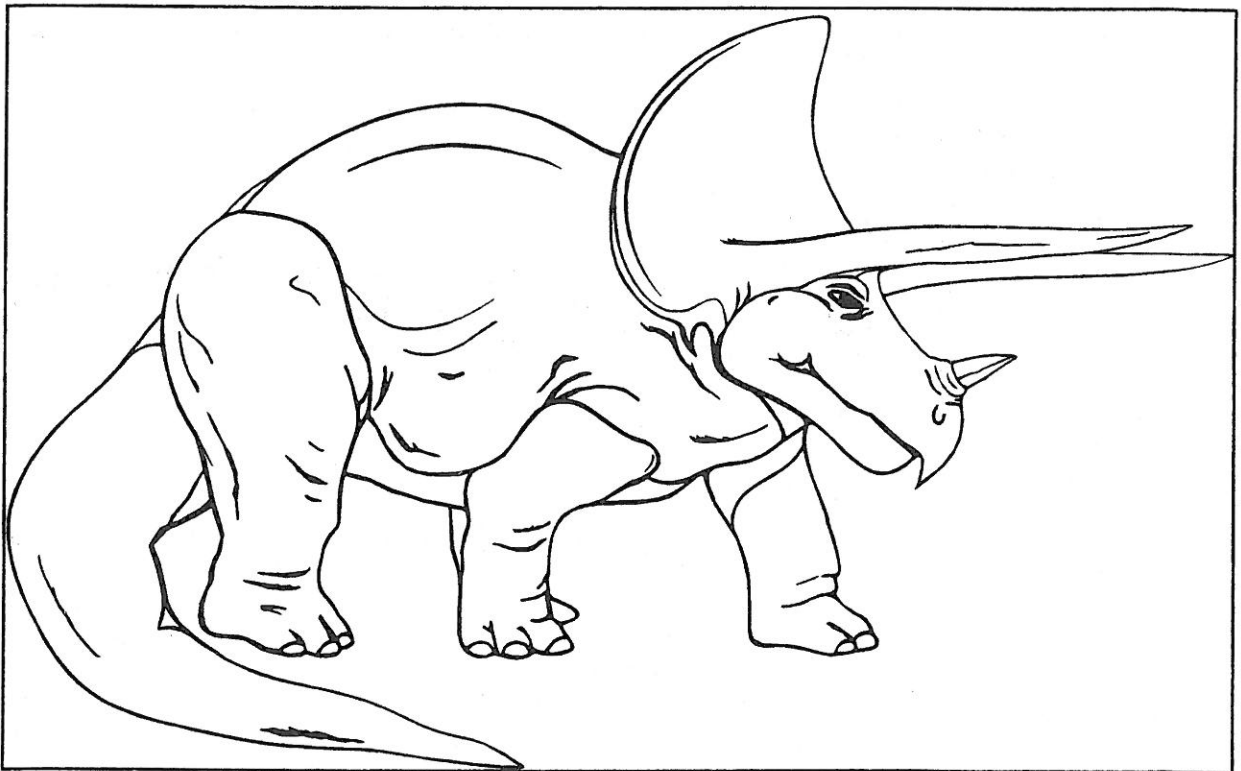
Tyrannosaurus Rex

(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.

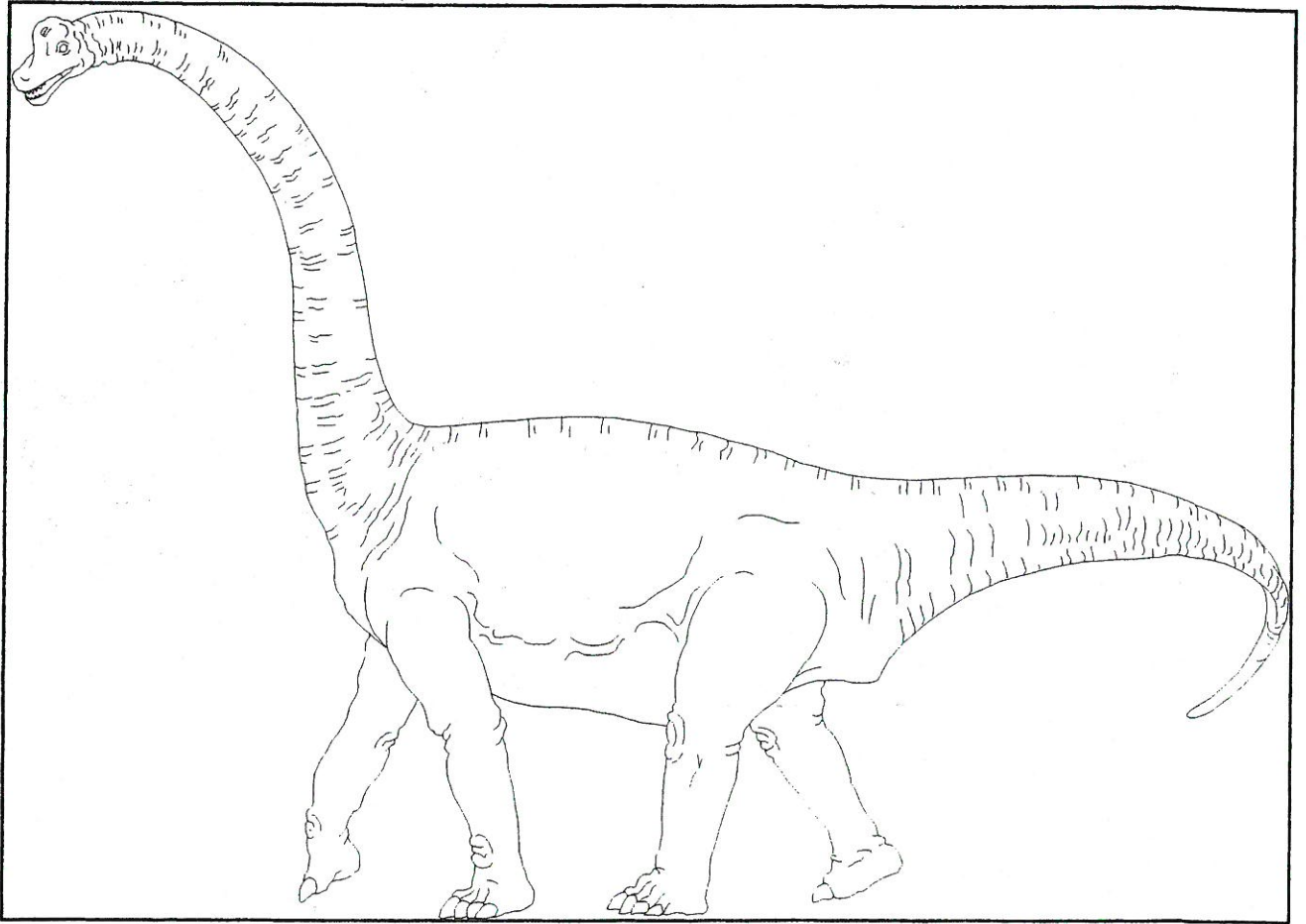
Velociraptor (means "quick predator") - This meat eater had sharp, six inch claws which killed its prey. The Velociraptor would stand on one foot and use its tail to balance while it used its claws. It was 3 feet tall and 10 feet tall. It could run 50 mph or more!



3. _____



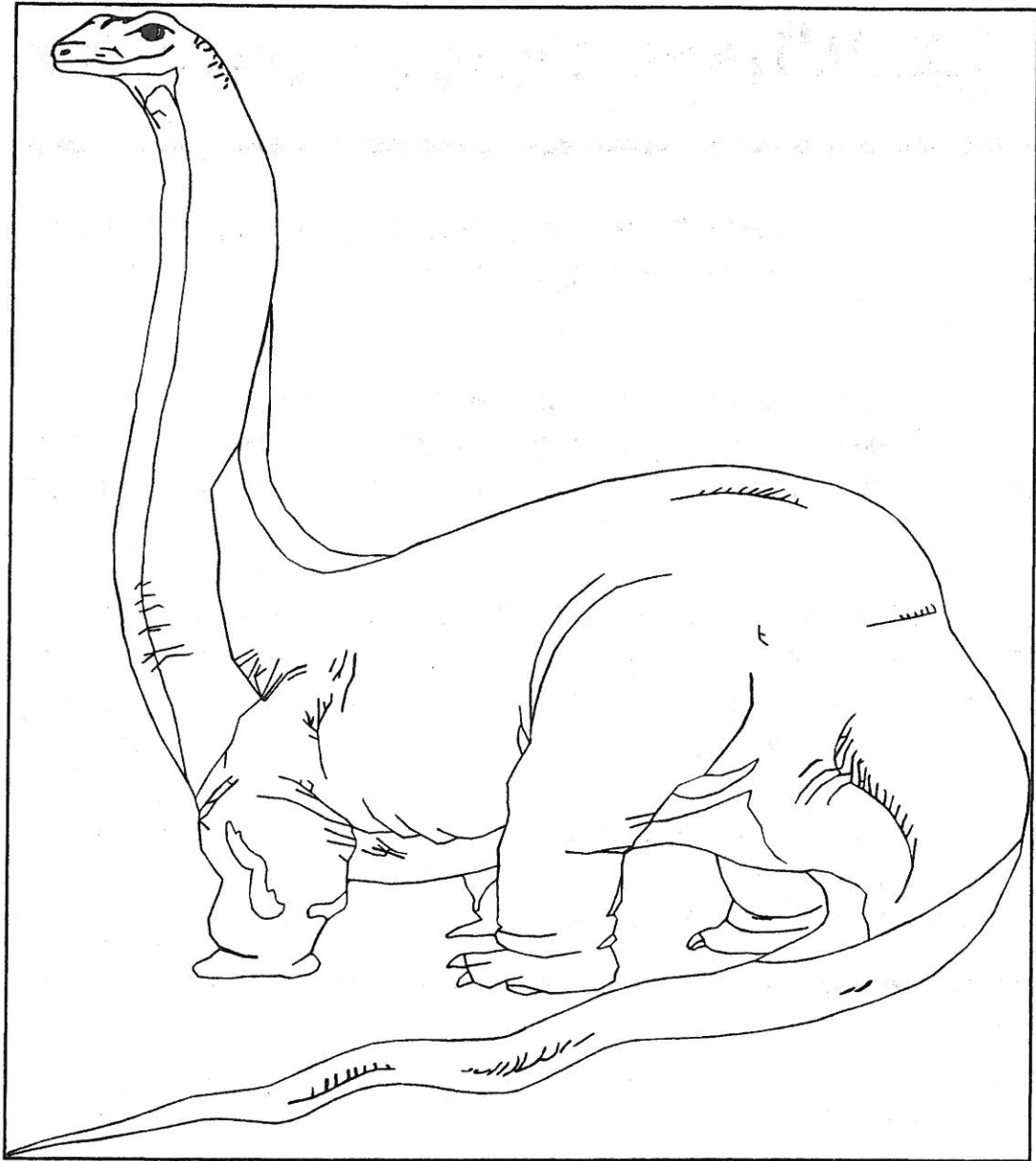
4. _____



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.

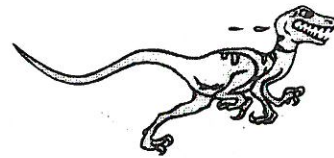
Most of the plants that lived then were ferns, mosses and other smaller plants. The plants were very simple. There were no flowers, fruits or seeds. All plants liked the warm, wet climate. Plants gave a lot of tender, green leaves to feed the large dinosaurs.

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

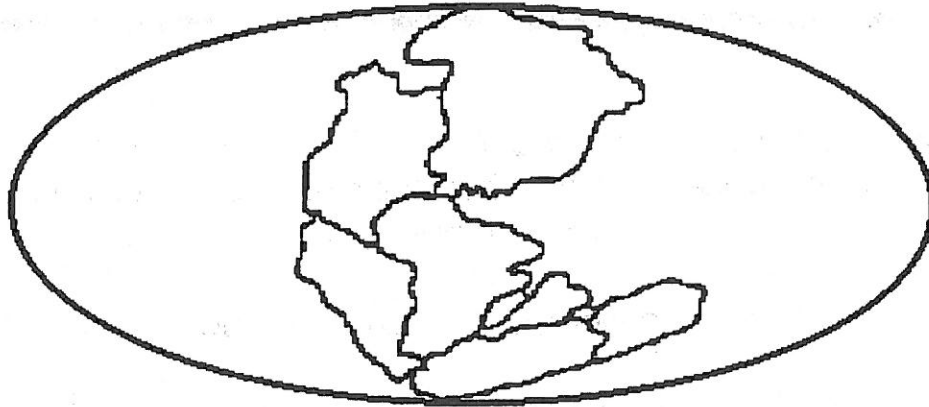
You will need these things:

- crayons, colored pencils or markers

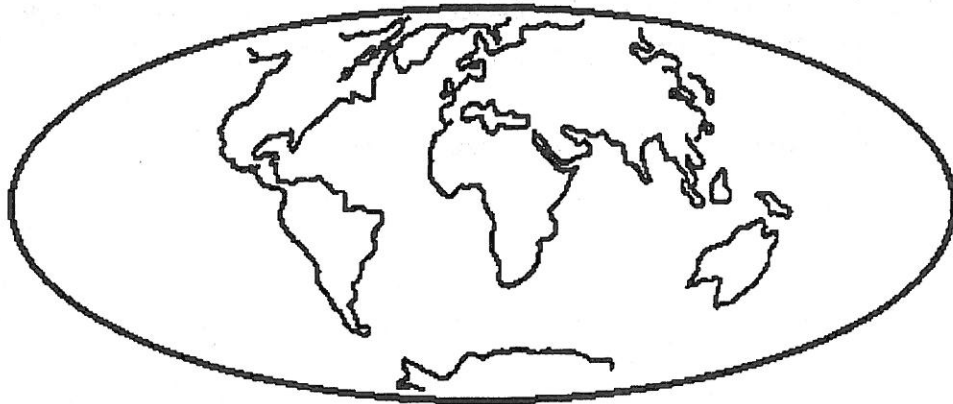


Here is what you do:

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



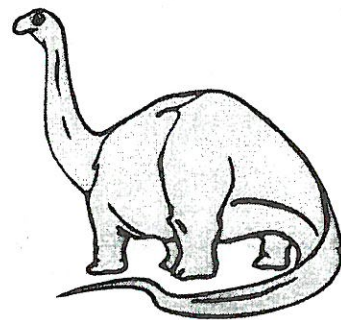
About 65 millions years ago, something happened to the dinosaur. Many people have many ideas about dinosaur extinction. *Extinction* means that a special kind of plant or animal no longer exists or is living.

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?

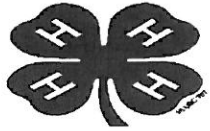


Answers to Types of Dinosaurs:

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



4-H Fair Exhibit



Exhibit – Kindergarten

A poster with 3 pictures of dinosaurs, properly identified.

Exhibit – 1st Grade: (choose one)

1. A poster with 4 pictures of dinosaurs. Make a label (2" x 4") for each picture with the following information on it: a.) Name of dinosaur, b.) Weight of dinosaur, c.) Size of dinosaur, d.) Type of Dinosaur.
2. Make a model of your favorite dinosaur. You can use model materials of your choice.

Exhibit – 2nd Grade: (choose one)

1. Make a poster that shows how big dinosaurs were. Draw pictures of yourself, your house, your school, and your favorite dinosaur. Make a label (2" x 4") for each drawing with the following information on it: a.) name of thing, b.) Size of thing.
2. Collect 5 types of plants that dinosaurs would be able to eat if they lived today. Exhibit the plants in a notebook. Make a label (2" x 4") for each plant with the following information on it: a.) Name of plant, b.) Why a dinosaur would eat it. c.) Where you found the plant.

Poster Construction Rules:

All posters are to be covered with clear plastic and have a stiff, non-flexible backing. All posters are to be **14" HIGH x 22" WIDE**. You may use any color of poster board. Each poster project should have a title.

All projects are to have a name label on them. You will receive a Mini 4-H newsletter in the mail prior to the Fair that will contain name labels.

If you have any questions about your project, please call the Extension Office at 636-2111 or 1-800-601-5826.



Noble County Mini 4-H Record Sheet

Name _____ Grade in School _____

Address _____

4-H Club _____ Township _____

Number of years in Mini 4-H _____ Number of years in project _____

Member's Signature _____

Parent's Signature _____

Leader's Signature _____

A. Project: _____

B. Estimated number of hours worked to complete project _____

C. Money spent on project:

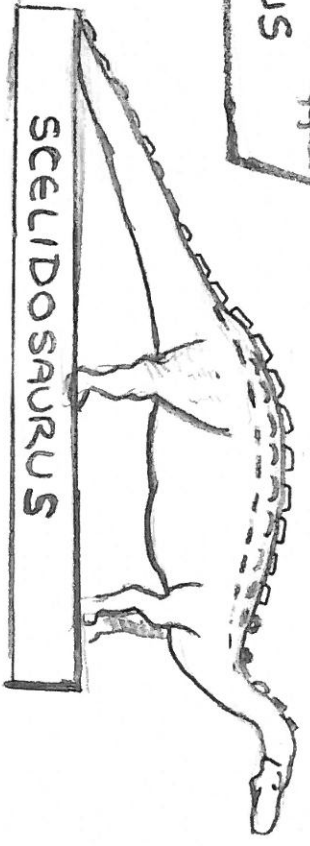
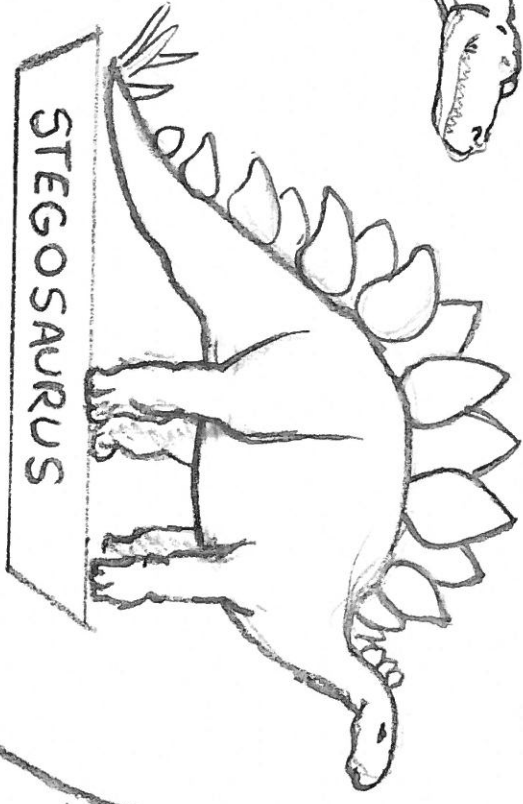
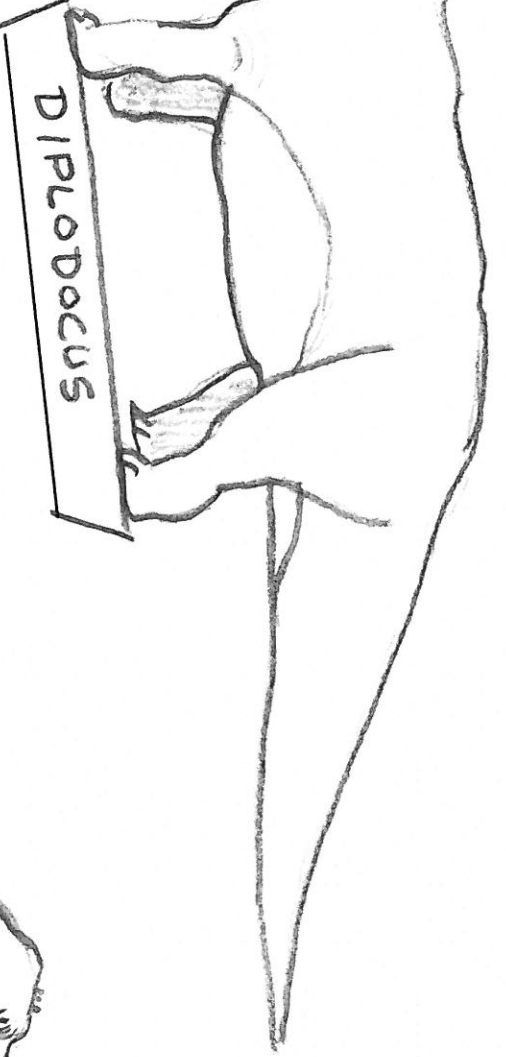
Cost of supplies: (list) _____

OR

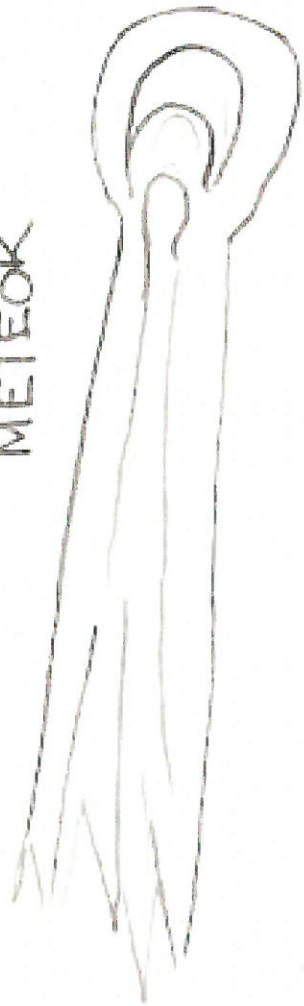
Foods – number of _____

times made _____

D. List the things that you learned while you were doing Mini 4-H:



METEOR



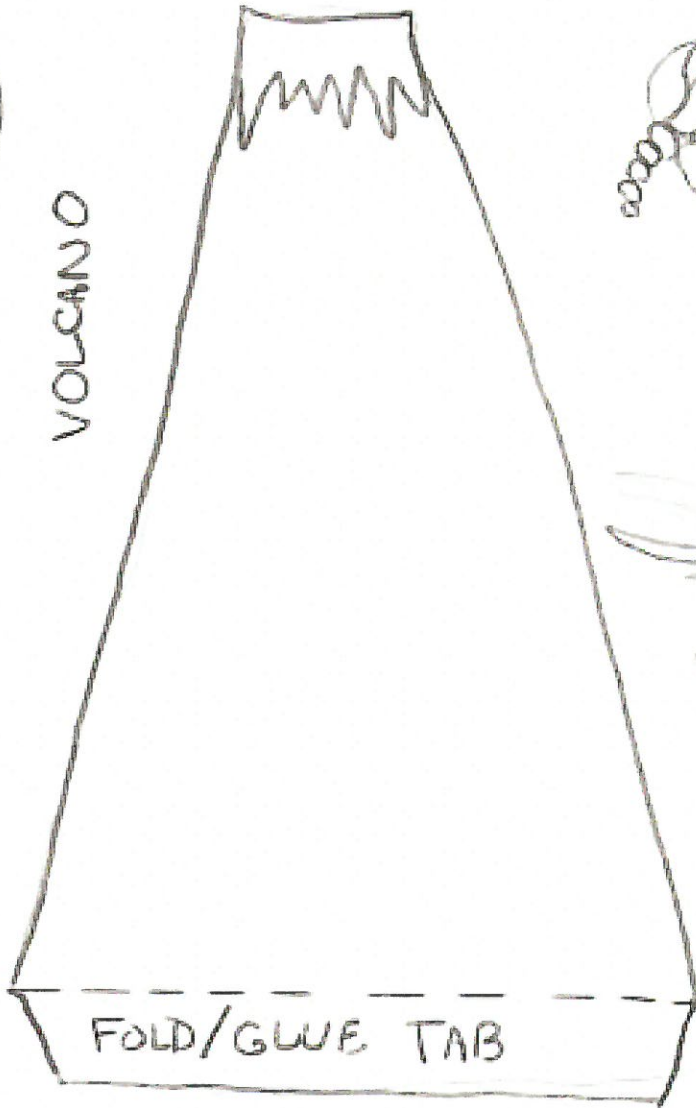
SUN 1



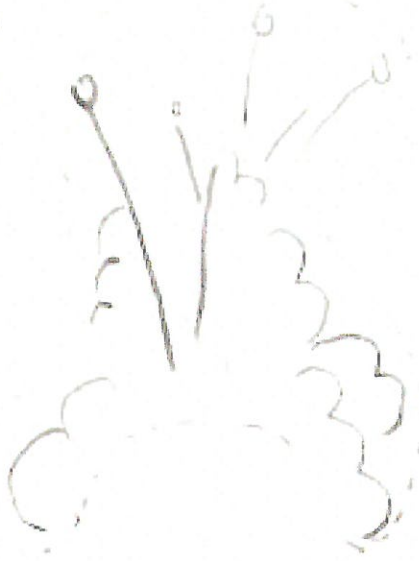
SUN 2



VOLCANO



VOLCANO ERUPTION



BEND/FOLD AND GLUE (COVER THE PLANTS!)



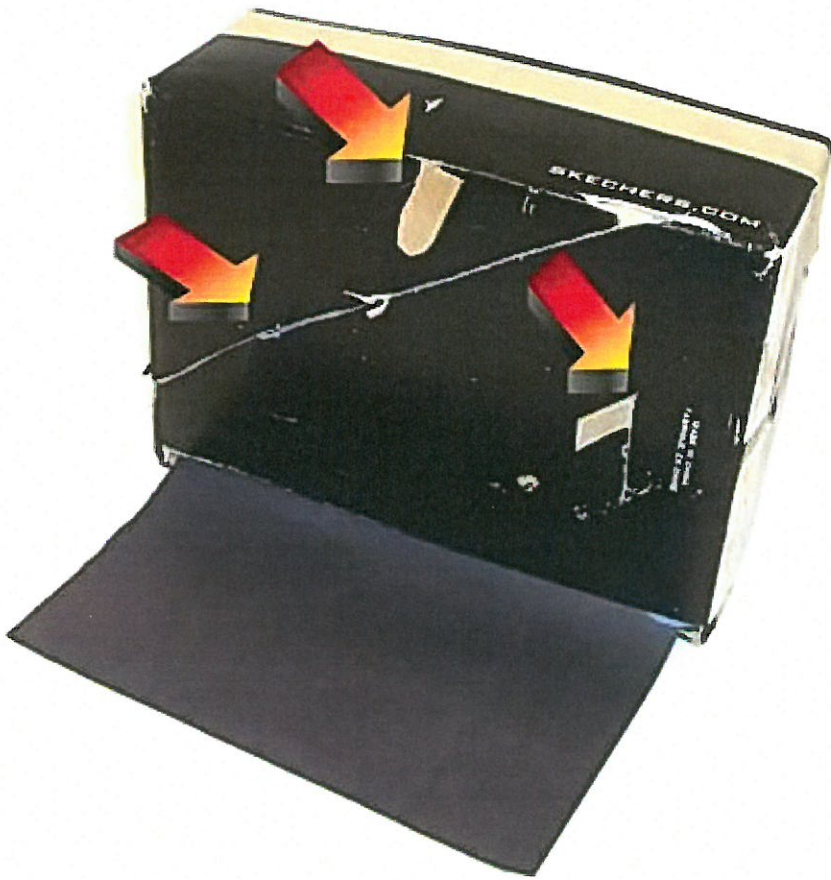
This is a picture of the completed diorama. But it is an active diorama. The volcano on the left will erupt, a meteor will come crashing out of the sky, and the background turns to black.



This picture shows what makes this diorama unique. You can see the volcano is erupting and you can see that the meteor is streaking through the sky. You move these from the back.



After these catastrophic events the sky is filled with ash, smoke and contamination. This turns the sky black as shown here in this picture. These are the leading theories as to why the dinosaurs went extinct and this diorama shows you. So it is not just a regular diorama but an active Dinosaur Diorama.



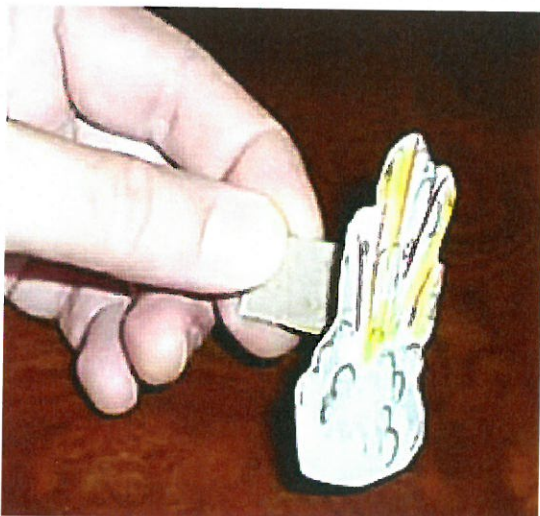
This picture of the back of the shoebox shows you how it is done. There is a little tab at the top center. This tab pulls the black sky up. The long slash is a cut I made so the meteor could travel. The other cardboard tab with a small slash is for the volcano smoke.

You just have to make these same cuts in your diorama to get the same effect. And make a long cut along the bottom so the black paper sky can fit in.

The Materials You need to Make this diorama



- A Shoe Box
- Colored Construction Paper
- A Cereal box (glue the dinosaur cut outs to cardboard so they stand up straight)
- Scissors, Ruler, Pencil, crayons or colored pencils
- Glue Stick or glue
- Cellophane tape



The trick to making the volcano active and the meteor streak across the sky is to glue a little tab on the back like in the picture shown here.

Now you can put the volcano explosion in its slot and move it up and down. And you can put the meteor in its slot and move it across the sky.

