



# Activity: Make Your Own Liaoning Diorama

## Introduction

Students will create their own diorama or mural of the Liaoning forest and use it to draw conclusions about how that ecosystem functioned.

## Objectives

Students will:

- re-create the 130-million-year-old Liaoning forest.
- understand that some dinosaurs lived in forest settings similar to today's forests alongside many other types of animals. (Younger students)
- draw conclusions about climate, animal behavior, and predator/prey relationships. (Older students)

## Time Frame

Approximately two periods (40 minutes each)

## Materials

- *Liaoning Forest* mural (grades K-2) or *Liaoning Forest* background and cutouts (grades 3-8), duplicated for each student
- Art materials such as scissors, glue, cardboard paper, and colored pencils or crayons
- Shoebox for each student (grades 3-8)

## Procedure

### Prior Knowledge

1. Remind students of the Liaoning forest diorama that they saw onboard the Moveable Museum. Ask students to recall and name some of the plants, insects, mammals, and dinosaurs that lived in this habitat. Discuss with students how paleontologists know which plants and animals lived in the Liaoning forest 130 million years ago.



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### Exploration

2. Tell students they are going to make their own model of the Liaoning forest.

For grades K-2: Distribute the Liaoning forest mural and crayons or colored pencils to each student. Instruct students to color the plants and animals in the mural. (Note: You may consider enlarging the mural.)

For grades 3-8: Distribute the Liaoning forest background and cutouts as well as scissors, glue, and crayons or colored pencils to students. Have them color the forest background page. They should then carefully glue the forest background to the back and sides of their shoeboxes. Students may want to glue the sheets containing individual plants and animals onto heavier paper to make them stronger. Have them color the images and cut them out. They can then glue the cutout pictures to the bottom and sides of the box using the attached tabs. Encourage students to be innovative in re-creating the Liaoning forest. To complete the activity, have students create label copy describing the diorama and identifying the plants and animals in it.

### Wrap-up

3. For grades K-2: When students are done, call upon them to display their murals and discuss one plant or animal in their drawings. Facilitate the process by asking questions such as:
  - What do you notice about the forest? Do you think it was a warm place or a cold place?
  - Describe the plants you see in the diorama.
  - What plants are like those we see today?
  - Describe the animals you see in the diorama. Did that animal live on land or in the water?
  - Are any of the animals like the animals we see today? Which ones? How are they alike?
  - What do you think each animal ate?

Display students' murals on the bulletin board or in the school corridor.



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For grades 3-8: Discuss what the evidence in the diorama tells them about the climate in the forest and the behavior and predator/prey relationships of the animals. Facilitate the discussion with these questions:

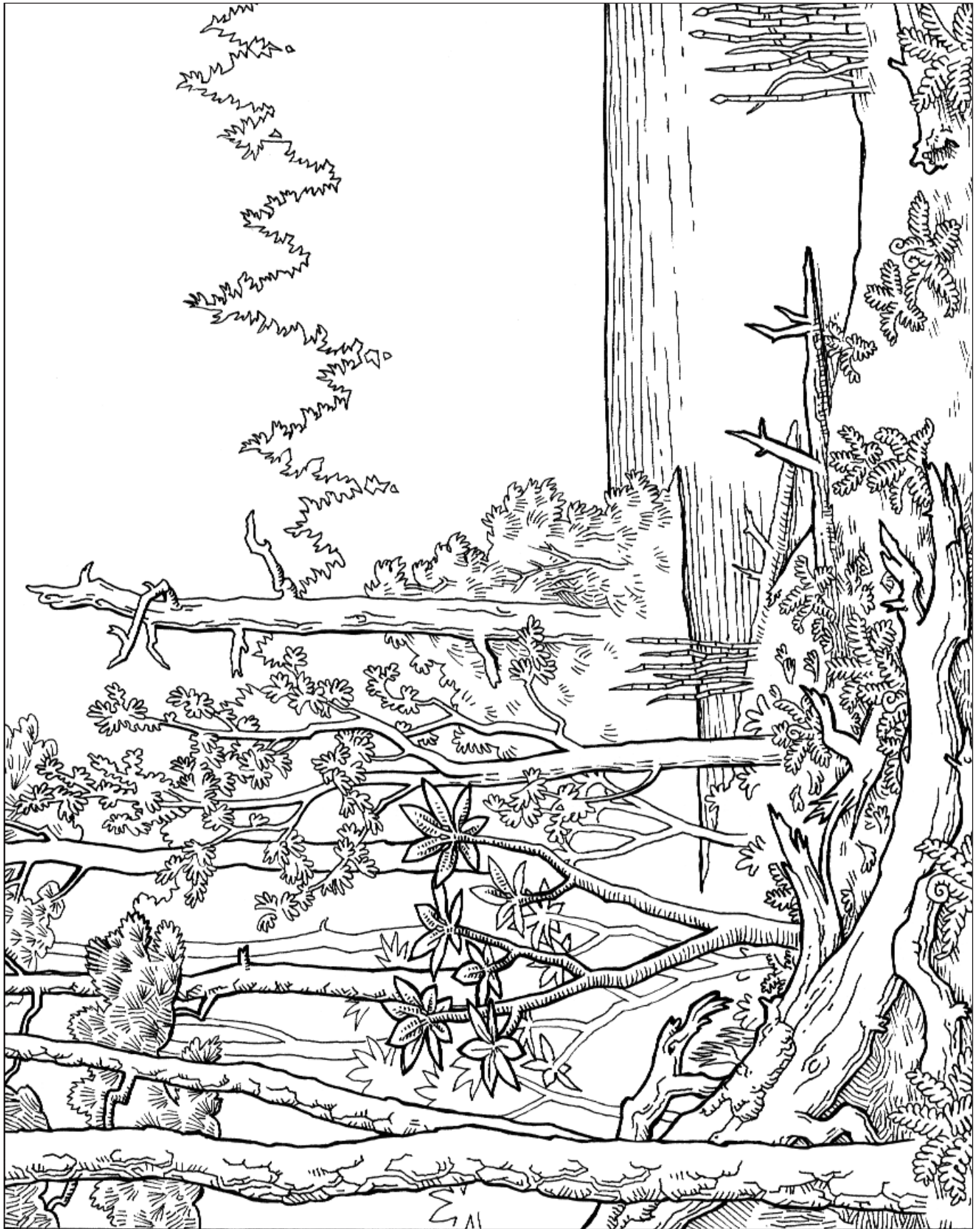
- How were paleontologists able to re-create the Liaoning forest? Do you think there might have been other plants or animals living there? Why or why not?
- What do you think the Liaoning climate was like? What evidence do you have?
- How would you describe the Liaoning forest? (Answer: swampy, marshland)
- What plants and animals (including insects) found in Liaoning have relatives living today?
- Which of the animals pictured are predators? Which ones are prey?
- Which dinosaur had babies?

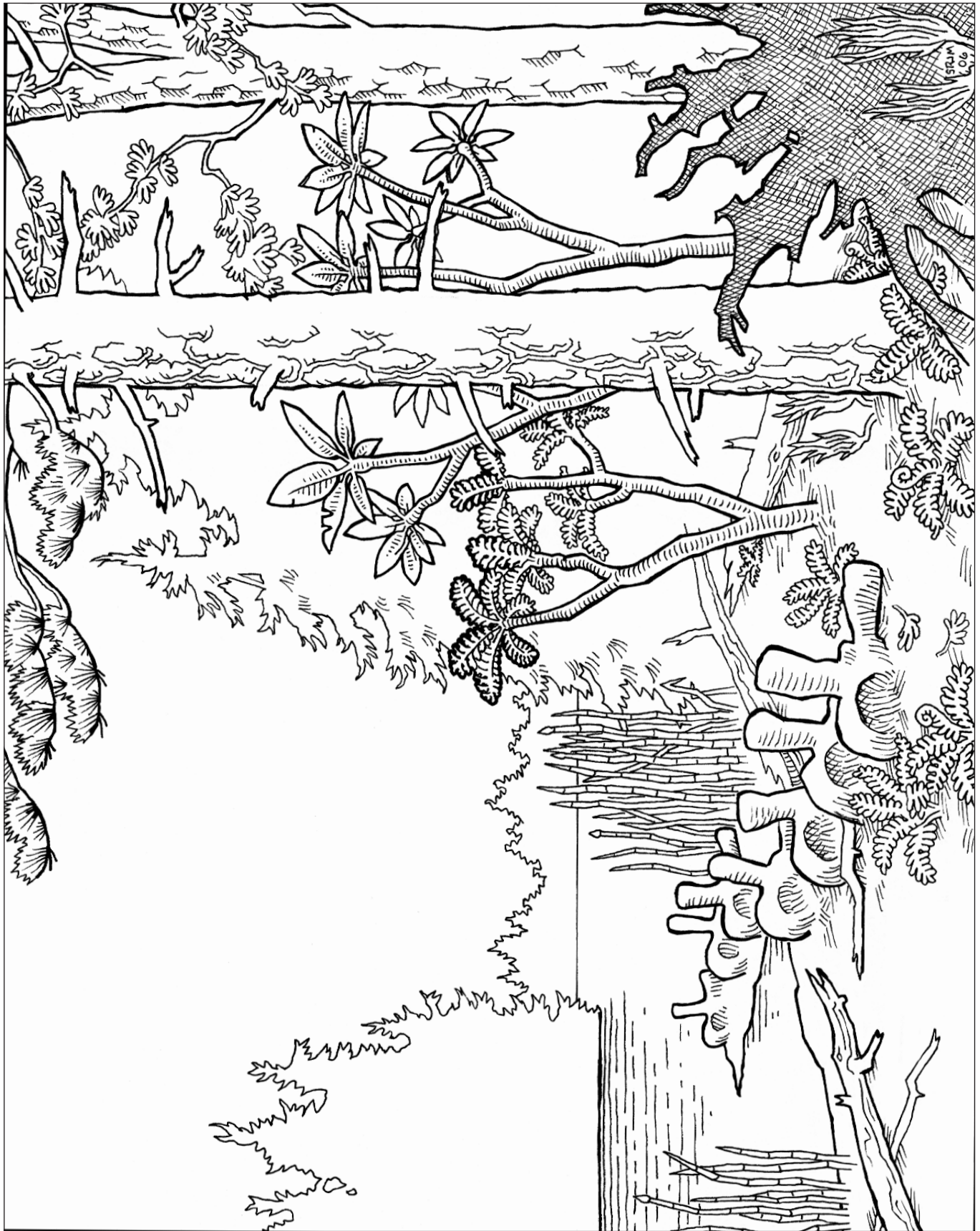
### Extension for older grades:

Have students work in small groups. Call on them to create a food web for the plants and animals in the Liaoning forest. When the groups are done, call on them to make presentations to the rest of the class. Afterwards, discuss how each group's food web differed and why.

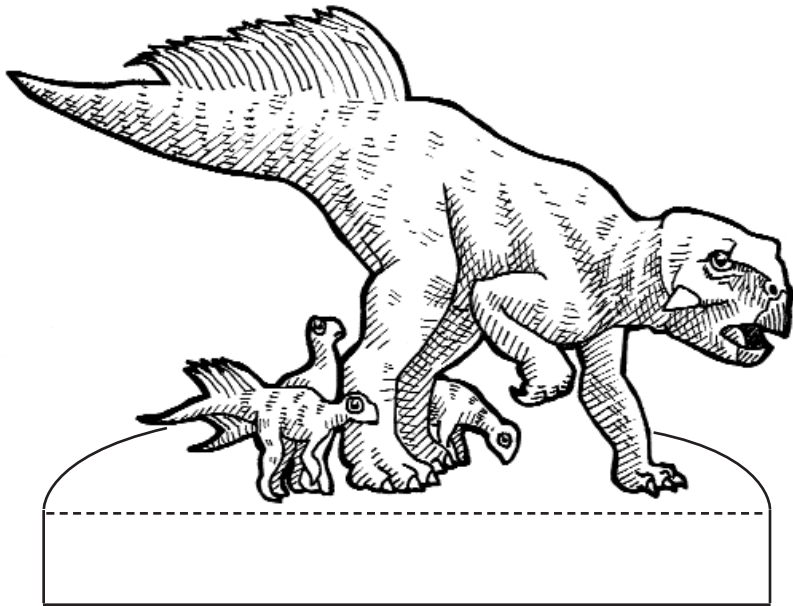


Liaoning Forest, 130 million years ago

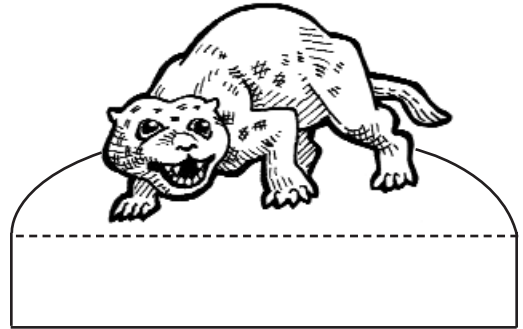




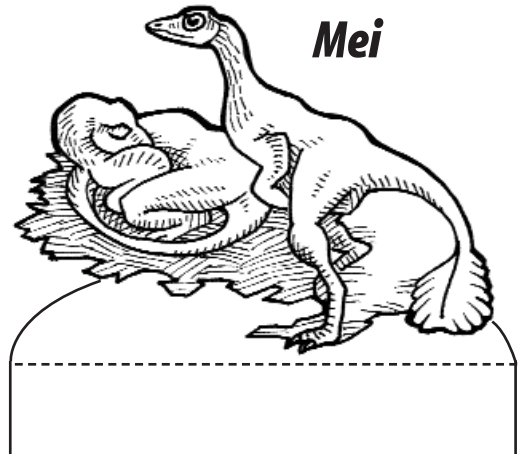
***Psittacosaurus***



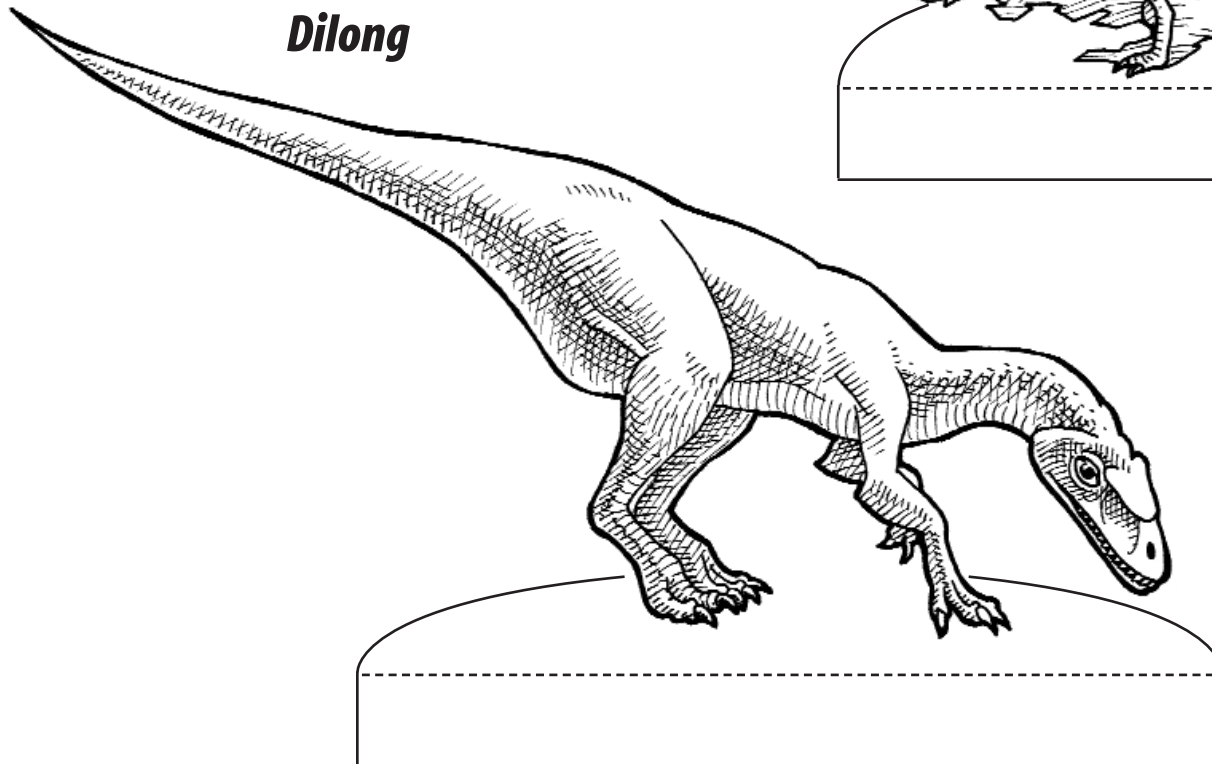
***Repanomamus***



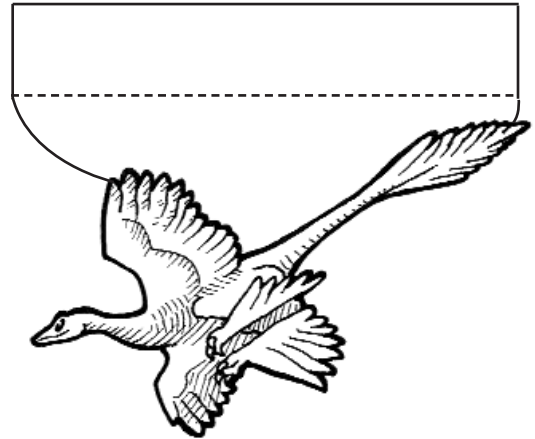
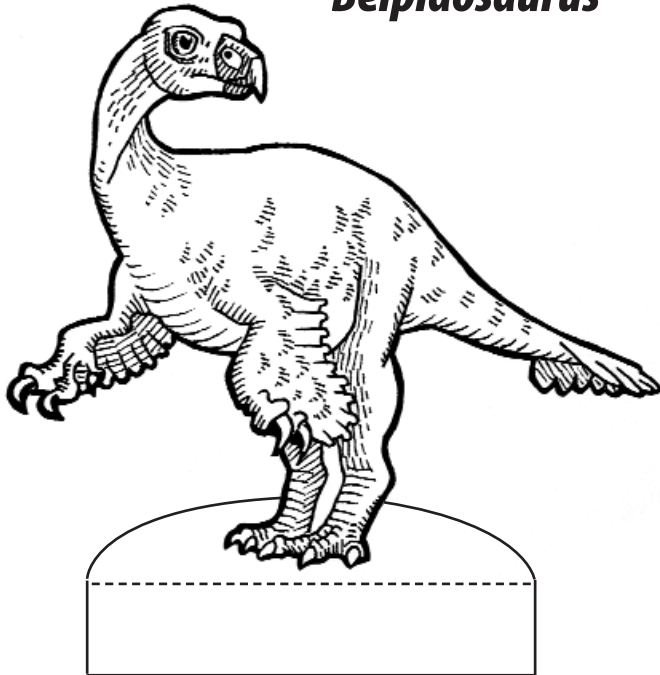
***Mei***



***Dilong***

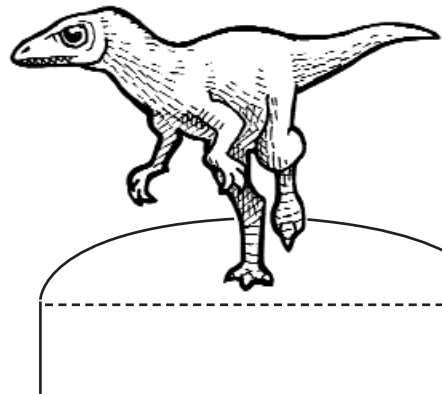


***Beipiaosaurus***

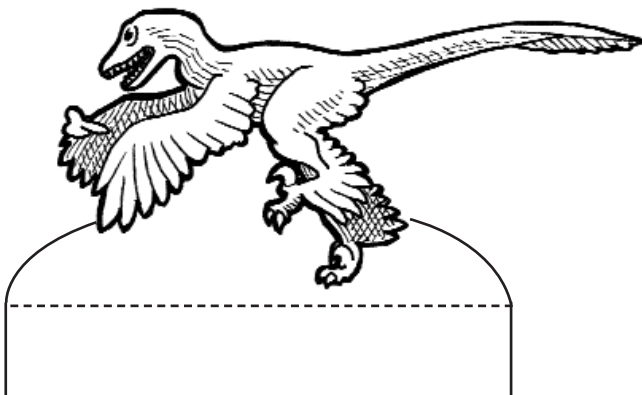


***Microraptor***

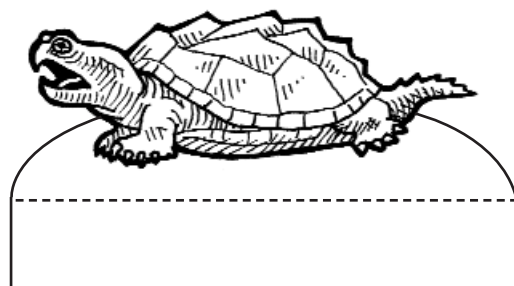
***Sinosauropteryx***



***Sinornithosaurus***



***Manchurochelys***

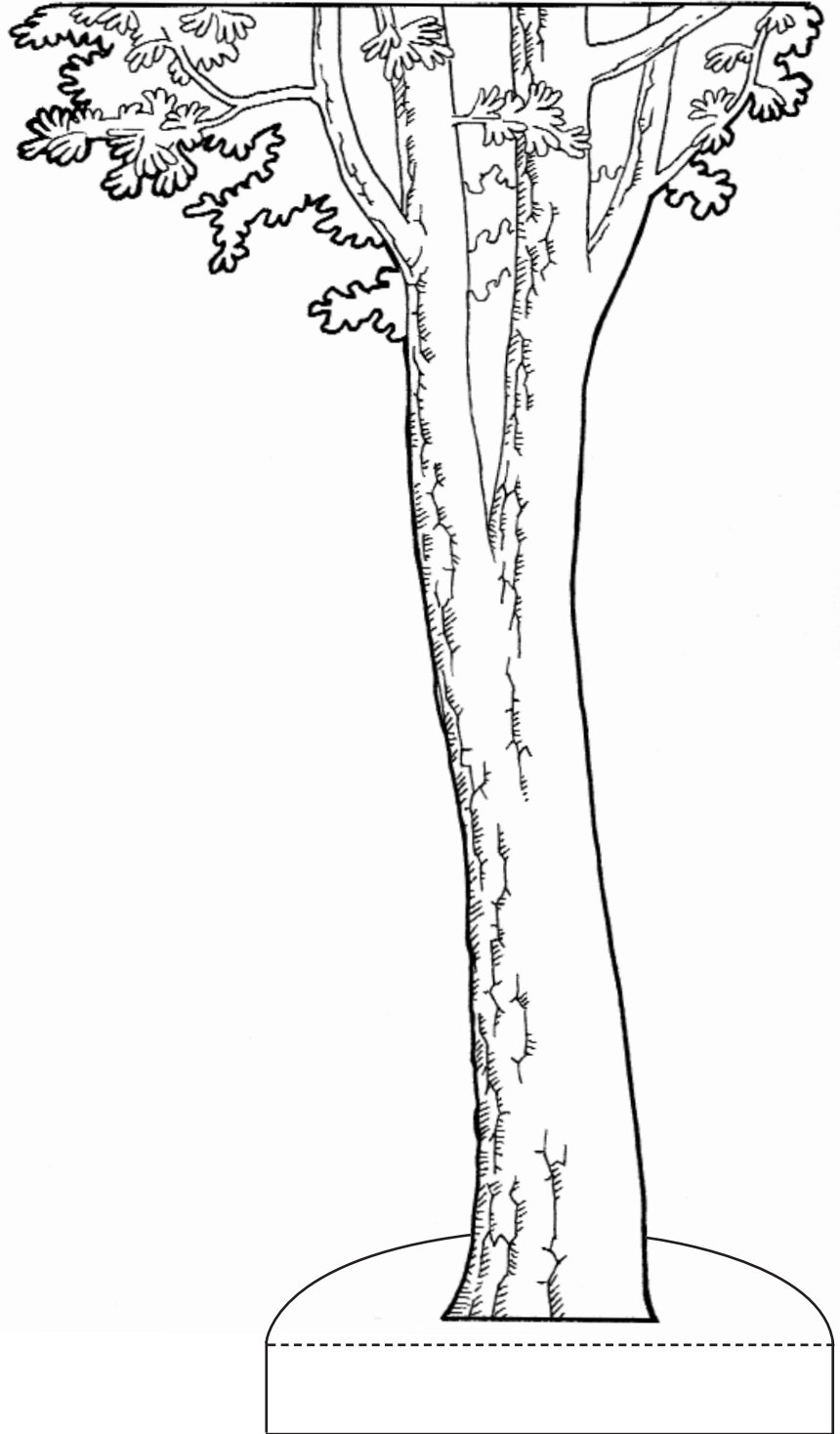
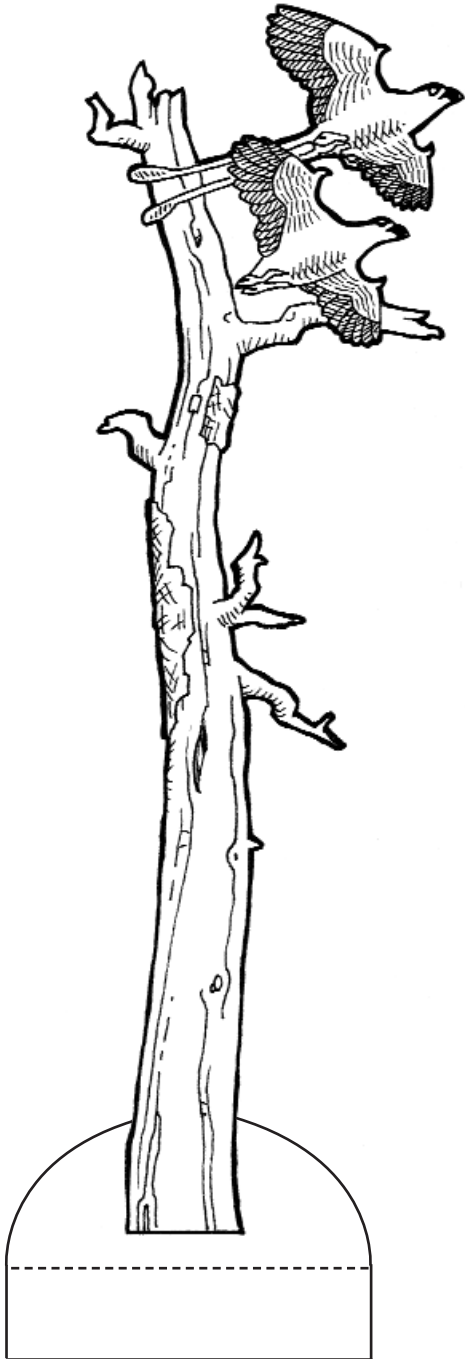






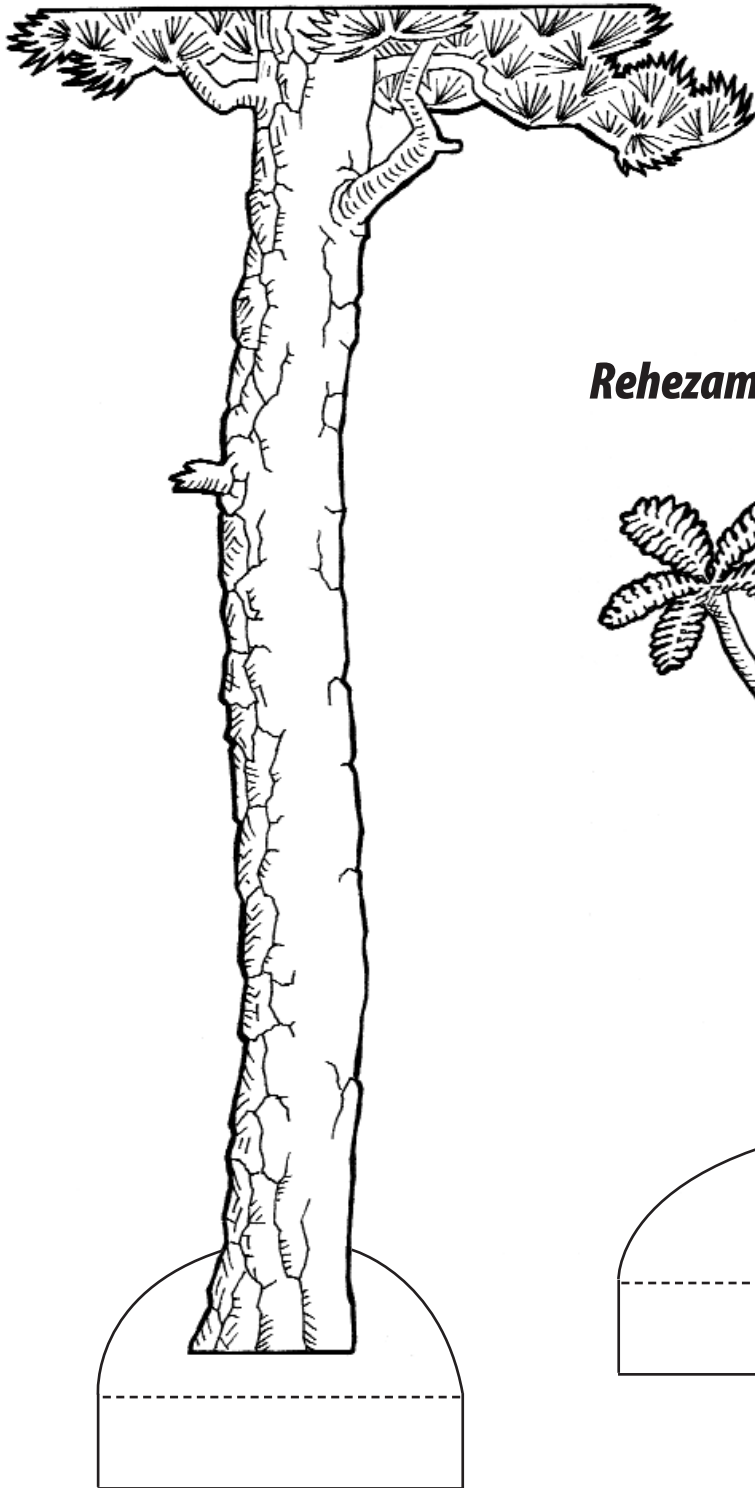
# Ginkgo

## Confuciusornis and Tree





## *Pitycladus*



## *Rehezamites*

