



What is a Dinosaur? Part II: What is Not a Dinosaur

Adapted from original *What is a Dinosaur?* Activity from MOR Dinosaur Trunk

Grade Level: K-8

Preparation Time: 5 minutes or less (after background material is understood)

Activity Duration: 30 minutes

Concepts addressed:

- We now call extinct dinosaurs that lived during the Mesozoic Era non-avian dinosaurs.
- Birds (or avian dinosaurs) evolved from a certain type of non-avian dinosaurs during the Mesozoic Era.

Objectives

The student will:

- Observe characteristics of different animals.
- Determine which characteristics define dinosaurs.
- Categorize animals as dinosaurs or not dinosaurs.
- Be able to explain why each animal was categorized as a dinosaur or not.

Materials Included

- Plastic animals labeled 1-20
- Two Plastic bins
- Laminated signs—“Dinosaur” and “Not a Dinosaur”
- *What is a Dinosaur?* Notes

Background

In Part I of this activity we established that paleontologists now consider birds to be living “avian dinosaurs” and extinct dinosaurs to be “non-avian dinosaurs”. If this concept is not well understood, please go back to the Part I extension and utilize the Museum of the Rockies “Bone Blog” to answer any questions you or your students might have.

Much confusion abounds about not only what is a dinosaur, but what is not. We have already established that birds are dinosaurs. And, we have already established that dinosaurs, by definition, have legs directly beneath their bodies, not sprawled out to the sides.

In this activity students will observe several animals that are commonly confused as dinosaurs, as well as dinosaurs and birds. Students will categorize the animals as “dinosaur” or “not a

dinosaur”. This activity is also a good check for understanding about birds now being classified as dinosaurs.

Procedure

1. Complete *What is a Dinosaur Part 1: Birds and Dinosaurs*.
2. Spread the provided plastic toys for Part II across a table at the front of the room.
3. Place the two plastic boxes on the table, as well. Label one with the sign “Dinosaur” and the other with the sign “Not a Dinosaur”.
4. As a class, hold up one animal at a time and ask the class to classify it as a “Dinosaur” or “Not a Dinosaur”.
5. Place the plastic toys in the boxes that the students decide upon.
6. Go through the animals one at a time and use the answer sheet to discuss with the students why they were correct or incorrect.

Extensions

- Have students go through magazines or search online to find at least one additional animal that is and/or is not a dinosaur.

What is a Dinosaur? Notes for Parts I and II

Number	Animal	Part I	Part II	Explanation Part I	Explanation Part II
1	Dimetrodon		Not a Dinosaur		A Dimetrodon is not a dinosaur. It is a reptile with legs sprawled to the sides of its body that lived during the Mesozoic Era that is now extinct.
2	<i>Stegosaurus</i>	Non-Avian Dinosaur	Dinosaur	A <i>Stegosaurus</i> is a non-avian dinosaur. It is a reptile with legs directly beneath its body. It lived during the Mesozoic Era and is now extinct.	A <i>Stegosaurus</i> is a dinosaur--a non-avian dinosaur that lived during the Mesozoic Era and is now extinct.
3	Snowy Owl	Avian Dinosaur	Dinosaur	The Snowy Owl is an avian dinosaur. It is a reptile with legs directly beneath its body. It lives now but evolved from avian dinosaurs that lived during the Mesozoic Era.	A Snowy Owl is a dinosaur--an avian dinosaur that evolved from avian dinosaurs from the Mesozoic Era and lives today.
4	Elasmosaurus		Not a Dinosaur		An Elasmosaurus is not a dinosaur. It is a marine reptile that lived in the shallow inland seas during the Mesozoic Era.
5	Pelican	Avian Dinosaur	Dinosaur	The Pelican is an avian dinosaur. It is a reptile with legs directly beneath its body. It lives now but evolved from avian dinosaurs that lived during the Mesozoic Era.	A Pelican is a dinosaur--an avian dinosaur that evolved from avian dinosaurs from the Mesozoic Era and lives today.
6	<i>Apatosaurus</i>	Non-Avian Dinosaur	Dinosaur	An <i>Apatosaurus</i> is a non-avian dinosaur. It is a reptile with legs directly beneath its body. It lived during the Mesozoic Era and is now extinct.	An <i>Apatosaurus</i> is a dinosaur--a non-avian dinosaur that lived during the Mesozoic Era and is now extinct.
7	Saber-Toothed Tiger		Not a Dinosaur		A Saber-toothed Tiger is not a dinosaur. It is a mammal that lived after the Mesozoic Era. Although this animal is extinct, it is not a dinosaur.
8	Mososaurus		Not a Dinosaur		A Mososaurus is not a dinosaur. It is a marine reptile that lived in the shallow inland seas during the Mesozoic Era.
9	Crocodile		Not a Dinosaur		A crocodile is not a dinosaur. It is a reptile that lives today. Its legs sprawl out to the sides of its body. Although it may seem more like a non-avian dinosaur to you than a bird does, when closely compared a crocodile is much less similar to a non-avian dinosaur than a bird is.

10	Pteranodon		Not a Dinosaur		A Pteranodon is not a dinosaur. It is a flying reptile that lived during the Mesozoic Era with avian and non-avian dinosaurs. Although this reptile can fly, it is very different than both non-avian and avian dinosaurs. It has a much different skeleton and it does not have feathers.
11	Penguin	Avian Dinosaur	Dinosaur	The Penguin is an avian dinosaur. It is a reptile with legs directly beneath it's body. It lives now but evolved from avian dinosaurs that lived during the Mesozoic Era.	A Penguin is a dinosaur--an avian dinosaur that evolved from avian dinosaurs from the Mesozoic Era and lives today.
12	Iguana		Not a Dinosaur		An Iguana is not a dinosaur. It is a reptile that lives today. It's legs sprawl out to the sides of it's body. Although it may seem more like a non-avian dinosaur to you than a bird does, when closely compared a crocodile is much less similar to a non-avian dinosaur than a bird is.
13	Woolly Mammoth		Not a Dinosaur		A Woolly Mammoth is not a dinosaur. It is a mammal that lived after the Mesozoic Era. Although this animal is extinct, it is not a dinosaur.
14	Chicken	Avian Dinosaur	Dinosaur	The Chicken is an avian dinosaur. It is a reptile with legs directly beneath it's body. It lives now but evolved from avian dinosaurs that lived during the Mesozoic Era.	A Chicken is a dinosaur--an avian dinosaur that evolved from avian dinosaurs from the Mesozoic Era and lives today.
15	<i>Allosaurus</i>	Non-Avian Dinosaur	Dinosaur	An <i>Allosaurus</i> is a non-avian dinosaur. It is a reptile with legs directly beneath it's body. It lived during the Mesozoic Era and is now extinct.	An <i>Allosaurus</i> is a dinosaur--a non-avian dinosaur that lived during the Mesozoic Era and is now extinct.
16	Parrot	Avian Dinosaur	Dinosaur	The Parrot is an avian dinosaur. It is a reptile with legs directly beneath it's body. It lives now but evolved from avian dinosaurs that lived during the Mesozoic Era.	A Parrot is a dinosaur--an avian dinosaur that evolved from avian dinosaurs from the Mesozoic Era and lives today.
17	<i>Velociraptor</i>	Non-Avian Dinosaur	Dinosaur	A <i>Velociraptor</i> is a non-avian dinosaur. It is a reptile with legs directly beneath it's body. It lived during the Mesozoic Era and is now extinct.	A <i>Velociraptor</i> is a dinosaur--a non-avian dinosaur that lived during the Mesozoic Era and is now extinct.

18	Duck	Avian Dinosaur	Dinosaur	The Duck is an avian dinosaur. It is a reptile with legs directly beneath it's body. It lives now but evolved from avian dinosaurs that lived during the Mesozoic Era.	A Duck is a dinosaur--an avian dinosaur that evolved from avian dinosaurs from the Mesozoic Era and lives today.
19	<i>Triceratops</i>	Non-Avian Dinosaur	Dinosaur	A <i>Triceratops</i> is a non-avian dinosaur. It is a reptile with legs directly beneath it's body. It lived during the Mesozoic Era and is now extinct.	A <i>Triceratops</i> is a dinosaur--a non-avian dinosaur that lived during the Mesozoic Era and is now extinct.
20	Alligator		Not a Dinosaur		An alligator is not a dinosaur. It is a reptile that lives today. It's legs sprawl out to the sides of it's body. Although it may seem more like a non-avian dinosaur to you than a bird does, when closely compared a crocodile is much less similar to a non-avian dinosaur than a bird is.