DINOSAURS
OVERVIEW FOR TEACHERS/PARENTS

AGE/GRADE LEVEL

This program is appropriate for Grades K–4

DURATION

The program is approximately 1 hour long.

GROUP SIZE

30 students plus one educator/chaperone for every six students

LOCATION

Paleontology Gallery and/or Babbitt Reading Room

BACKGROUND

Dinosaurs are popular with all children. This program is a fun way for children to learn about dinosaurs and how paleontologist study them. The program takes place in the MNA Paleontology Gallery where students can see actual dinosaur tracks, bones and other evidence that has been left behind.

ESSENTIAL QUESTIONS

By the end of the activity, the students will be able to answer the following questions:

All Students

1. What makes a dinosaur a dinosaur?
2. How are dinosaurs alike/different from flying reptiles and marine reptiles?
3. What happened to the dinosaurs?
4. What are the scientists called who contributed knowledge, theories or ideas that created the current concepts regarding the rise and fall of dinosaurs in earth's history?
5. What were some characteristics of carnivore and herbivore dinosaurs?
6. How did dinosaurs become fossils?

Middle School Questions

7. How was the size of the dinosaur adapted to the environment in which it lived?
8. What qualities (adaptations) allowed the dinosaurs to "rule" the earth during the Jurassic period, and what qualities allowed some to endure?
9. How have we learned about the age of dinosaurs—geologic time?

KEY WORDS USED IN THE PROGRAM

Extinction	paleontology	paleontologist	reptile	fossil
Evolution	change	carnivore	herbivore	omnivore
Petrified	tracks	trackway	mammal-like reptile	
Jurassic	Cretaceous	Mesozoic	Triassic	

ARIZONA ACADEMIC STANDARDS

SCIENCE

Strand 1: Inquiry process

Concept 1: Observations, questions and hypothesis

Grades K–4: Observe, ask questions, and make prediction

Kindergarten and Grade 2

PO 2.Ask questions based on experiences with objects, organisms, and events in the environment.

PO 3. *(K–1)* Predict results of an investigation based on life, physical, and Earth and space sciences.

Grade 2
PO 1. Formulate relevant questions about the properties of objects, organisms, and events in the environment.
PO 2. Predict the results of an investigation (e.g., in animal life cycles, phases of matter, the water cycle).

Grade 3
PO 1. Formulate relevant questions about the properties of objects, organisms, and events in the environment using observation and prior knowledge.
PO 2. Predict the results of an investigation based on observed patterns, not random guessing.

Grade 4
PO 3. Formulate predictions in the realm of science based on observed cause and effect relationships.

Concept 2: Scientific testing (investigating and modeling)
Grades K–2: Participate in planning and conducting investigations, and recording data
PO 2. Participate in guided investigations in life, physical, and Earth and space sciences.

Concept 3: Analysis and Conclusions
Grade K–4 Organize and analyze data; compare to predictions
Kindergarten
PO 2. Compare objects according to their measurable characteristics (e.g. longer/shorter, lighter/heavier)

Grades 1–3
PO 2 and 3. Compare the results of the investigation to predictions made prior to the investigation.

Concept 4: Communication
Grades K–4: Communicate results of investigations.

Strand 4: Life Science
Concept 1: Characteristics of Organisms
Grades K–4: Understand that basic structures in plants and animals serve.
Kindergarten
PO 1. Distinguish between living things and nonliving things.
Grade 1
PO 2. Compare the following observable features of living things:
- Movement—legs, wings
- Protection—skin, feathers, tree bark
- Respiration—lungs, gills

PO 3. Identify observable similarities and differences (e.g. number of legs, body coverings, size) between/among different groups of animals.

Grade 2

PO 1. Identify animal structures that serve different functions (e.g. sensory, defense, locomotion).

Concept 3: Organisms and Environments

Grades K–4: Understand the relationship among various organisms and their environment.

Grade 3

PO 5. Describe how environmental factors (e.g. soil composition, range of temperature, quantity and quality of light or water) and the ecosystem may affect a member organism's ability to grow, reproduce, and thrive.

Concept 4: Diversity, Adaptation and Behavior

Grades K– 4: Identify plant and animal adaptations

Grade 3

PO 1. Identify adaptations of plants and animals that allow them to live in specific environments.

PO 3. Cite examples of how a species inability to adapt to changing conditions in the ecosystem led to the extinction of that species.

Grade 4

PO 2. Give examples of adaptations that allow plants and animals to survive.

- Camouflage
- Mimicry
- Physical

Strand 6: Earth and Space Science

Concept 1: Properties of Earth Materials

Grades K–4: Identify the basic properties of Earth materials.

Grade 3

PO 4. Describe fossils as a record of past life forms.

PO 5. Describe how fossils are formed.