

## MYSTERY OF THE THERIZINOSAUR CURRICULUM GUIDE

<b>AGE/GRADE LEVEL</b>	This program is appropriate for Grades Pre-K-3
<b>DURATION</b>	The program is approximately 1 hour long.
<b>GROUP SIZE</b>	Up to 60
<b>LOCATION</b>	Branigar or Discovery Room
<b>BACKGROUND</b>	Claude, the sickle-clawed dinosaur in the museum lobby lived on land, so how come the paleontologist found the dinosaur fossils where it had been water? This puppet show brings to life one theory about what happened to Claude, while also introducing concepts about the progression of time, changes in Earth's geological features, how animals use specialized body parts for survival, how scientists gather and use evidence, and the death of an individual vs. the extinction of a species.
<b>ESSENTIAL QUESTIONS</b>	<ul style="list-style-type: none"><li>• What's the difference between a dinosaur and a reptile?</li><li>• What is a paleontologist?</li><li>• What's a fossil and how does it differ from an imprint fossil?</li><li>• How has the Earth changed over time?</li><li>• How do species evolve and develop unique attributes for survival?</li></ul>
<b>KEY WORDS USED IN THE PROGRAM</b>	Fossil                  Evolution                  Paleontology Dinosaur              Reptile

### SET UP

Set up puppet show stage into Branigar or Discovery Room. Cut out dino footprints and tape to floor. Create clay balls for each student for imprint activity. Stage fossils in Geology Gallery.

### SUPPLIES NEEDED

- Clay
- Small paper plates
- Dinos for imprint fossils
- Butcher paper in shape of dino footprint
- Measurement string to show dino lengths

### PROGRAM INSTRUCTIONS

- Perform the puppet show for whole group
- Split group in two or three if large
- Small groups make imprint fossils, trace feet in dino footprint, measure length of dinosaurs in hallway and visit Geology Gallery and Courtyard to see fossils
- Rotate until everyone has done all activities



## Arizona Science Standards

### LIFE SCIENCES

- K.L1U1.6 Obtain, evaluate, and communicate information about how organisms use different body parts for survival.
  - **Crosscutting Concepts: Patterns;** Cause and Effect; Scale, Proportion and Quantity; Systems and System Models; Energy and Matter; **Structure and Function;** Stability and Change.
- K.L1U1.7 Observe, ask questions, and explain how specialized structures found on a variety of plants and animals (including humans) help them sense and respond to their environment.
- K.L2U1.8 Observe, ask questions, and explain the differences between the characteristics of living and non-living things.
- 1.L1U1.6 Observe, describe, and predict life cycles of animals and plants.
  - **Crosscutting Concepts: Patterns; Cause and Effect;** Scale, Proportion and Quantity; Systems and System Models; Energy and Matter; **Structure and Function; Stability and Change.**
- 1.L2U2.7 Develop and use models about how living things use resources to grow and survive; design and evaluate habitats for organisms using earth materials.
- 1.L4U3.11 Ask questions and explain how factors can cause species to go extinct.
- 3.L1U1.5 Develop and use models to explain that plants and animals (including humans) have internal and external structures that serve various functions that aid in growth, survival, behavior, and reproduction.
  - **Crosscutting Concepts: Patterns, Cause and Effect, Scale, Proportion and Quantity; Systems and System Models;** Energy and Matter; **Structure and Function;** Stability and Change.

## Arizona Math Standards

### Measurement and Data

- K.MD.A.1 Describe measurable attributes of a single object (e.g., length and weight).
- K.MD.A.2 Directly compare two objects with a measurable attribute in common to see which object has “more of” or “less of” the attribute, and describe the difference (e.g., directly compare the length of 10 cubes to a pencil and describe one as longer or shorter).
- 2.MD.A.1 Measure the length of an object by selecting and using appropriate tools (e.g., ruler, meter stick, yardstick, measuring tape).
- 2.MD.A.3 Estimate lengths using units of inches, feet, centimeters, and meters.
- 2.MD.A.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard-length unit.

## Arizona English Language Arts Standards

### SPEAKING AND LISTENING

#### Comprehension and Collaboration

- K.SL.2 Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
- K.SL.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
- 1.SL.2 Ask and answer questions about key details in a text read aloud or information presented orally or through other media.



- 1.SL.3 Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
- 2.SL.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- 2.SL.3 Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
- 3.SL.2 Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- 3.SL.3 Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

### Presentation of Knowledge and Ideas

- K.SL.5 Add drawings or other visual displays to descriptions as desired to provide additional detail.
- K.SL.6 Speak audibly and express thoughts, feelings, and ideas clearly.
- 1.SL.4 Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.
- 1.SL.5 Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.
- 2.SL.4 Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.
- 3.SL.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.

## Arizona Theatre Standards

### Responding

#### K-7. Perceive and Analyze Artistic Work

- With prompting and support, express an emotional response to characters in a guided theatrical experience (e.g., process drama, story drama, creative drama).

#### K-8. Interpret Intent and Meaning in Artistic Work

- With prompting and support, identify setting in a guided theatrical experience (e.g., process drama, story drama, creative drama).
- With prompting and support, name and describe settings in a guided theatrical experience (e.g., process drama, story drama, creative drama).
- With prompting and support, name and describe characters in a guided theatrical experience (e.g., process drama, story drama, creative drama).

#### 1-7. Perceive and Analyze Artistic Work

- Recall choices made in a guided theatrical experience (e.g., process drama, story drama, creative drama).

#### 1-8. Interpret Intent and Meaning in Artistic Work

- Describe emotions in a guided theatrical experience (e.g., process drama, story drama, creative drama).
- With prompting and support, name and describe details in settings in a dramatic play or a guided theatrical experience (e.g., process drama, story drama, creative drama).
- Use text and draw pictures to describe personal emotions in a guided theatrical experience (e.g., process drama, story drama, creative drama).

#### 2-7. Perceive and Analyze Artistic Work

- Identify when artistic choices are made in a guided theatrical experience (e.g., process drama, story drama, creative drama).

#### 2-8. Interpret Intent and Meaning in Artistic Work



- a. Demonstrate personal experiences in a guided theatrical experience (e.g., process drama, story drama, creative drama).
  - b. With prompting and support, name and describe details in multiple settings in a dramatic play or a guided theatrical experience (e.g., process drama, story drama, creative drama).
  - c. Use text and draw pictures to describe others' emotions in a guided theatrical experience (e.g., process drama, story drama, creative drama).
- 3-7. Perceive and Analyze Artistic Work
- a. Discuss why artistic choices are made in a theatrical work.
- 3-8. Interpret Intent and Meaning in Artistic Work
- a. Describe personal reactions and emotions to events presented in a guided theatrical experience (e.g., process drama, story drama, creative drama).
  - b. Express multiple ways to develop a character using props or costumes that reflect cultural perspectives in a theatrical work.
  - c. Describe connections made between personal emotions and a character's emotions in a theatrical work.

