

TITLE: Aurora Sand Sifting

Audience: All ages especially those aged 8 and above

Activity Overview:

Participants will be able to use tools of the trade in this interactive fossil finding activity.

Program/Exhibit Criterion addressed:

- Guided Inquiry: This activity will provide participants an opportunity to question what they are learning and explore new forms of discovery.
- Experiential Immersion: The participant will be immersed in an experience as a paleontologist.
- Science/Knowledge as a Human Endeavor: Participants will have an understanding of this activity as one that helps people understand plants, animals, and even cultures that came before them.
- Complexity: The participant can dive into the information as much or as little as they would like.
- Apparatus: The participant will be using tools of paleontology.
- Procreation/The Act of Creation: Participants will be able to take away their fossil finds!

Objectives/Desired Outcomes:

Participants will gain an understanding of sifting, one of the processes paleontologists rely on to find smaller more intricate fossils in various places. They will also gain the experience of inquiry as they investigate independently the contents of the Aurora Sands.

NATIONAL STANDARDS ADDRESSED:

Science as Inquiry

CONTENT STANDARD A:

As a result of activities in grades K-12 students should develop:

- Abilities necessary to do scientific inquiry
- Understanding about scientific inquiry

Earth and Space Science

CONTENT STANDARD D:

As a result of their activities in grades K-4, all students should develop an understanding of:

- Properties of earth materials

As a result of their activities in grades 5-8, all students should develop an understanding of:

- Earth's history

History and Nature of Science

CONTENT STANDARD G:

As a result of their activities in grades K-12, all students should develop understanding of:

- Science as a human endeavor

As a result of activities in grades 5-8, all students should develop understanding of:

- Nature of science

As a result of activities in grades 9-12, all students should develop understanding of:

- Nature of scientific knowledge

Time Involved:

- 10 minutes for preparation
- 10 minutes for activity or as long as desired
- 10 – 15 minutes for clean up

Materials Needed:

- Paper cups
- Aurora Sands
- Shark Teeth applicable to the Aurora Sands
- Take away charts
- Sifters
- Trays
- Table space

Note: Aurora Sands is mined and collected from the PCS Phosphate Mine in Aurora, NC

Reproducibles: Key to Aurora Sands fossil finds

Background:

The process of sifting for fossils is a unique experience enhanced with the use of sands from the PCS phosphate mine in Aurora, North Carolina. This collection of sand, minerals, clay and fossils culminate in an experience that is particularly relevant to North Carolina natives as they learn the about sifting.

Sifting is an important part in the long process of uncovering artifacts because it allows us to find important but smaller clues to what or who lived in a specific area many years ago. In this activity, participants will get the chance to sift through the sands and take their fossil finds home with them.

Lesson Steps:

1. Set out screens and trays to be used for sifting.
2. Participants will receive a cup filled with Aurora Sand and go to one of the preset stations to begin sifting through the contents of their cup.
3. Participants will find a variety of fossils which they can take with them.
4. Fossils can be compared to the visual key that helps identify what kind of sharks' tooth, shell or other artifact the participant has found.

Academic Extensions/Modifications:

Besides Aurora Sands, participants can use a variety of soils to sift through. Give your paleontologist a shovel and the screen and let them loose to find out what discoveries can be found in their own back yard!

Evaluation: This experience will be evaluated based on the discovery and identification of fossils.