

HOW WE DISCOVER THE PAST

□ The Evidence of the Past

- ✓ Artifacts
- ✓ Ecofacts
- ✓ Fossils
- ✓ Features

Artifacts

- Anything made or modified by humans
- Most common artifacts are **lithics**
- Also find:
 - *Ceramics*
 - Wood
 - Bone
 - Metal / Glass



Ecofacts

- Natural objects that have been used or affected by humans
 - Bones of animals
 - Pollen from plants, humans
 - Insects and animals that associate with humans

Fossils

- An impression of an insect or leaf on a surface that is now stone, or
- The hardened remains of an animal's skeleton.

Features

- A kind of artifact that is an intrinsic, non-portable part of an archaeological site.
 - Hearths
 - Pits
 - Living Floors
 - Middens
 - Buildings

Finding the Evidence

- Sites are created when remnants of human activity are covered or buried by some natural process.
- Taphonomy - the processes of site destruction or disturbance.

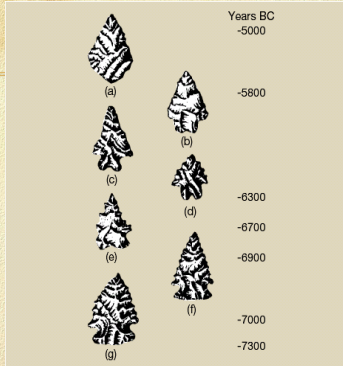
Finding the Evidence

- How are sites found?
 - ✓ Pedestrian survey
 - ✓ Remote sensing
- How are Artifacts, Ecofacts, and Features recovered from sites?
 - ✓ Excavation

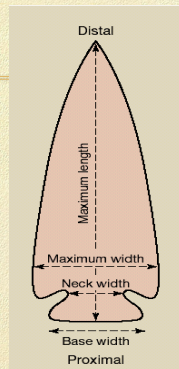
Analyzing the Evidence

- Conservation and Reconstruction
 - Conservation: the process of treating artifacts, ecofacts and even features to stop decay and, if possible, even reverse deterioration.
 - Reconstruction: where materials are sorted into similar types and then reassembled.
- What can we learn from Artifacts?
 - ✓ Form, Size, Function, and Use

A Projectile Point Chronology from the Icehouse Bottom Site in Tennessee



Standard Metrical Measurements of Chipped Stone Tools



Analyzing the Evidence

- **What can we learn from Fossils?**
 - ✓ Bones and teeth tell us a great deal about extinct animals - what they ate
 - ✓ Dentition tells us about the relative size of animals.
 - ✓ Posture and locomotion from fragments.
 - ✓ Proportions of the brain allocated for specific functions - and the reliance on smell and vision
 - ✓ Ancient climate and habitat

Analyzing the Evidence

- **What can we learn from Features?**
 - **Tools of Analysis**
 - ✓ **Mapping**
 - ✓ **Records about the feature**
 - ✓ **GIS**

Analyzing the Evidence

- **Putting it all in Context**
- **Context - the relationship between and among artifacts and other materials.**
 - The goal of paleoanthropologists and archaeologists is to decipher what occurred in the past

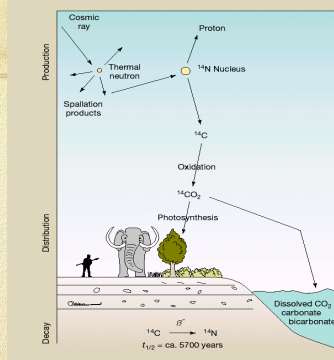
Dating the Evidence

- **Relative Dating Methods**
 - ✓ **Stratigraphy**
 - ✓ **Indicator fossils**
 - ✓ **F-U-N trio**

Dating the Evidence

- Absolute, or Chronometric Dating Methods
 - ✓ Radiocarbon Dating
 - ✓ Thermoluminescence Dating
 - ✓ Electron Spin Resonance Dating
 - ✓ Paleomagnetic Dating

The Carbon-14 Cycle



Dating the Evidence

- ✓ Potassium-Argon Dating and Argon-Argon Dating
- ✓ Uranium-Series Dating
- ✓ Fission-Track Dating
