

Name: _____

ANT 3514- Introduction to Biological Anthropology
Transitional Hominins
Lab 11, Week of 3/28/05

PURPOSE: The purpose of this lab is for you to examine fossil casts and information concerning transitional hominids. You will answer questions concerning *Homo erectus/ergaster*, *Homo neanderthalensis*, and *Homo heidelbergensis*. You will also consider questions concerning comparing the relation of these hominins to anatomically modern humans. Please read over chapter 11 and 12 in your textbook.

STATION 1: Homo Evolution

Compare the following specimen:

	<i>H. Erectus</i>	Archaic <i>H. sapiens</i>	<i>Neandertals</i>	Modern humans
Dates				
Geographic Distribution				
Cranial Shape				
Facial Prognathism				
Browridge Shape				
Mandible features				
Postorbital constriction				
Max. cranial breadth position				

STATION 2 – Homo heidelbergensis

(in class) Compare the supraorbital tori and frontal bones between *Homo erectus* and *Homo heidelbergensis* (Kabwe). Are there any differences?

(in class) Name several differences (at least 2) between *Homo heidelbergensis* and modern *Homo sapiens*.

(at home) Discuss the temporal (time) and spatial (geographic distribution) overlap between *Homo erectus* and *Homo heidelbergensis*. What might the anatomical, temporal and spatial data regarding *Homo erectus* and *Homo heidelbergensis* imply regarding the evolutionary family tree?

STATION 3- Homo Neanderthalensis and Homo heidelbergensis

How does the cranial capacity and maximum cranial breadth (i.e., width) of Neanderthals compare to Homo Heidelbergensis?

Compare Neanderthal (La Chapelle-aux-Saints), *Homo erectus* (reconstruction of Zhoukoudian) and *Homo heidelbergensis* (Steinheim) regarding:

	<i>Neanderthal</i>	<i>H. erectus</i>	<i>H. heidelbergensis</i>
Post orbital constriction			
Degree of prognathism			

STATION 5- NEANDERTHAL LIFE

The artifact at the bottom of the page was discovered in a cave in western Slovenia. It is believed to be between 43,000 and 82,000 years old and determined to be from the thighbone of a juvenile cave bear. It was found at a former Neanderthal camp known as Divje Babe I near the town of Reka. But what is this artifact? What, if anything, was it used for? Use the information about Neanderthal life below to see whether you can figure out what this artifact might be.

Neanderthal Life

Who were the Neanderthals, the *hominids* that existed before and during part of the same time as modern *Homo sapiens*? While scholars disagree about exactly who the Neanderthals were, they have some idea of how they lived from sites that have been excavated in Europe and Western Asia. The Neanderthals lived from about 200,000 years ago to around 30,000 years ago, during the Ice Age.

They made tools from stone gathered nearby their camps and presumably used them for such things as shaping wood, butchering animals, and scraping hides. They lived in caves, rock shelters, and open-air

sites. They used fire. There is only limited evidence of artistic expression. A few pierced animal teeth have been found, probably worn as personal adornment, but no cave paintings or figurative carvings on bone or stone have been found. There is no way of knowing, however, whether their artistic talents took another form that would not be preserved, such as wood carving or storytelling.

In terms of diet, they subsisted on meat from hunting small game and herd animals such as wild horses, deer, and caribou. Larger and more dangerous animals such as mammoths and bears were either ambushed or trapped, or -- more likely -- scavenged after another predator had killed them. They also ate plant foods, although little of the evidence for this aspect of their diet has survived. The question of whether Neanderthals deliberately buried their dead, as opposed to merely disposing of bodies in trash heaps at their living sites, is still controversial. There is good evidence from at least one site that they cared for disabled individuals.

1. What do you think this object is? What might it have been used for? What level of confidence do you have in your conclusion? Defend your reasoning.
2. What else could this be?
3. What other information would you want to get to help you figure out what this might be?

