CS 184 * Modeling the Evolution of Cognition **Bioanthropology Site Visit Worksheet**

SKELETONS: Examine the differences between a human and a nonhuman primate (in this case, chimp) skeleton

- How long is a human's big toe?
- Is it longer or shorter than the human thumb? ... than a chimpanzee's toe? ... a chimpanzee's thumb?

- What differences do you see in . . .

- Hands.

- Spine & Foramen Magnum.

- Heel.

- Toes.

- Pelvic bone.

- Knee.

- Compare the relationship between the pelvis and the femur (thigh bone)

Briefly describe a cognitive implication of the evolutionary changes in the . . .

- Shoulder

- Hand

- Pelvis

SKULLS: Compare the skulls of humans, contemporary primates, and our hominid ancestors ...

- Which species/groups have "sagittal crests"?

- What are they for? Why might it be that WE don't have them?

- What is the most striking difference in the teeth of the hominids compared to the other primates?

- Why might this change have taken place?

- How does the shape of the face (especially brow, jaw, chin) change across the hominid skulls?

- Can you detect a change in the frontal pole? From which species to which?

- What brain/skull features distinguish Homo sapiens from Homo neanderthalensis

- Describe the size, shape & placement of the hyoid bone.

- List the hominid species in the order of brain/skull size. (Include estimated brain size in cc's.)

TOOLS Handle these hominid stone tools, and imagine how you might use them out on the savannah . . .

- List an associated species and time (in MYA), and breifly describe key features of the stones, their manufacture, and use

- Oldowan

- Acheulian

- Mousterian

- Upper Paleolithic

- Contemporary

- What is the "Levallois Method", which species practiced it, and what might be its cognitive implications ?

- List some possible cognitive implications for each transition from one culture to the next . . .

- Perishable to Oldowan

- Oldowan to Acheulian

- Acheulian to Mousterian

- Mousterian to Upper Paleo