

CHECKLIST
HOMINOID CRANIUM COMPARISON
by Martin Nickels

PLEASE READ THESE 5 STATEMENTS BEFORE BEGINNING THIS ACTIVITY:

1. Work in groups of 3-4 students so that everyone can be involved in the activity.
2. BE SURE (!) TO TAKE TURNS doing different measurements and observations.
3. When taking a measurement, use the SLIDING CALIPERS (except for #11 & #12 which may require the HINGE calipers) and remember to...
4. ALWAYS MEASURE IN MILLIMETERS [mm] and round off to whole numbers.
5. PLEASE DO NOT ADD ANY PENCIL OR PEN MARK "TATTOOS" TO THESE CRANIA, OR STICK YOUR FINGERS IN THEIR EYE ORBITS OR NOSES!

A. BRAINCASE: (7 items #1-7)

1. Does the FOREHEAD (frontal bone) look more vertical OR flatter when the skull is held in Normal Anatomical Position [NAP] (i.e., with the eyes oriented forward)?
2. Is a SUPRAORBITAL BROWRIDGE present?
3. If present, is the BROWRIDGE DIVIDED in the middle, or CONTINUOUS?
4. What is the SHAPE OF THE BRAINCASE (front to back) when viewed from above?
5. Is a SAGITTAL CREST present?
6. In NAP, is the FORAMEN MAGNUM oriented more downward OR more to the rear?
7. Is the MASTOID process relatively flat OR does it noticeably protrude (project)?

B. FACE: (5 items: #8-12)

8. Are the NASAL BONES raised (arched) OR flat?
9. Measure the MAXIMUM BREADTH (width) of the NASAL OPENING [mm].
10. Measure the MAXIMUM HEIGHT of the NASAL OPENING [mm].
11. Measure the LENGTH of the MAXILLA (the upper jaw) [mm]. (Measure down the middle of the palate from the front edge of the foramen magnum to either between or just in front of the two central incisors to determine how much the face projects forward.)
12. Measure the BIZYGOMATIC BREADTH using the hinge caliper if necessary [mm]. (This is the width or breadth of the face from the widest part of one zygomatic arch to the widest part of the other zygomatic arch.)

C. DENTITION: (6 items #13-18)

13. SHAPE OF THE DENTAL ARCADE: Do the tooth rows diverge towards the back OR are they more straight-sided and parallel to one another?
14. When viewed from the side, are the INCISORS angled out OR are they vertical?
15. Measure the COMBINED WIDTH or BREADTH of the 4 INCISORS together.
16. Does the CANINE tooth project above the chewing surfaces of the other teeth?
17. Is a CANINE DIASTEMA present?
18. Measure the COMBINED LENGTH of the LEFT 2 PREMOLARS and 3 MOLARS together by measuring from the back of the last molar to the front of the first premolar to determine the length of the chewing surface of the "cheek teeth". [mm]. (NOTE: Measure the right side if the left side is missing any of these 5 teeth.)