


<p>I.E.S. J. S. Elcano (Sanlúcar de Bda.)</p>  <p>Biology and Geology Departament</p>	<p>“SCIENCES FOR THE CONTEMPORARY WORLD” (1º Bach) Unit 3: Human evolution</p>	<p>Fecha de entrega: 13-11-14 (jueves)</p>	<p>NOTA</p>
<p>Nombre:.....Curso:.....</p>			

1. **Linnaeus classified the human being in a determined animal group.**
 - a. Which is this group? Why did he choose it?
 - b. Name the characteristics that distinguish this animal group from others.

2. **About 4 million years ago, a climatic change was produced in East Africa.**
 - a. Which was the cause of this climatic change? How did the environmental conditions change?
 - b. What consequences had this climatic change in the evolution of Hominids?

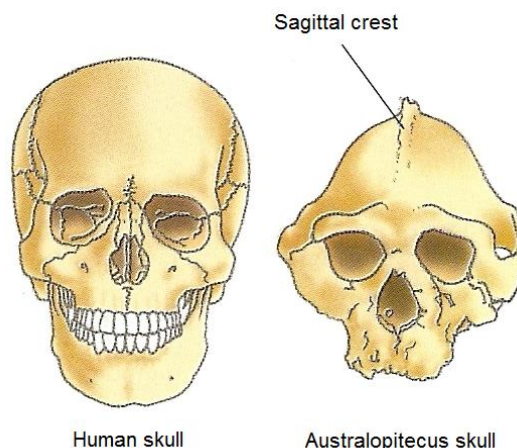
3. **What relationship is there between the type of diet and the development of the brain?**

4. **Compare the pictures of these Primates' hands:**



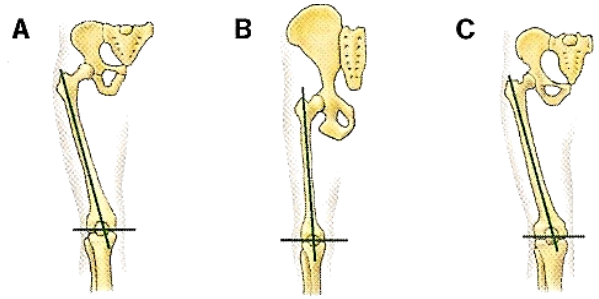
- a. Indicate the differences among them.
 - b. Which influence could have the high manipulative ability of human hand in the development of the brain?

5. **In the course of the human evolution, human beings have lost some features characteristics of Primates such as the tail or the sagittal crest. Other traits tend to disappear, like wisdom teeth or appendix. Which can be the reasons for these changes? Explain your answer.**

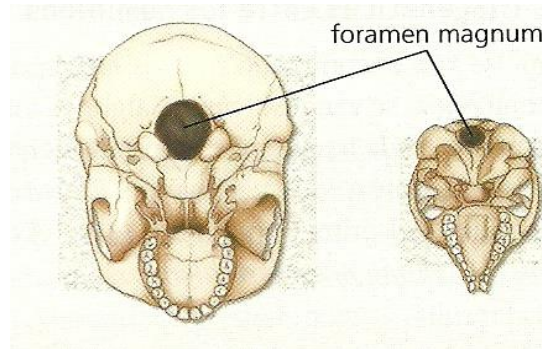


6. The image shows the pelvis and leg's insertion of a human, a chimpanzee and "Lucy"

- Which picture corresponds to each one?
- Which consequences did bipedalism have?

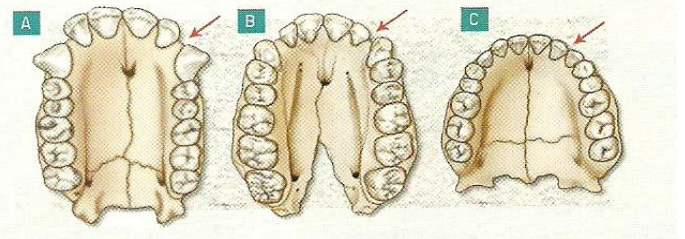


7. The picture represents the position of foramen magnum in humans and apes. Which relationship has its position with the bipedalism?



8. Look at the illustration that shows the teeth and palate of three species of primates:

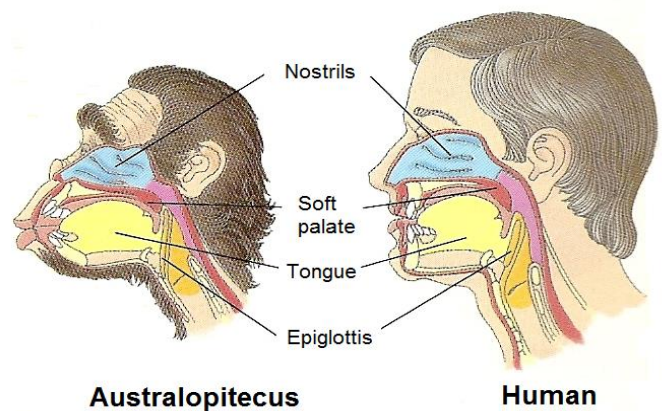
- Pan troglodites* (chimpanzee)
- Australopithecus afarensis*
- Homo sapiens*.



- Which differences are there among the canines of these three species? And among incisors?
- The space between incisors and canines is called diastema. What species has the big one? What could be cause it?
- Which species has the bigger molars? Why?
- The palate shape is different too. Which are the more similar ones? Why?

9. Observe the pictures of the phonator apparatus of a human and an australopithecus.

- In which species is the epiglottis more separated from the soft palate?
- How has the face's angle with the basis of the cranium (skull) over the evolution?
- In which species is bigger the resonance box formed by the mouth and the nose? Has this factor anything to do with the question b?
- What importance has for Hominids the acquisition of the language?



10. Answer these questions about the origin of the human species:

- Which are the two hypotheses about the origin of human beings? How they do differ?
- Elaborate a phylogenetic tree of the hominids based in the information given in the text.