

a i fur or ~~hair~~ hair on body

ii - Larger brain capacity in homo-sapiens  
~~- Bipedalism~~ then in the Australopithecus  
aferansus

- Bipedalism occurs in the homo-sapiens  
which did not occur in the Australopithecus  
aferansus. This is due to the forearm magnum  
being further back in the homo Sapien.



bii)

To gather information about <sup>the</sup> use of radiometric data, to date material collected from a fossils site, collect the information from a scientist who has previously used ~~the~~ radiometric data to determine ages of fossils. The information could be found from the scientist, in non-fiction books, articles, internet or documentaries,

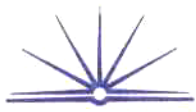
(ii)

To assess the information was relevant + reliable, you could test it yourself, if you had ~~possible~~ the right possible tools, if your information was first hand from the scientist + you had observed his results then his information would be reliable.

When checking if the books, magazines, articles, internet + documentary were relevant + reliable ~~try~~ look to see if it is updated, make sure it's not NOAA (internet) and determine the reliable from the unreliable.

c) An example of polymorphism in humans is skin colour. In evolution, skin colour ~~was~~ <sup>is</sup> believed to have changed according to the environment, which differs in both natural causes and by movement of humans.

Humans that were close to the equator were believed to have darker skin due to the presence of high melanin in their skin, protecting them from ultra violet rays from the sun, and therefore limiting the dangers of disease such as skin cancer. Humans that were ~~was~~ further away from the equator had lighter skin with low amount of melanin, which made them more prone to skin cancer with continuous exposure to the sun.



d) SKULL SIZE AND SHAPE:

Prosimians - small sized skull, longer ~~snout~~ snout, large brow ridges

Monkeys - larger skull, face becoming flatter, with old world monkeys nostrils facing forward

Apes - large skull, almost completing flat face, still has brow ridges

Humans - large skull, flat face, no brow ridges, well defined chin and nose.

The evolution of the skull size and shape changed from being long and quite small in prosimians to large and flat in humans; because of the greater dependancy on vision rather than smell. The increased brain size also lead to the increase in size of the skull.

VISION:

Prosimians - eyes facing outwards and on side of head, no binnocular or colour vision.

Monkeys - eyes coming closer to middle of skull, some colour and binnocular vision.

Apes - eyes in middle of head, binnowular and colour vision present due to cone cells.



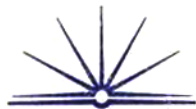
Humans - eyes in middle of skull, binocular and colour vision present due to cone cells.

The ~~was~~ evolutionary change from having the eyes to the side of the head and no colour or binocular vision in prosimians; to having the eyes facing forwards and ~~to~~ having cone cells in the eyes present in humans; meant that the humans and apes were able to see further distances and if predators were coming. It also meant that they are able to distinguish between different objects due to the colour vision.

E) The main factors that I believe will affect human biological evolution in the next one hundred years will be Genetic Engineering and the development of Modern medicine.



In the next one hundred years I believe modern medicine will be extremely advanced, maybe even finding cures for diseases such as cancer. Modern medicine has the ability to increase the survival rate within the world's population. Examples of this are already present, such as the use of insulin in people with diabetes. First of all animal insulin was used and then human insulin was genetically engineered. This insulin is now used in diabetes sufferers and has increased the rate of survival among the population. This will affect human biological evolution in a positive way by enabling more genes to be included in the gene pool and by greatly increasing the survival rate of disease sufferers in the world's population. Genetic engineering will also affect human biological evolution in the



next 100 years. Scientists are able to clone animals, plants etc at this present time. Over the next one hundred years I believe they will be able to successfully clone humans. Reproductive technologies such as IVF are already in place which is also increasing the population. However I believe if they are able to clone humans the effects will be negative. Genetic engineering has the potential to wipe out certain genes and overall would lead to a loss of variation.

Over the next one hundred years I believe that advancements in modern medicine as well as advances in genetic engineering will be factors that will affect human biological evolution.