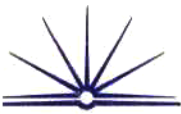


a i) Covering of hair/ fur and presence of mammary gland.

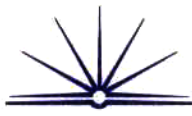
ii) • Homo sapiens possess larger cranial capacity 1300-1600 whilst Australopithecus africanus has cranial capacity the size of softball.

• In Homo sapiens Foramen magnum is positioned centrally and the spine is S-shape curved. This caters for upright stance. Australopithecus africanus possessed a foramen magnum that would have been further positioned at back though they still possessed an upright stance.



(b). (i). ~~By collecting ~~statistical~~ data collected and ~~not~~~~
~~calculated by qualified scientists.~~ I would go
to an university library and look up resources in the
form of books ^{video's,} ~~and~~ multimedia C-Ds and encyclopedias.
Using keywords radiometric dating techniques fuses. To ensure
reliability I would make sure they were written by
qualified people in radiometric dating. I would also
try to consult a lecturer in the palaeontology unit.

(ii) By collecting data collected and calculated by
a number greater than 3 qualified scientists.
I would then
Make comparisons of the data I collected with
my own. I would also calculate the average age
by adding the qualified scientists results together
for a given fossil then divide by the number
of estimate. ~~they~~ Then I would compare
with my own results the smaller the difference
the more accurate my results. Note: I would
measure my results a number of times to ensure
they are accurate.



(c). Skin pigmentation is an example of polymorphism in humans. Dark skin pigmentation can be dominantly found in hot conditions including places such as Africa and Australia. The melanin (the ^{chemical that gives the} dark pigmentation) has proven to be a very significant in reducing the formation of skin cancer. It is an evolutionary advantage. As a result they people with this pigmentation have been more successful in being able to survive, reach maturity and reproduce to pass on this gene to their next generation which increases their population when compared to people with white skin from a European background. Who are more confined to areas with less sun exposure. ~~who~~ however they are able to survive better in colder environments than people with the dark skin pigmentation.

c) In the next 100 yrs, human biological evolution may be affected by a number of things.

Increased air travel and mixing of races (interbreeding etc) will ^{have} created new combinations of genes, ~~and~~ and produce new, different looking individuals to those who continue to breed within the same racial groups e.g. negroid with negroid & mongoloid with mongoloid etc.

The overall effect will be a decrease in polymorphism ~~as features that~~ "a line" as features that have once been common in only certain groups of people, become common in a more far-reaching & widespread group of individuals.

With increased scientific understanding & technology, diseases, which may be inherited can be eradicated with techniques such as 'The Human Genome Project' and selective breeding. Diseases such as diabetes

may soon be eradicated, as scientists are currently undertaking experiments where the gene for insulin production is being made in fish. We may also in the next 100 yrs find a cure for 'ageing'. This would undoubtedly increase the life span of age of the human population and have significant impacts on social welfare programs. That of what is to come can already be seen, as we continue to find cures for diseases that were once life threatening, the population continues to survive for longer & is already causing a strain on social welfare & old age pensioners funds.

~~late the increasing~~

~~A species should not be viewed as a stagnant entity, they will continue to change as their environment changes (flourish through natural selection). Humans will undoubtedly follow the same pattern, as it has been studied for multiple other organisms.~~

PTO

Environmental factors such as the increasing ~~hole~~ hole in the ozone layer, therefore increasing the amount of solar radiation reaching the globe may affect human biological evolution. Hopefully with a continued decrease in the use of halogen and chemicals such as chlorofluorocarbons (banned in the Montreal Protocol) we will see a recovery in the damage done to the ozone layer in past decades.

Nuclear waste ~~has the potential~~ & biological warfare has the potential to affect human biological evolution, causing mutations, changing DNA etc.

In modern times, this is a justifiable precaution.