



## Human Story

a (i) classification of humans as mammals;

- four limbs - two hind limbs
- two fore-limbs.

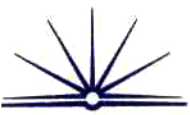
- hair - covers our body.

(ii) ~~2~~ 2 structural differences;

- homo sapiens have larger brain capacity, than the Aust. afarensis, therefore enabling them to ~~comp~~ communicate better.

- upright ~~bipedal~~ bipedal position, positioning of cro-magnum which connects the neck & head is different allowing homo sapiens to move around better.

- homo-sapiens have smaller pelvic bone than Australopithecus afarensis.



Part B

i) ~~By~~ <sup>By</sup> examining <sup>the work of</sup> ~~the~~ <sup>radiometric</sup> data dating to date material before <sup>People who have used</sup> ~~it~~ I would be able to see if this information was applicable and I would do this by reading reports journals articles etc written by these people.

ii) By conducting a first hand investigation using material <sup>of</sup> ~~from~~ a known age and then ~~and~~ dating that <sup>same</sup> ~~material~~ we would see if these techniques are reliable or not.



© Polymorphism is to inherit and display different features and qualities to efficiently survive in the surrounding environment.

Body shape is one example of polymorphism.

The body shape of humans depends on their habitat and function in the environment.

For instance humans which live in cold places like eskimo's have a short body height, and a ~~very~~ large in weight as the fat upon them insulates them from the cold. Their

height contrasts with that of humans living in ~~equatorial~~ environmental land on the equator, <sup>in high</sup> mountains

these people have much ~~skin~~ slimmer bodies

and are taller in height as they are

~~more~~ competing with higher altitudes. Their

shape of their body allows them to be more

swift in movement and thus they are

better equipped for their habitat.

These phenotypes enable them to survive.

Inter-breeding with these different body



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(C) continued..

Shapes is allowed, as there are no barriers.

Though natural selection would play a vast  
role in evolution as the eskimo's body type

would have no chance of ~~surviving~~ surviving in  
the hot climates of the mountain, equator  
environment, and thus the better

attributes of both, if interbred would be  
inherited into the next generations, having  
evolutionary significance

d) There are many similarities & differences between prosimians, monkeys, apes & humans.

2 features of these primates, that were investigated are as shown below;

	① HAIR COVERAGE?	② TAIL PRESENT?
PROSIMIANS	Yes, covering most parts of body	Yes, they have a prehensile tail
MONKEYS	Yes, covering most parts of body	Yes, they have a tail
APES	Yes, covering most parts of body	If yes, it is a small stub Most do not have one
HUMANS	Yes, sparse covering on body, except for specialised areas.	No.

## Part d continued

The observation of these primates at Taronga zoo, allowed me to collect information about their features make ~~the comparisons, then~~ comparisons between them, & draw conclusions about their relationship ~~with~~.

The ~~sample~~ information shown in the previous table shows both the similarities & differences between certain primates. It shows the development of each primate as well, such as the tail being present <sup>in primates & monkeys</sup> to non-existent in humans. This gives us an idea ~~to~~ <sup>of the</sup> relationships that exist between the primates and allows me to conclude that the primates originate from a common ancestor. This is evident by the study of the features; hair coverage & tail being present or not.

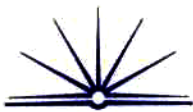
e) There are several factors that will affect human biological evolution in the next 100 yrs. ~~Some~~ <sup>Some</sup> of the factors include;

- \* the rise in temperature of the earth, hence causing environmental change.

e) There are a number of factors which would affect human biological evolution, these being:

- Genetic Engineering- things such as ~~the~~ genetically engineered organs, genetically engineered diseases, genetically engineered bacteria; and many more things would mean that the process of reproduction may be lost, meaning that the differences in human characteristics would decrease.

But with ~~genetically engineered~~ genetic engineering those suffering from diseases or the loss of a limb,



can benefit. This means that genetic engineering ~~can~~ would have an affect on human biological evolution, but be both positive and negative.

- Increased Mixing of the Gene Pool - with the number of people moving to different countries and starting families, the gene pools are becoming much more diverse. Where before the gene pools of one country (such as Italy) ~~were~~ was very similar, with little variations; the increased mixing of gene pools has meant that countries (such as Italy), have more differences with their characteristics. This then over the next one hundred years could lead to the formation of a new sub-species.

- Technology - with more things and processes becoming more and more computerised, the number of people becoming overweight and dying of life-style diseases is increasing. Over the next one hundred years when technology is still rapidly advancing, the human population will continue to evolve according



to technology. For example, with the increase use of buttons instead of holding onto objects; humans may lose ~~the~~ ~~oppos~~ some opposability of ~~their~~ the thumb. Also the increase in technology means more knowledge, therefore an increase in the size of the cerebral cortex may ~~be~~ be an evolutionary characteristic. These, along with other changes; could result due to technology.

- Cultural Influences - things such as environmental influences, communication, social influences; could play a part in ~~affect~~ affecting human biological evolution. Although these would cause mainly small biological changes they may still have an effect.

- Diseases - certain diseases such as HIV/AIDS, ~~or~~ may affect human biology in a way which causes humans to become immune to these diseases. Over the next one hundred years, humans ~~may~~ may evolve so that they can not be affected by harmful diseases. They would evolve into having immunity.



- Climatic conditions - a warmer environment may cause the structure of the human skeleton to evolve into a skeleton with less surface area, or greater heat resistant processes. A colder environment may cause the human population to evolve into having thicker skin or shorter bones. These factors would mean that human evolution would adapt to its environment.

&

These would be the main factors that would affect human biological evolution in the next one hundred years.