

1. From the Beginning of Time

Look at the diagram showing the positive feedback mechanism on page 13. Can you list the inputs that went into tool making? What were the processes that were strengthened by tool making?

Answer:

Increase in size and capacity of brain
Visual surveillance, long distance walking, while foraging and hunting
Upright walking (Bipedalism)
Hands freed for using tools and carrying infants, objects

The processes which were strengthened by the making of tools were:

In the process of making tools, man interacted with varieties of stone and wooden materials; his mental capacity, material knowledge with specific technical skills improved. This improvement shifted man's mode of earning food from scavenging to hunting and crop cultivation. Now he could use tools to hunt animals and to process the meat by separating bones.

2. Humans and mammals such as monkeys and apes have certain similarities in behaviour and anatomy. This indicates that humans possibly evolved from apes. List these resemblances in two columns under the headings of (a) behaviour and (b) anatomy. Are there any differences that you think are noteworthy?

Answer:

Humans and mammals such as monkeys and apes have certain similarities in behaviour and anatomy. This shows that humans possibly evolved from apes.

Resemblances in behavior:

Both can climb on trees
Both can stay as groups and look after their babies by carrying them and feeding them.
Both use oral sound to communicate with each other

Resemblances in anatomy: Both have -

body hair
a long gestation period following birth
mammary glands
different types of teeth
ability to maintain a constant body temperature

Noteworthy differences:

- Some features of human tool making are not known among apes.
- Certain anatomical and neurological (related to the nervous system) adaptations have led to the skilled use of hands, due to the important role of tools in human lives. Monkeys and apes have no such physical neurological features.
- Moreover, the ways in which humans use and make tools often require greater memory and complex organisational skills, both of which are absent among apes and monkeys.

Discuss the arguments advanced in favour of the regional continuity model of human origins. Do you think it provides a convincing explanation of the archaeological evidence? Give reasons for your answer.

Answer:

The regional continuity model (with multiple regions of origin) argues that the archaic (the old) *Homo sapiens* in different regions gradually evolved at different rates into modern humans, and hence the variation in the first appearance of modern humans in different parts of the world. The argument is based on the regional differences in the features of present-day humans. Supporters of this theory advocate that these dissimilarities are due to differences between the pre-existing *Homo erectus* and *Homo heidelbergensis* populations that occupied the same regions.

However, the available evidence of the earliest fossils of modern humans from Omo in Ethiopia disproves the claims of the regional continuity model.

Which of the following do you think is best documented in the archaeological record: (a) gathering, (b) tool making, (c) the use of fire?

Answer:

Tool making is best documented in the archaeological record. The earliest evidence for the making and use of stone tools comes from sites in Ethiopia and Kenya. It is likely that the earliest stone tool makers were the *Australopithecus*.

ANSWER IN A SHORT ESSAY

Discuss the extent to which (a) hunting and (b) constructing shelters would have been facilitated by the use of language. What other modes of communication could have been used for these activities?

Answer:

- Hunting and constructing shelters would have been facilitated by the use of language because these two activities are group activities requiring collective labour and cooperation among fellow humans.
- Humans certainly had to communicate with each other during the group activities. Language was vital tool in these group activities.

Other modes of communication:

- Gestures or hand movements, other non-verbal communication such as singing or humming, imitation of movements and sounds of birds and animals, cave paintings and other expressions with signs could have been used for these activities.

Choose any two developments each from Timelines 1 and 2 at the end of the chapter and indicate why you think these are significant.

Answer: Timeline- 1

2.6-2.5 mya - Earliest stone tools

The earliest evidence for the making and use of stone tools comes from sites in Ethiopia and Kenya. It is likely that the earliest stone tool makers were the *Australopithecus*. Tools enabled man to become hunter from scavenger, and then, cultivator of his own crops for food.

0.8 mya- 'Archaic' sapiens, Homo heidelbergensis

The earliest fossils from Europe are of *Homo heidelbergensis* and *Homo neanderthalensis*. Both belong to the species of archaic (old) *Homo sapiens*. The fossils of *Homo heidelbergensis* (0.8-0.1 mya) have a wide distribution, having been found in Africa, Asia and Europe.

Timeline- 2

Development of voice box -200,000 years ago

The brain of *Homo habilis* (the tool maker) had certain features which would have made it possible for them to speak. Thus, language may have developed as early as 2 mya. The evolution of the vocal tract was equally important. This occurred around 200,000 years ago. It is more specifically associated with modern humans.

Invention of sewing needles- 21,000 years ago

The trapping of fur-bearing animals (to use the fur for clothing) and the invention of sewing needles are important developments in human history. Early man had used grass, leaves, tree bark, and animal skin to protect his body from harsh weather. The invention of sewing needles made it possible to stitch cloth and make many strong and durable dress materials. Man started experimenting with various types of naturally available fibrous materials such as silk,

cotton, wool, jute. This revolutionized his material condition and culture. The earliest evidence of sewn clothing comes from about 21,000 years ago.

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