




## Module 7 : Prehistoric and Ancient Tools

### Lecture 18 : Basic Tools, Shape and Size of Prehistoric Tools, Conclusion

The Lecture Contains:

-  Basic Household Tools
-  Shape and Size of Prehistoric Tools
-  Conclusion

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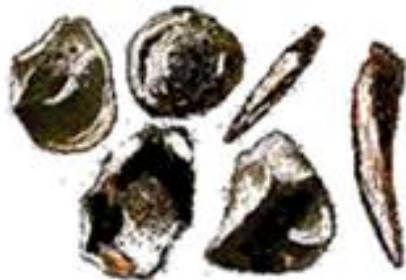
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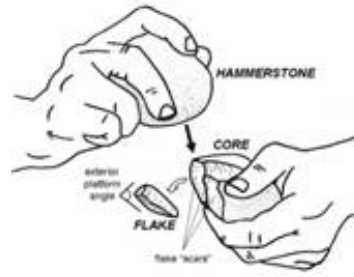
## Basic Household Tools



Plate 3A Paleolithic Tools  
(18000-12000 BC)



3B Hominid Tools  
(Paleolithic Period)



3C Hammering & Flaking Tools

(Source: [https://www.google.co.in/search?hl=en&sugexp=les%3B&gs\\_rn=1&gs\\_ri=hp&tok=N0nmKwJ7ToRfTM1DOetQ&cp=14&gs\\_id=135&xhr=t&q=prehistoric+tools&bav=on.2,or.r\\_gc.r\\_pw.r\\_qf.&bvm=bv.41524429,d.bmk&biw=1318&bih=600&um=1&ie=UTF-8&tbn=isch&source=og&sa=N&tab=wi&ei=E1YHU Y7IBcjRrQfuwYGIBg](https://www.google.co.in/search?hl=en&sugexp=les%3B&gs_rn=1&gs_ri=hp&tok=N0nmKwJ7ToRfTM1DOetQ&cp=14&gs_id=135&xhr=t&q=prehistoric+tools&bav=on.2,or.r_gc.r_pw.r_qf.&bvm=bv.41524429,d.bmk&biw=1318&bih=600&um=1&ie=UTF-8&tbn=isch&source=og&sa=N&tab=wi&ei=E1YHU Y7IBcjRrQfuwYGIBg) ; January 29, 2013)

Plate 3C [https://www.google.co.in/search?hl=en&q=prehistoric+tool+grips&bav=on.2,or.r\\_gc.r\\_pw.r\\_qf.&bvm=bv.41524429,d.bmk&biw=1318&bih=600&um=1&ie=UTF-8&tbn=isch&source=og&sa=N&tab=wi&ei=sVYHUbGIM8L3rQfhr4CoBw](https://www.google.co.in/search?hl=en&q=prehistoric+tool+grips&bav=on.2,or.r_gc.r_pw.r_qf.&bvm=bv.41524429,d.bmk&biw=1318&bih=600&um=1&ie=UTF-8&tbn=isch&source=og&sa=N&tab=wi&ei=sVYHUbGIM8L3rQfhr4CoBw)

Paleolithic Tools (plate 3A) are directly related to the common difficulties human beings experience. There are four basic tools (plate 3B & 3C) are needed for various household work and for survival-Chopping, Cutting, Hammering & Piercing. Each tool is designed and developed carefully based on anthropometric measurement (plate 3C) and the quality of stone's hardness/softness. The finger position and the grip are extremely vital to exert maximum force. For smashing or hammering purpose one needs harder stone while scrapping one has flint (a very hard stone) for getting the sharp edge.

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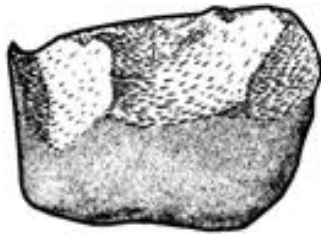
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Plate 3A  
Piercing



3B Crusher



3C Spear-head



4D Hammerhead

(Source: <http://en.wikipedia.org/wiki/Paleolithic> ; January 17, 2013)

(Source: [https://www.google.co.in/search?hl=en&sugexp=les%3B&gs\\_rn=1&gs\\_ri=serp&tok=9JugfWqDk1bLDcgJL1Q0uA&pq=grip+for+handheld+prehistoric+tools&cp=23&gs\\_id=13m&xhr=t&q=paleolithic+stone+tools&bav=on.2,or.r\\_gc.r\\_pw.r\\_qf.&biw=1318&bih=600&um=1&ie=UTF-8&tbm=isch&source=og&sa=N&tab=wi&ei=PUMGUaemKIHWrQemqYHIBg](https://www.google.co.in/search?hl=en&sugexp=les%3B&gs_rn=1&gs_ri=serp&tok=9JugfWqDk1bLDcgJL1Q0uA&pq=grip+for+handheld+prehistoric+tools&cp=23&gs_id=13m&xhr=t&q=paleolithic+stone+tools&bav=on.2,or.r_gc.r_pw.r_qf.&biw=1318&bih=600&um=1&ie=UTF-8&tbm=isch&source=og&sa=N&tab=wi&ei=PUMGUaemKIHWrQemqYHIBg) ; January 28, 2013)

Plate4D: [https://www.google.co.in/search?hl=en&q=Hand+as+hammer+in+prehistoric+tools&bav=on.2,or.r\\_gc.r\\_pw.r\\_qf.&biw=1318&bih=600&um=1&ie=UTF8&tbm=isch&source=og&sa=N&tab=wi&ei=qksGUb\\_4CoaErQfr24DQCw#um=1&hl=en&tbo=d&tbm=isch&sa=1&q=using+arm+as+handle+for+hammering+stone+tool&oq=using+arm+as+handle+for+hammering+stone+tool&gs\\_l=img.12...18334.23914.2.25984.11.11.0.0.0.0.471.2357.3j3j1j3j1.11.0...0.0...1c.1.bMIHfi9Leag&bav=on.2,or.r\\_gc.r\\_pw.r\\_qf.&bvm=bv.41524429,d.bmk&fp=3ab84e5e54264c02&biw=1318&bih=600&imgsrc=SSZrQGpgANVJOM%3A%3BPI7j9KDyUEUsHM%3Bhttp%253A%252F%252F1.bp.blogspot.com%252F\\_-D1I4nARj\\_A%252FSuNQ-BZLuYI%252FAAAAAAAAAAVI%252FcQFkFojAbYc%252Fs320%252Fneolithic%252B-%252Baxe.jpg%3Bhttp%253A%252F%252Fhistoryandsociety.blogspot.com%252F%3B320%3B219](https://www.google.co.in/search?hl=en&q=Hand+as+hammer+in+prehistoric+tools&bav=on.2,or.r_gc.r_pw.r_qf.&biw=1318&bih=600&um=1&ie=UTF8&tbm=isch&source=og&sa=N&tab=wi&ei=qksGUb_4CoaErQfr24DQCw#um=1&hl=en&tbo=d&tbm=isch&sa=1&q=using+arm+as+handle+for+hammering+stone+tool&oq=using+arm+as+handle+for+hammering+stone+tool&gs_l=img.12...18334.23914.2.25984.11.11.0.0.0.0.471.2357.3j3j1j3j1.11.0...0.0...1c.1.bMIHfi9Leag&bav=on.2,or.r_gc.r_pw.r_qf.&bvm=bv.41524429,d.bmk&fp=3ab84e5e54264c02&biw=1318&bih=600&imgsrc=SSZrQGpgANVJOM%3A%3BPI7j9KDyUEUsHM%3Bhttp%253A%252F%252F1.bp.blogspot.com%252F_-D1I4nARj_A%252FSuNQ-BZLuYI%252FAAAAAAAAAAVI%252FcQFkFojAbYc%252Fs320%252Fneolithic%252B-%252Baxe.jpg%3Bhttp%253A%252F%252Fhistoryandsociety.blogspot.com%252F%3B320%3B219) ; January 28, 2013)

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## Shape and Size of Prehistoric Tools

“Chimpanzees are well-known tool-users, capable of fashioning spear-like weapons from branches for hunting and using stones as hammers and anvils in the wild.”

(Source: <http://nanopatentsandinnovations.blogspot.in/2012/08/bonobo-stone-tools-as-competent-as.html> ; January 28, 2013)



Plate 4A Handgrip of hammer



4B Lever system for lifting



4C Using fist as Hammerhead

(Source: [https://www.google.co.in/search?hl=en&sugexp=les%3B&gs\\_rn=1&gs\\_ri=hp&tok=N0nmKwJ7T-oRfTM1DOetQ&pq=prehistoric+tool+grips&cp=1&gs\\_id=33w&xhr=t&q=hand+grips&bav=on.2,or.r\\_gc.r\\_pw.r\\_qf.&bvm=bv.41524429,d.bmk&biw=1318&bih=600&um=1&ie=UTF8&tbn=isch&source=og&sa=N&tab=wi&ei=QVcHUfvYN4fkrAeRwoG4DQ#um=1&hl=en&tbo=d&tbn=isch&sa=1&q=Fist+grips+%26+gestures&oq=Fist+grips+%26+gestures&gs\\_l=img.12...60631.66982.11.69676.13.13.0.0.0.139.1446.2j11.13.0...0.0...1c.1.A601UrhkzEo&bav=on.2,or.r\\_gc.r\\_pw.r\\_qf.&bvm=bv.41524429,d.bmk&fp=6708e8a2c60fa2e6&biw=1318&bih=600](https://www.google.co.in/search?hl=en&sugexp=les%3B&gs_rn=1&gs_ri=hp&tok=N0nmKwJ7T-oRfTM1DOetQ&pq=prehistoric+tool+grips&cp=1&gs_id=33w&xhr=t&q=hand+grips&bav=on.2,or.r_gc.r_pw.r_qf.&bvm=bv.41524429,d.bmk&biw=1318&bih=600&um=1&ie=UTF8&tbn=isch&source=og&sa=N&tab=wi&ei=QVcHUfvYN4fkrAeRwoG4DQ#um=1&hl=en&tbo=d&tbn=isch&sa=1&q=Fist+grips+%26+gestures&oq=Fist+grips+%26+gestures&gs_l=img.12...60631.66982.11.69676.13.13.0.0.0.139.1446.2j11.13.0...0.0...1c.1.A601UrhkzEo&bav=on.2,or.r_gc.r_pw.r_qf.&bvm=bv.41524429,d.bmk&fp=6708e8a2c60fa2e6&biw=1318&bih=600) ; January 29, 2013

Plate4C: [https://www.google.co.in/search?hl=en&sugexp=les%3B&gs\\_rn=1&gs\\_ri=hp&tok=N0nmKwJ7T-oRfTM1-DOetQ&pq=prehistoric+tool+grips&cp=1&gs\\_id=33w&xhr=t&q=hand+grips&bav=on.2,or.r\\_gc.r\\_pw.r\\_qf.&bvm=bv.41524429,d.bmk&biw=1318&bih=600&um=1&ie=UTF8&tbn=isch&source=og&sa=N&tab=wi&ei=QVcHUfvYN4fkrAeRwoG4DQ#um=1&hl=en&tbo=d&tbn=isch&sa=1&q=Hammering+with+fist&oq=Hammering+with+fist&gs\\_l=img.3...704433.709551.13.710415.19.18.0.1.1.0.169.2082.3j15.18.0...0.0...1c.1.tjjGLWCqlIRM&bav=on.2,or.r\\_gc.r\\_pw.r\\_qf.&bvm=bv.41524429,d.bmk&fp=6708e8a2c60fa2e6&biw=1318&bih=600](https://www.google.co.in/search?hl=en&sugexp=les%3B&gs_rn=1&gs_ri=hp&tok=N0nmKwJ7T-oRfTM1-DOetQ&pq=prehistoric+tool+grips&cp=1&gs_id=33w&xhr=t&q=hand+grips&bav=on.2,or.r_gc.r_pw.r_qf.&bvm=bv.41524429,d.bmk&biw=1318&bih=600&um=1&ie=UTF8&tbn=isch&source=og&sa=N&tab=wi&ei=QVcHUfvYN4fkrAeRwoG4DQ#um=1&hl=en&tbo=d&tbn=isch&sa=1&q=Hammering+with+fist&oq=Hammering+with+fist&gs_l=img.3...704433.709551.13.710415.19.18.0.1.1.0.169.2082.3j15.18.0...0.0...1c.1.tjjGLWCqlIRM&bav=on.2,or.r_gc.r_pw.r_qf.&bvm=bv.41524429,d.bmk&fp=6708e8a2c60fa2e6&biw=1318&bih=600) ; January 29, 2013)

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Paleolithic Period has contributed significant ways through key innovations-

- (1) The shaping of an entire stone to a stereotyped tool form (plate 4A), and
  - (2) Chipping the stone from both sides to produce a symmetrical (bifacial) cutting edge (plate 3C).
- Hand Axe:** a stone tool with a cutting edge; the stone is held in the hand and used for chopping
  - Spearhead:** the sharp-pointed head that forms the piercing end of a spear

Shaping the tool with symmetric shape (plate 3C) is an extraordinary achievement during the Paleolithic Period. The shape and the size quite rightly determine the usage and purpose. Crusher (plate 3B) has to heavy and bolder in shape so that it covers larger space while smashing. The grip should provide maximum grip with all the fingers and held inside the palm. The arm in this case will behave like the handle of a hammer (plate 4A). The sharp blade of the hammerhead (plate 3D) is fixed on a longer handle for exerting maximum force. Man's arm functions with the help of fulcrum joint and the lever mechanism (plate 4B).

Manufacture shifted from flakes struck from a stone core to shaping a more massive tool by careful repetitive flaking. The most common tool materials were quartzite, glassy lava and flint.

### Conclusion

Since the time of Paleolithic Period human being has created tools for their survival. Handheld tools are being designed and developed with great command. Man tried to understand the material for their appropriate applications. Material knowledge is one of the most important aspects for their survival. Indigenous materials rock, timber and clay provided multiple solutions. Hence, designing is an integral part of human behaviour. Curiosity and thrust for knowledge has always led man for innovation and newer solutions.

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