

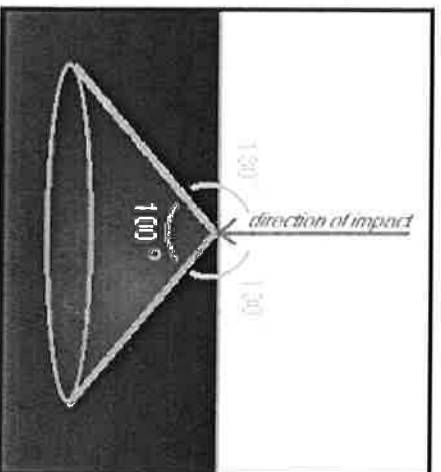
Hard Hammer Percussion

Chip Away. Chip Away at the Stone ...

Using a *Hammer Stone* large flakes are struck off of a *core*. This is the initial stage in the reduction process. Hard hammer percussion is used to remove the *cortex* from the core and the flakes which will eventually be knapped into tools. Some terms need to be defined at this point. The *core* is the chunk of rock that flakes are knocked off of. The core itself may be turned into a tool, but more likely the flakes become the tool. *Cortex* is the outer 'skin' or 'rind' of the raw material.

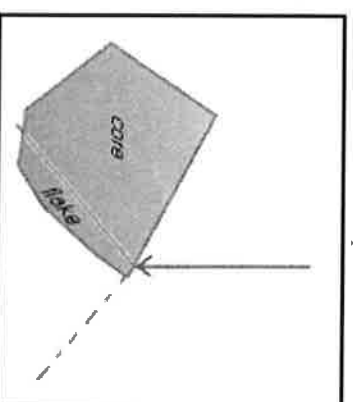
Flintknapping has been likened to chess – you think about what you are doing, you plan your strategies in advance, the masters think several moves ahead, and you must be familiar with the rules in order to play the game. To begin removing flakes with a hammerstone you will have to be familiar with these three rules:

1. Conchoidal Fracture



Hertzian Cone / Cone of Force

VERY hard the force will dissipate without detaching a flake. The trick is to angle the blow and apply it near the edge of the stone so that only part of the cone passes through the core. In practice, I find it easiest to keep the direction of the blow vertical, and tilt the core up or down to change the angle. Luckily for us, these cones always tend to be about the same shape so the angles don't change and once you learn how to make the cone work for you you've got it made! The angle that the flake detaches is about 130 degrees to the direction of the strike.



Make the Cone do the Work!

2. Near 90 degree platforms



The platform is the part of the core you strike to remove a flake. To find a potential platform on a core you want to look for a place where two faces meet at an angle of 90 degrees or less. It can not be greater than 90 degrees because of the way you are going to use the cone of force to work for you.