

3055 BA SANGAM COLLEGE

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LESSON NOTES

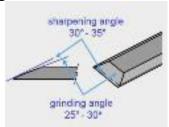
| School: Ba Sangam College | Year/Level: 10 | Name: |
|----------------------------------|----------------|-------|
| Subject: Basic Technology | Week 8 | Year: |

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| Strand | Hand Tools and Materials |
| Sub Strand | Sharpening Hand Tool |
| Content Learning Outcome | Differentiate between grinding and sharpening angle |

Sharpening Hand Tools

Chisels

There are two important angles at the sharp end of a chisel- the grinding angle and the sharpening angle.



The **grinding angle** is formed on a grinding wheel. It should be between 20° to 25° from the face of the chisel blade.

The **sharpening angle** is between 25° to 30°. This is the angle that gives a sharp cutting edge, so it's the one that must be maintain oilstone.

If cutting softwood or doing very delicate work, keep the angle closer to 30° because that will give a sharper blade. But for harder materials, an angle closer to 35° is better,

Because the edge is less brittle,

Grinding

Grinding and sharpening are the two basic steps in sharpening any knifeedged tool. Grinding removes a significant amount of metal and sets you up for sharpening success.

Improper grinding will generates temper- the excessive term he for strength component of our perfect cutting edge. Using a lubricated grinding wheel and removing the minimum amount of material are

Planes and chisels cut well only if they are sharp. Two kinds of operations are done to sharpen these tools. Grinding reshapes the cutting edge of tool. It should be done only when the tool needs a new bevel or when the edge of the cutter is nicked. Otherwise, honing-sharpening the tip of the cutting edge is enough.

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After repeated sharpening, the angle of the sharpening bevel will start to increase as the end gets progressively shorter.



Eventually, you'll need to-lengthregrind25°flat surface. The chisel When you're grinding the chisel, be very careful to avoid overheating the edge, because This will cause the steel to lose its **temper**. Strength Cool the edge fre

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| equently or by dipping it in water. | | | | |
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| evi | ew questions | | | |
| 1. | Describe the two operations necessary to maintain the cutting edge of a chisel or plane. | (5 marks) | | |
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| 2. | State the angles for grinding and sharpening? | (1 mark) | | |
| 3. | Explain why is water applied to the grinding stone? | (2 marks) | | |