

# Grind the bevel and not the edge.

For the sharpening process, follow these steps: Keep the edge horizontal and parallel to the face of the wheel, start at the heel and lap back and forth. Continue this process until sparks just trail over the edge. Flip over the tool and repeat the same procedure.

If you have an “oval style” skew (my last choice for a skew) you will find it wants to wobble rather than remain in a flat plane. In that case, maintain pressure in the center of the tool with a thumb to essentially lock it into a fixed plane. As an alternative, investigate a grinding jig that locks the darn thing in place.

If you are grinding a curved-edged skew, simply grind the edge while it is generally parallel to the face of the wheel. This will require a rotational motion that follows the curve of the edge. If the skew plagues you with multiple facets, go ahead and set the tool rest to the suggested bevel angle. Keep the tool flat on the rest and follow the above strategies. I have had good success just using the front or back edge of the tool rest as a point to slide along for a straight skew or to pivot on while grinding a curved edge.

## Tests for sharpness of cutting tools

If you can see the edge, there is no edge. Short of turning, this is the best test I know. Use an incandescent light to check for any reflection along

the edge; a sharp edge disappears into a black line. Dull spots will reflect light.

What comes off the tool, dust or curls? Even in dry material, a sharp tool forms a longer chip or ribbon, dull tools produce dust or very short chips.

How much effort does it require to remove the material? Unless you are roughing out a large piece, a sharp tool presented at the right angle is almost effortless; a dull tool requires more force.

What does the cutting action sound like? A sharp tool makes a sound reminiscent of a sharp hand plane; the dull tool sounds flat or makes a scraping sound.

How clean is the surface when you stop the lathe for inspection? Sometimes it is a difficult piece of wood, but generally a sharp tool gives far superior results to the surface of the wood.

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## Notes on overheating the tool

By now you may have come up against the problem of bluing the grinding surface of the tool. If you have high-carbon steel tools, you have a problem: the steel has now been re-tempered to a hardness that is too soft to hold an edge for woodturning. If you have high-speed or high-heat-working tool steel—no problem. But how do you know what kind of steel?

Generally the high-carbon tool steels produce a complex, white, bursting spark when placed on the grinding wheel. The high-speed steels tend to have individual, orange sparks. Often the manufacturer stamps the handle or steel itself with “HSS” or “High Speed Steel.” I have found some inexpensive imported tools stamped with those designations, but sparked like high carbon tools—so be careful.

Here are some suggestions regarding overheating. First, learn to grind with a lightness of hand and movement of tool that does

not overwork an area, thereby reducing heat. Second, use friable wheels (see page 54) that grind cooler, and dress the wheel often. If you have carbon steel tools—and some of my old favorites are of that steel—quench in water frequently for heavy grinding or delicate points of skew chisels.

If you have high-speed tools, don't quench in water: the effect may be too shocking for the steel and possibly produce small fractures at the cutting edge. The high-speed steels easily handle temperatures of 700 to 1000 degrees F with no loss of hardness (bluing is around 580 degrees F). If the high-speed tools get too hot to handle (during heavy grinding), I just place them on a large metal heat sink like a lathe bed and take a short break. The best rule for all steels is learn to work without generating a lot of excessive heat and eliminate the need for quenching.