STRETCHLEARN · WORKBOOK

Knife Sharpening — Workbook

This workbook turns the course into time at the stone. Each section pairs with a course module and gives you edge-reading drills, angle and burr practice logs, stropping and honing routines, and sharpness-test scorecards to run on your own knives. Work through it with real water stones, a strop, and a few knives in hand, and keep the templates open so you build a record of what angle, grit, and finish each knife actually likes instead of guessing each time.

How a Cutting Edge Works

Learn to read an edge, choose a sensible bevel angle, and identify a knife's steel before you ever touch a stone.

Exercise: Read the Edges in Your Block

Gather three or four knives (ideally a chef's knife, a paring knife, a folder, and a serrated bread knife). For each, find the bevel angle by laying the bevel flat on a stone and rocking the spine up until the bevel sits in full contact, then estimate degrees per side. Note whether it is single or double beveled, and run the paper and tomato tests to judge current sharpness.

• What approximate angle (deg/side) does each knife's factory bevel sit at, and how did you find it?

• Which knives are clearly double-beveled and which (if any) are single-beveled or serrated?

• Rank the knives from sharpest to dullest using the paper and tomato tests, and note where each fails.

Worksheet: Knife Profile & Target Angle Sheet

For each knife you plan to sharpen, record what it is and its likely steel (carbon or stainless, soft or hard), then choose a target angle and finish grit using the course ranges. Leave the 'measured existing angle' blank until you check it on the stone.

Knife (e.g. chef, paring, folder, bread)

Steel guess (carbon / stainless / powder)

Hardness guess (soft 56-58 / medium / hard 60+)

Job / how it is used

Measured existing angle (deg/side)

Target angle (deg/side)

Target finish grit

Checklist: Steel & Geometry Pre-Sharpening Checklist

[ ] Identified each knife as carbon or stainless (colour, patina, rust history)
[ ] Estimated hardness as soft, medium, or hard for each knife
[ ] Confirmed single- vs double-bevel and noted any serrations
[ ] Chose a target angle that matches the job (lower for slicing, higher for hard use)
[ ] Decided a finish grit (toothy ~1000 vs polished 3000+) per knife
[ ] Noted which knives may need a diamond plate for hard/powder steel

Whetstones and Holding the Angle

Set up and flatten stones, drill a steady angle, and learn to raise and read the burr that proves the edge is meeting.

Exercise: Marker Angle-Control Drill

Soak or splash your stone and set it on a non-slip base. Colour the whole bevel of a practice knife with a permanent marker. Take one light stroke at your intended angle and inspect where the ink rubbed off. Adjust your spine height and repeat until the ink clears right at the apex along the whole edge, not at the shoulder or short of the edge.

• Where did the ink first rub off (apex, shoulder, or short of the apex), and what did that tell you about your angle?

• How many adjustments did it take before the ink cleared evenly at the apex from heel to tip?

• Did using a coin, angle guide, or cube under the spine make it easier to hold steady, and by how much?

Worksheet: Burr-Raising Progress Log

Sharpen one side at your set angle and check for a burr at three points along the edge. Record how many strokes it took to raise a continuous burr at each point, so you learn how your knife and stone behave. Repeat for the second side.

Knife and stone grit

Strokes to raise burr at heel

Strokes to raise burr at middle

Strokes to raise burr at tip

Burr full length on side 1 (yes/no)

Burr full length on side 2 (yes/no)

Note on uneven sections

Checklist: Stone Setup & Flatness Checklist

[ ] Stone soaked (soaking type) or splashed (splash-and-go) until surface stays wet
[ ] Stone on a non-slip base or damp towel so it cannot move
[ ] Pencil-grid flatness check done; stone flattened until all lines disappear
[ ] Coarse stones flattened more often than fine ones

[ ] Water container and rinse nearby to keep surface wet and clear slurry
[ ] Wrists/elbows locked; stroke driven from shoulders, not fingers
[ ] Equal stroke count per side and per section (heel, belly, tip)

Refining, Stropping, and Maintenance

Climb the grits cleanly, strop to a keen polish, and build an honing routine that keeps knives sharp with little effort.

Exercise: Grit-Progression Run

Take one knife from a reset bevel through your full progression (for example 400, 1000, 3000). At each grit, sharpen until the previous coarser scratches are gone and the bevel looks uniform under good light, rinsing the blade and stone between grits. Strop at the end to deburr. Then test sharpness across the whole edge.

• At each grit, how could you tell the coarser scratch pattern was fully replaced before stepping up?

• Did rinsing between grits prevent stray coarse scratches on the finer bevel?

• How did the edge change in feel and test results from 400 to 1000 to 3000 and after stropping?

Worksheet: Strop & Hone Maintenance Card

Set a maintenance routine for each knife based on its steel. Record your strop compound and rod type, your stroke counts, and how often you intend to hone, strop, and fully sharpen. Update the 'last sharpened' date as you go.

Knife

Rod type (smooth steel / ceramic / none)

Strop compound (e.g. chromium oxide ~0.5 micron)

Hone passes per side (e.g. 4-6)

Strop passes per side (e.g. 10-20)

Hone / strop / sharpen frequency

Last full sharpen (date)

Checklist: Stropping Technique Checklist

[ ] Strop on a firm, flat backing (paddle/bench) rather than a soft hanging strop for crisp apex
[ ] Bevel laid flat at the same angle used on the stone
[ ] All passes edge-trailing (spine leading) so the edge does not dig in
[ ] Light, even pressure; sides alternated each pass
[ ] 10 to 20 passes per side for a touch-up, not more
[ ] Stop as soon as the edge tests keen; avoid over-stropping and rounding the apex

Testing, Repair, and Special Edges

Prove edges with honest tests, reset damaged bevels, sharpen real knives end to end, and care for serrations correctly.

Exercise: Run the Sharpness Test Ladder

On a freshly sharpened knife, run the test ladder in order: paper slice, tomato push, arm-hair shave, thumbnail catch. Test the heel, middle, and tip separately. Wherever a section fails a test, give it a few more passes and a strop, then re-test until the whole edge passes your chosen benchmark. Always cut and shave away from yourself.

• Which sections passed each test, and where did the edge first fail along the blade?

• For any failure, was the cause a dull section, a leftover burr, or a too-coarse apex, and how did you fix it?

• Which one or two tests will you adopt as your standard benchmark, and why?

Worksheet: Chip & Repair Assessment Sheet

Before repairing a damaged knife, assess it so you remove only as much steel as needed. Record the damage, the coarse grit you will start at, and your plan, then note the result after the grits are climbed.

Knife and damage type (chip / roll / rounded apex)

Damage location and rough depth

Starting coarse grit (e.g. 220 / 400)

Plan (local blend vs lower whole edge)

Target angle after repair (deg/side)

Burr raised full length (yes/no)

Result after climbing grits and stropping

Checklist: Serrated Edge Care Checklist

[ ] Confirmed the ground (beveled) side and the flat side of the serrations
[ ] Used a tapered ceramic/diamond rod, never a flat stone, on the scallops
[ ] Matched the rod taper to each scallop's curve
[ ] Sharpened only the ground side at the existing bevel angle, a few light passes per gullet
[ ] Worked one scallop at a time along the whole blade
[ ] Removed the back burr with one or two light flat passes without flattening the teeth
[ ] Confirmed the serrations actually needed sharpening before starting (often leave alone)

Your Action Plan

1. Assemble a starter kit: a 400 and a 1000 water stone (plus a 3000 or a charged strop), a flattening plate, a marker for the bevel test, an angle guide or cube, a honing rod (smooth steel or ceramic), a strop, and a tapered rod for serrations.
2. Read every knife in the block: find each existing angle, identify steel and hardness, and record it on the Knife Profile sheet with a target angle and finish grit.
3. Flatten your stones with the pencil-grid check and set up a non-slip, well-lit sharpening station.
4. Drill angle control with the marker test until the ink clears at the apex along the whole edge at your chosen angle.
5. Raise a full-length burr on one side, confirm it at heel, middle, and tip, then repeat on the second side, logging strokes.
6. Remove the burr completely with light alternating strokes and edge-trailing passes, then run a grit progression (e.g. 400, 1000, 3000).
7. Strop on a firm backing, edge-trailing, 10 to 20 light passes per side, until the edge tests keen.
8. Run the sharpness test ladder (paper, tomato, arm hair, thumbnail) on heel, middle, and tip, and fix any weak section before calling it done.
9. Sharpen a chef's knife, a paring knife, and a folding pocket knife end to end, adjusting angle and abrasive to each knife's steel.
10. Set a maintenance routine: hone soft kitchen knives before each use, strop weekly, and sharpen on stones only when honing and stropping stop reviving the edge; sharpen serrations only when they truly struggle.