

Polymer Clay Sculpting — Workbook

This workbook turns the course into reps at your bench. Each section pairs hands-on exercises with worksheets and checklists that build a personal reference library: conditioning notes, color recipes, brand cure charts and a finishing routine you can trust. Work through it with clay in front of you and keep every baked swatch you make.

Materials, Tools and Conditioning

Get your workspace, brand choices and conditioning dialed in before you build anything.

Exercise: The conditioning bend test

Take a fresh slice of one clay brand and condition it for two minutes, then test it. Repeat in two-minute increments until it passes the bend test, recording how long it took. Then deliberately over-condition a second slice with body heat until it turns sticky and note what fixes it.

- How many minutes did it take to reach a clean, crack-free bend?

- Describe what under-conditioned clay felt and looked like when it cracked.

- What returned the over-conditioned sticky clay to a workable state, and how long did it take?

Worksheet: Brand comparison sheet

Condition and test a small amount of each brand you own. Fill in one row per brand from direct experience, not the packaging.

Brand and line

Firmness out of the block (1 soft to 5 firm)

Minutes to fully condition

Detail held (poor / good / crisp)

Strength when bent after baking

Best use you would assign it

Checklist: Workspace safety and cleanliness setup

- Non-porous work surface in place (tile, glass or marble)
- Window open and a fan moving air away from the bench
- Clay-only tools separated from all kitchen tools
- Baby wipes and isopropyl alcohol within reach
- Light colors planned before dark colors for the session

[] Surface and hands wiped clean before starting

Color Mixing and Surface Blends

Build a repeatable color practice and master the blends that feed caning and surface work.

Exercise: Skinner blend from scratch

Make a two-color Skinner blend following the diagonal-join, same-fold method. Count your passes and stop when the gradient is seamless. Then roll the finished blend into a log and slice it to see the gradient in cross-section.

- How many passes did it take to reach a seamless blend?

- Did rotating or mis-feeding the sheet ever muddy the gradient, and how did you correct it?

- Which two colors did you use, and would you change the ratio next time?

Worksheet: Color recipe log

Record every mix you make by parts so you can reproduce it. Bake a chip of each and tape or note the baked result.

Recipe name

Brand

Parts of each color (e.g. 4 yellow : 1 red)

Translucent added (yes / no, how much)

Raw color description

Baked color description and any shift

Exercise: Mokume-gane reveal

Stack five thin sheets of related colors, optionally with metal leaf, distort the stack from beneath, and shave thin slices. Apply the slices to a base and roll smooth to reveal the pattern.

- What distortion method gave the most interesting pattern: stamping, poking from below, or pressing tools in?

- How thin could you slice before the pattern smeared?

- What would you change about your color choices for more contrast?

Checklist: Clean color-mixing habits

- [] Cut uniform tiles with a tissue blade for accurate parts
- [] Mixed lightest to darkest in the session
- [] Conditioned each mix until streak-free
- [] Baked a chip of every new recipe
- [] Logged the ratio, brand and baked swatch

Hand-Building and Caning

Build stable forms over cores and produce your first reducible cane.

Exercise: Foil-core form with no trapped air

Build a rounded form by wrapping an even clay skin over an aluminum foil core. Smooth every seam, then inspect under raking light and pierce any bubbles with a needle tool before baking.

- Where did seams or air bubbles try to form, and how did you resolve them?

- How thick was your clay skin, and did it bake through evenly?

- What would you do differently to make the core or skin cleaner next time?

Worksheet: Sculpture build planner

Plan a small piece before you touch clay. Fill this in for the next sculpture you intend to build. Subject and rough size

Core type (foil ball / wire armature / both)

Internal supports needed

Order of construction (large masses to fine detail)

Textures and tools planned

Estimated thickest section and bake time

Exercise: Bullseye to flower cane

Build a bullseye cane, then use several small bullseyes as petals around a center to form a simple flower cane. Reduce it slowly while keeping it round, trim the distorted ends, and slice clean sections.

- How much did the ends distort, and how much did you trim away?

- Did the cane get too soft while reducing, and did resting it help?

- How thin were your cleanest slices, and what blade and technique gave them?

Checklist: Pre-bake form check

- All seams smoothed and blended invisible
- Surface inspected under raking light
- Suspected air bubbles pierced
- Thin extensions supported by wire or skewer
- Piece supported so it will not sag during baking

Baking and Finishing

Cure correctly for your brand, then sand, buff and seal into a durable finish.

Exercise: Calibrate your oven

Place a standalone oven thermometer in the center of your oven, set the dial to your clay temperature, preheat fully, and compare actual versus set temperature. Note the difference and any hot spots, then bake a test chip tented with foil.

- What was the gap between your dial setting and the actual thermometer reading?

- Where were the hot spots, and how will you position pieces to avoid them?

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- Did tenting prevent browning on the test chip?

Worksheet: Personal brand cure chart

Build your own verified cure chart from the packet plus your calibrated oven. Add a row each time you bake a new brand or thickness.

Brand and line

Packet temperature

Actual oven temperature on your thermometer

Thickness of piece

Bake time used

Result (well cured / underbaked / scorched) and notes

Exercise: Sand and seal a test piece

Take one baked piece through wet-sanding from 400 to 2000 grit, buff it, then seal half of it with one sealer and leave the other half bare. After 24 hours compare durability, gloss and whether the sealer cured hard.

- How did the surface change at each grit step?

- Buffed bare versus sealed: which finish did you prefer and why?

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- Did the sealer cure hard within 24 hours, or stay tacky or cloudy?

Checklist: Finishing routine

- Piece fully cured and cooled before finishing
- Wet-sanded through grits without skipping (400 to 2000)
- Rinsed between grits and inspected under raking light
- Buffed with denim or a muslin wheel for sheen
- Sealer tested on a scrap chip and confirmed to dry hard
- Thin even coats applied, each dried fully before the next

Your Action Plan

1. Pick one beginner-friendly brand (Premo or Fimo Soft) and fully condition a slice using the bend test until you can do it from feel.
2. Set up a permanent non-porous, ventilated workspace with clay-only tools kept separate from food.
3. Mix three colors by parts, bake a chip of each, and start your color recipe log.
4. Make one clean two-color Skinner blend, counting passes until it is seamless.
5. Build a small form over a foil core, smoothing seams and piercing air bubbles before baking.
6. Construct a bullseye cane, turn it into a flower cane, and reduce it without distorting the pattern.
7. Calibrate your oven with a standalone thermometer and record the gap between dial and actual.
8. Bake your form and cane slices at the correct brand temperature, tented, for the full time for the thickness.
9. Wet-sand a baked piece from 400 to 2000 grit and buff it to a sheen.
10. Test one sealer on a scrap chip, then seal your finished piece in thin even coats and let it cure undisturbed.

