



Passos

Educational Workbook: Frame Loom and H4 Weaving



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Target Audience: All skill levels (Ages 10 to 70+)

Approach: Intuitive practice, foundational weave structures, H4 equipment integration, and functional textile creation.

Course Overview

Manual frame loom weaving utilizing the H4 equipment system provides a versatile, accessible entry into textile creation. This workbook guides learners through warping, weaving techniques, off-loom finishing, and project care.

MODULE 01

The Loom & Essential Terminology

All woven cloth consists of two intersecting thread systems:

- **The Warp:** Vertical threads stretched tightly on the frame loom that form the foundation of the fabric.
- **The Weft:** Horizontal threads woven over and under the warp using a shuttle or tapestry needle.
- **The H4 System / Heddle:** Specialized equipment that speeds up shed opening (the space between alternate warp threads) to pass the weft efficiently.

MODULE 02

Warping the Loom & Maintaining Tension

1. **Calculating Sett (Density):** Determining the spacing of warp ends based on the intended project (wall hanging, scarf, or cloth).
2. **Warping Process:** Threading the warp continuously around loom pegs or notches with consistent pull.
3. **Tension Check:** Ensuring even tension across all warp threads to guarantee straight, clean selvages (edges).

MODULE 03

Weaving Techniques & Textures

1. Plain Weave (Tabby)

The foundational weave structure: passing over one warp thread and under the next (1x1 pattern).

2. Soumak Stitch

A wrapping technique that creates raised braids or ridges, perfect for highlighting thick handspun wools.

3. Weft Inclusions & Textures

Inserting unspun roving or textured novelty yarns to create dimensional visual interest.

Structure Comparison Table

Structure	Pass Pattern	Textile Result
Plain Weave (Tabby)	Over 1, Under 1	Flat, balanced, strong fabric
Twill	Over 2, Under 1 (staggered)	Flexible drape with diagonal lines
Soumak	Wrapped around warp ends	Raised 3D rope-like texture

MODULE 04

Off-Loom Finishing and Project Care

- **Cutting Off the Loom:** Releasing warp ends from the frame while preserving adequate length for tying off.
- **Securing the Fringe:** Tying overhand knots or twisting fringe bundles to prevent unraveling.
- **Wet Finishing / Blocking:** Gently washing the woven piece in warm water to let the fibers bloom and settle into place.