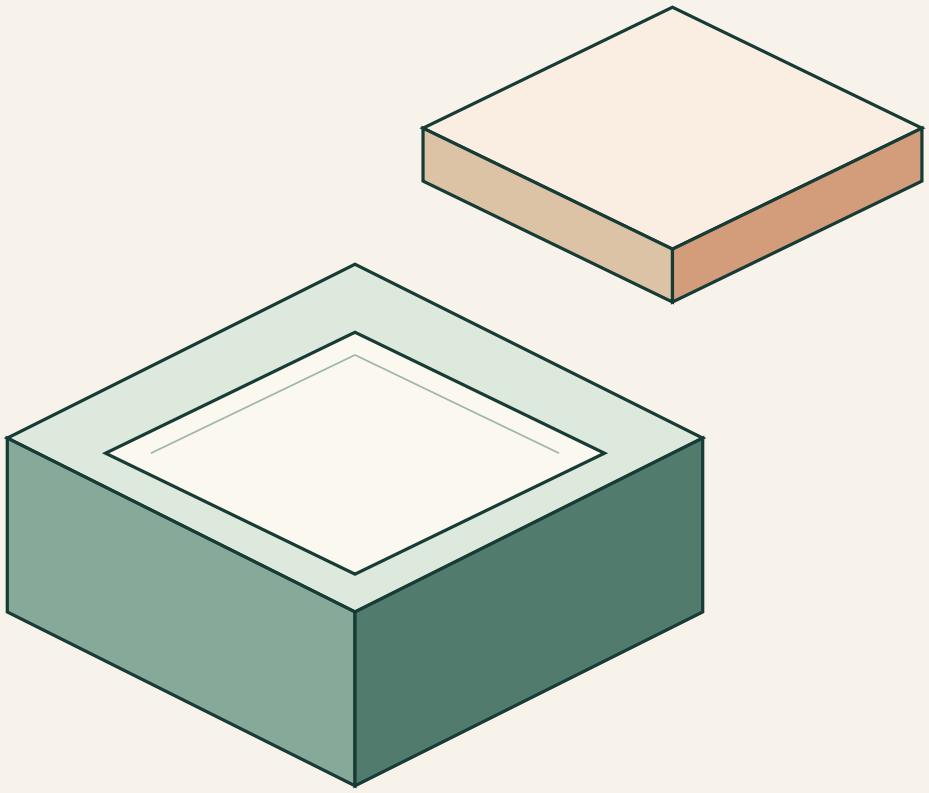
PAPER FOLDING & CONSTRUCTION

Create a Folded Paper Keepsake Box

A little tray, a loose-fitting lid, and a measured fold.



BASE / 70 × 70 × 25 mm

LID / 76 × 76 × 18 mm

Includes original print-size cut nets + assembly checklist

No physical fit, cutting or adhesive-strength test is claimed.

Original educational vector drawings. Decorative lightweight-paper craft only.

Steadleaf Press · MAKE · M02 Paper Folding & Construction · STP-MAKE-F006

A small open tray, a removable lid, two original full-size cutting nets, and a clear construction record.

An empty box can look simple until the first corner will not stay closed. Sometimes the cutting pattern is at fault. Sometimes a fold is too thick, an adhesive has not dried, or the lid is being asked to fit a tray it was never measured for. The best first paper box is not one that hides these decisions. It is one you can inspect, adjust and make again.

This guide makes a small **open tray** from a single cut-and-fold card blank. A second, slightly larger blank makes a **removable lid**. Each blank has four wall panels and four glue tabs. The four tabs extend sideways from the top and bottom wall panels; they fold inward and attach to the inside faces of the plain left and right walls. It is a simple construction with no special machinery. The companion PDF provides both original nets at intended physical size in A4 and US Letter versions, plus a one-page build record.

The **tray floor is designed to measure 70 × 70 mm**, with **25 mm walls**. The lid's central panel is designed as **76 × 76 mm**, with **18 mm walls**. The 6 mm difference between the two centre panels creates a **nominal 3 mm margin on each side in the flat drawing**. Actual lid-to-tray clearance will be smaller after wall thickness, folding, glue and printer scaling are accounted for. This is an editorial starting design, **not a tested fit or a guaranteed clearance**. Use a first trial on scrap card. Do not use the box for food, liquids, hot objects, valuable fragile items, or children's toys.

1. Decide what the box must hold

A folded paper keepsake box suits a small note, a pressed-paper memento, a spare set of gift tags or other clean, dry, lightweight items. It is not a protective case for breakable objects. Begin by comparing the intended contents with the tray floor. Does a folded note actually fit within 70 × 70 mm without being forced into a wall? Do the contents need 25 mm of vertical space? If the answer is no, choose a different project or design new dimensions instead of scaling this PDF blindly.

The included size is deliberately modest. A bigger paper structure brings different stiffness, corner-joint and weight problems; simple proportional enlargement does not establish that the walls will remain square. The tray is open at the top. The loose lid covers it but is not hinged, locked, sealed or drop-proof. Do not claim it will protect contents from humidity or impact.

A useful result: a dry, lightweight note fits inside a correctly assembled tray and the lid can be lifted away without tearing either component. That is an observation you must make on your own assembled sample, not a claim from this manuscript.

2. Materials and workspace

Use two sheets of clean, light card or firm paper that a household printer can feed if you plan to print the nets directly. Alternatively, print the nets on ordinary copier paper and trace them onto your chosen card. Choose paper appropriate to folding; coated or heavy stock can crack at a score. Paper grain can influence the result. Cornell University Library describes how machine-made paper grain affects folding, including puckering when folded against the grain [2]. A small flex test on scrap is more informative than assuming all paper with the same weight behaves alike.

Gather a ruler, pencil, scissors you can use confidently, an appropriate blunt scoring implement if needed, a clean work surface, a small amount of **water-based white craft glue** suitable for your paper, and two clean paper clips or small holding clips if your card tolerates them. Avoid sharp craft knives, hot glue, spray glue and solvent adhesives for this beginner build. If a scoring tool cuts or tears the surface, stop and use lighter pressure or different paper. Gloves are not a substitute for safe tool handling.

Health Canada advises reading craft-product labels, using safer alternatives, keeping food away from craft surfaces, and ventilating the work area [1]. Work with a modest amount of adhesive according to the manufacturer's directions, including its drying and cleanup instructions. Keep scissors, small clips, scraps and glue inaccessible to young children and pets. This is an adult-oriented educational craft, not a child-safe toy specification.

3. Check scale before you cut

The **cutting-net PDF** has three pages in each paper size: base pattern, lid pattern and one-page assembly checklist. Choose A4 or US Letter to match your physical sheet. In your printer choose **Actual size / 100%** and disable automatic shrink, fit-to-page and borderless expansion. These are designed as full-size vector drawings; that statement refers to PDF coordinates, **not to the accuracy of a particular printed sheet**.

Each pattern page has a **50 mm calibration bar**. Measure between the bar's end marks using a separate ruler. If it is not 50 mm, stop and correct the printer settings. Only then cut. A seemingly minor error can be magnified by four walls, tabs and a lid. If the printer cannot produce a reliable full-size page, redraw the dimensions with a ruler rather than treating an inaccurately scaled output as an approved template.

The diagram legend is straightforward:

- **Solid outer line — CUT** the single outside silhouette.
- **Dashed lines — SCORE/FOLD** on the indicated panel hinges without severing the card.
- **Lightly shaded corner panels — GLUE TABS**; they are not additional walls or scraps to discard.
- **Centre square — FLOOR**; do not cut through it or glue over the entire area.

Use the pattern side to mark the score lines on your card. You may wish to orient the print on the inner face of the finished box so the marks are hidden. With the loose lid, decide which side should become the outside before you add decoration; a print direction that looks fine flat may face inward after folding.

4. Understand the base pattern

The base net is **120 × 120 mm overall**. Its centre floor is **70 × 70 mm**. Four **25 mm-high walls** extend from the floor. Four **15 × 25 mm glue tabs** extend sideways from the top and bottom wall panels. The tabs tuck inside the left and right walls. Every dimension is specified in millimetres; you are not being asked to convert a pattern by guessing inches.

Lay the cut base net on the table and identify the middle square. Run a fingertip lightly along the four dashed floor hinges and the four smaller tab hinges. Those eight hinges must remain connected. If you accidentally cut through any of them, start again rather than building a weak box with improvised layers of tape.

Orientation check: the top and bottom wall panels carry the four tabs. The left and right walls are the plain panels that receive those tabs. Keeping that distinction visible prevents a common mistake: trying to fold two adjacent walls into the same corner before the glue flap has been turned inward.

5. Fold and assemble the base tray

1. **Cut the outside once.** Trim around the complete solid perimeter, including the small steps where the tabs meet the side walls. Use controlled cuts on a stable surface. Turn the paper when changing direction rather than forcing scissors sideways.
2. **Score only where marked.** With the blank lying flat, lightly score the four sides of the 70 mm floor and the four tab hinges. Follow the scoring implement's instructions. Do not improvise a blade or cut through the card.
3. **Pre-fold the four walls.** Fold each wall upward against the floor along its dashed line, then open again to confirm an even bend. The tray will be easier to assemble if the folds know where to go before glue is introduced.
4. **Pre-fold the four tabs.** Bend each tab inward at its hinge. None should be crumpled under the floor or folded outward as a decorative wing.
5. **Dry-fit the first corner.** Bring one top wall and its adjacent plain side wall upright. The tab from the top wall must lie **inside** the side wall, flat enough to make contact. If it does not, check the orientation and hinge before applying adhesive.

6. **Glue one corner at a time.** Apply a small amount of suitable craft glue to the tab face that will meet the side wall. Press tab and wall together gently. Follow the product's setting and drying directions. A clip can hold a joint only if it does not bend or scar the card.
7. **Repeat for the remaining three corners.** Keep the walls approximately upright and avoid pulling on a joint before the adhesive has set. Remove clips when safe to do so under the glue's instructions.
8. **Inspect the tray.** Set it on a level surface. Does the floor sit flat? Do the side walls remain upright? Are any corners separating? If a joint fails, stop and reassess the stock and adhesive rather than claiming it is ready for use.

A box with a shallow lean is a useful learning result, not a reason to hide the defect. Note whether the drift appeared during cutting, scoring, folding or gluing. If needed, use a fresh print to make one corrected sample. Do not load a wet corner with contents to see whether it will hold.

6. Make the removable lid

The lid uses the same tab-and-wall logic with a different size. Its centre floor is **76 × 76 mm**, and its walls are **18 mm high**. The complete lid net measures **112 × 112 mm overall**, with four **12 × 18 mm glue tabs** on the top and bottom wall panels. Assemble it by the same eight-fold and four-corner sequence used for the tray, but keep the lid distinct. Do not cut a second tray pattern and expect it to serve as a lid: two nominally identical parts will usually interfere rather than fit comfortably.

Dry-fit the lid first. Hold its walls upright without adhesive if the stock allows; check the orientation and whether it will approach the tray without obvious interference. After the lid's adhesive has cured as directed, lower it **gently** over the completed dry tray. It should act as a removable cover, not require force. If the corners catch or the lid will not sit down, do not press harder. The proposed 3 mm allowance is a geometric design choice; real stock and print tolerances may require changing the lid blank and trying again.

You may prefer an open tray without a lid. That is a legitimate outcome if the contents do not need a cover. Do not transform a failed lid fit into a reason to compress, cut down, or damage the base tray containing a keepsake.

7. Decorate after the structure works

Decorate a dry, square box after you have tested the assembled structure. A restrained band of colour or a handwritten label can look more considered than layers of bulky embellishments. Keep decoration away from joining tabs, lid contact edges and the bottom where it could make the tray rock. Do not put adhesive on the inside of a box meant to hold paper keepsakes until you understand whether it can transfer, stain or remain tacky.

For a personal note, write the recipient name on the lid top and put the date inside on a separate slip of paper. This keeps the box reusable. If you need to remove the note later, a loose insert is more reversible than permanently gluing a keepsake into the container. Cornell's paper discussion and Library of Congress paper-handling guidance concern real paper properties and preservation; neither certifies this ordinary craft box as archival housing [2, 3]. Do not market it as conservation-safe or acid-free without materials evidence.

8. A quick route when something goes wrong

A corner opens. Check whether the tab was folded inward, was clean, and made real contact with the side wall. Do not tug at wet adhesive. Recut if necessary and follow the adhesive label rather than stacking more glue on top of a failed joint.

The lid sticks halfway. Stop pushing. Check print scale, folded wall thickness and inward-facing tabs. Confirm it is the 76 mm lid and the 70 mm tray. If the card is too thick for the allowance, adjust a new lid design; do not cut down the keepsake tray just to make the cover fit.

The walls bow out. Assess paper stiffness and scoring. Do not place heavier contents inside to press the floor flat. Make a new test in a stock suited to the geometry, or use the box without a lid if it remains structurally sound for decorative display only.

The card cracks at the crease. Try gentler scoring or a different stock and consider paper grain [2]. A cracked hinge cannot be considered as strong as an intact hinge because it happens to look straight under decoration.

The printed pattern is too small. Measure the 50 mm bar before cutting. Reprint at 100% and use the correct page size. Do not use the lid to test printer calibration after the parts are already glued.

The contents could fall or be damaged. Change the use. Paper boxes are not protective packaging or transport-rated containers. This project makes a decorative keepsake holder for clean, dry, lightweight items that tolerate ordinary handling.

9. Make one record and improve the next box

Complete the companion assembly checklist while making your first trial. Note the card stock, page size, measured calibration bar, whether all eight fold lines remained intact, and which corner was hardest to join. When the glue is fully dry, try the lid without force and record what happened. Record **not tested** if you did not complete a check; never fill a box marked as untested with important items on the strength of a printed promise.

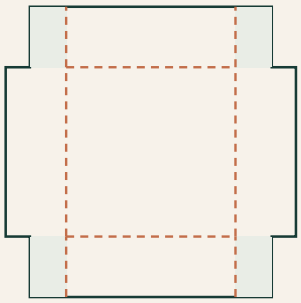
Fictional example, not a physical trial. Avery prints the tray with a 50 mm bar that measures 47 mm. She does not cut it. On the second print she obtains the intended reading and traces onto light card. Her first corner tab wrinkles during gluing, so she pauses and makes one clean replacement instead of hiding it under tape.

Fictional example, not a physical trial. Jordan's tray stands square, but the lid catches on a side wall. He checks the measurements and the card stock. Rather than forcing the lid, he keeps the tray open for a light paper note and records a trial of a redesigned lid as a separate task. The box has a useful purpose without an invented claim of perfect lid fit.

The aim is not a commercial product or a box that tolerates every use. It is an understandable, repeatable paper construction: measured floor, marked folds, corner tabs, a carefully matched lid and an honest report of what you observed.

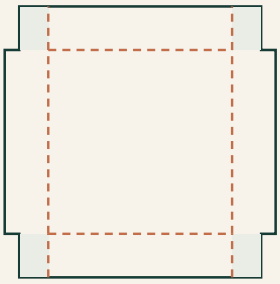
DESIGN AT A GLANCE

TRAY · walls 25 mm



CUT outside · FOLD dash · GLUE four tabs
Digital design, not a physical sample.

LID · walls 18 mm



CUT outside · FOLD dash · GLUE four tabs
Digital design, not a physical sample.

Sources, rights and limits

[1] Health Canada, **Arts and crafts safety**, accessed November 20, 2026. Workspace ventilation, materials and adhesive labels, hazards from cutting and glue, child safety and safe alternatives.
https://www.canada.ca/en/health-canada/services/home-garden-safety/use-arts-crafts-materials-safely.html

[2] Cornell University Library, **Paper — Library Preservation and Conservation Tutorial**, accessed November 20, 2026. Paper grain and folding behavior, especially differences along and across the grain.
https://chinapreservationtutorial.library.cornell.edu/content/paper/

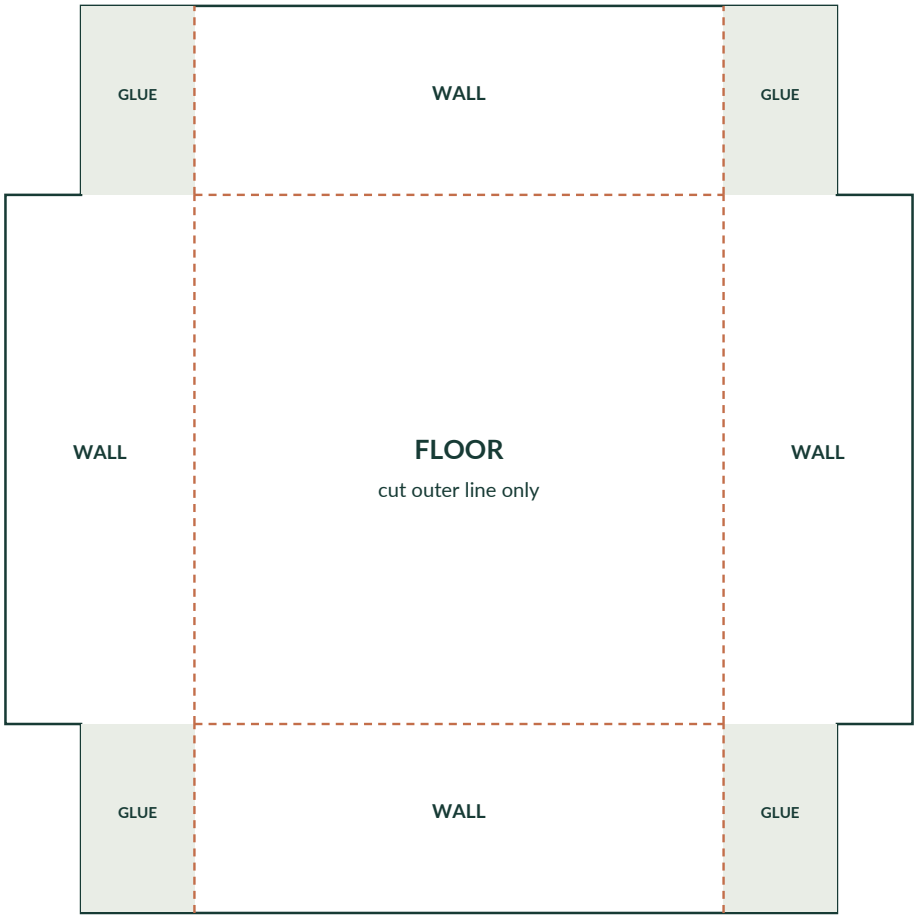
[3] Library of Congress, **Care, Handling and Storage of Works on Paper**, accessed November 20, 2026. Clean handling and limitations of ordinary paper enclosures. This is cited as background on paper care, **not** as approval of adhesive use or of this box as archival storage. https://www.loc.gov/preservation/care/paper.html

The two nets, dimensions, eight-fold lines, tab locations, visual diagrams, calibration marks and checklist are original Steadleaf Press editorial assets. They were generated as vector coordinates and inspected digitally, **not physically cut, folded, glued, load-tested or fit-tested**. The base and lid sizes are author-designed examples and not sourced or tested engineering specifications. The PDF does not grant permission to call a printed sample exact-size without checking its 50 mm bar. No third-party photos, crafts patterns or licensed artwork have been copied into the project. Independent textual review was performed; no physical fabrication, fit or strength test was performed. This is an ordinary decorative craft, not food packaging, a children's toy, a container for hazardous substances, a protective case or conservation housing.

BASE TRAY CUTTING NET

Actual Size / 100%. Use the 50 mm scale below to check your printer.

70 × 70 mm floor · 25 mm walls · 15 × 25 mm glue tabs · 120 × 120 mm outline



SOLID = CUT outside - - - DASH = FOLD/SCORE PALE = GLUE TAB

Keep all 8 hinges intact. Glue tabs INSIDE the two plain side walls.

50 mm

If this line is not 50 mm on paper, correct scaling BEFORE cutting.

Use clean, dry paper/card. Scissors and adhesives require safe handling.

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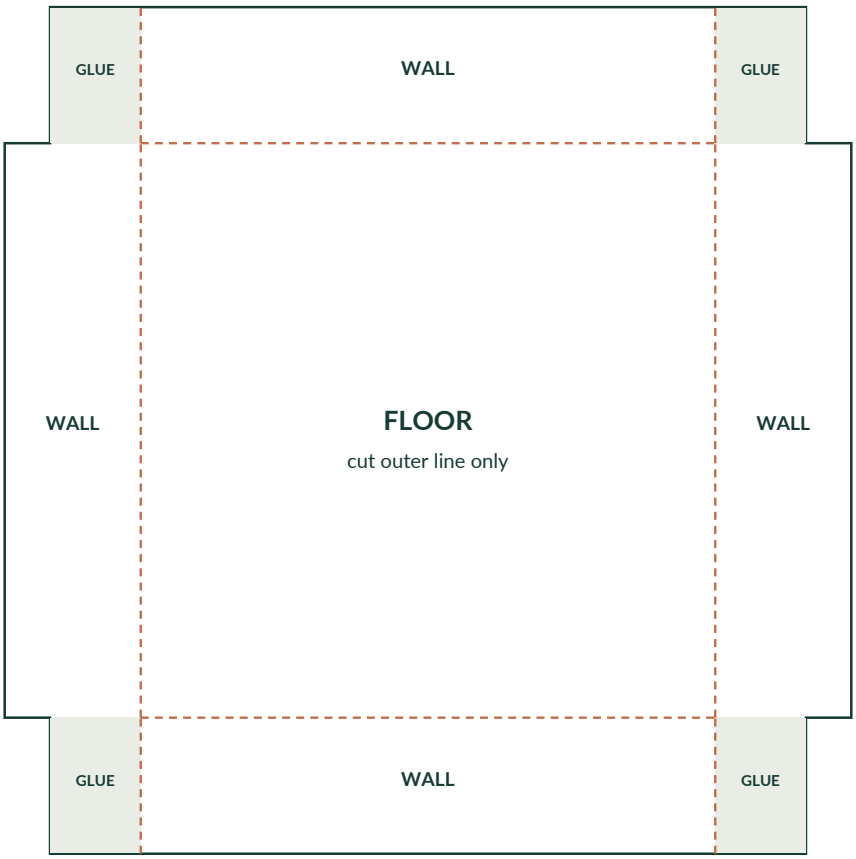
REMOVABLE LID CUTTING NET

Actual Size / 100%. Use the 50 mm scale below to check your printer.

76 × 76 mm lid floor · 18 mm walls · 12 × 18 mm glue tabs · 112 × 112 mm outline



SOLID = CUT outside - - - DASH = FOLD/SCORE PALE = GLUE TAB

Keep all 8 hinges intact. Glue tabs INSIDE the two plain side walls.

50 mm

If this line is not 50 mm on paper, correct scaling BEFORE cutting.

Use clean, dry paper/card. Scissors and adhesives require safe handling.

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MY ONE-BOX ASSEMBLY RECORD

Check a real sample, not just the printed diagram.

1. Print page size

A4 / US Letter Actual Size / 100%

2. Both scale bars

Base ____ mm Lid ____ mm Target: 50 mm

3. Paper or card

_____

4. Cut and fold

8 hinges intact on base? Yes / No On lid? Yes / No

5. Glue choice

Water-based product / other: _____

6. Corner check

Four glued joints on each piece? Yes / No / Not tested

7. Fully dry

Per label directions? Yes / No / Not tested

8. Lid fit

Slides over gently / Catches / Not tested

9. Contents check

Dry, clean, light paper object / Other / None

WHAT CHANGED DURING MY FIRST BUILD?

If the lid catches, stop: no force or invented fit guarantee.

Decorative keepsake holder only — not food packaging, a toy, or protective case.