# LINE SHAPE TEXTURE

A CREATIVE'S GUIDE TO FRAME-LOOM WEAVING

BY ANDREA ROTHWELL

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## A CREATIVE'S GUIDE TO FRAME-LOOM WEAVING

For April and Joanie

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# INTRODUCTION

Having spent many hours seeking resources on frame-loom weaving I know they are few and far between. With most books on the topic having been published before I was born, I am prompted to share what I've learnt in a new and engaging format.

Like you I am not a master weaver. This book won't be delving into every aspect of weaving as the topic is vast and has many branches. Instead, my aim is to introduce you to the language and technique of frame-loom weaving. Within this context I bring together the foundation skills and key elements of woven design, providing a framework for you to explore weaving and discover how woven fabric is formed.

The techniques presented are just a starting point for individual expression. Use this guide as a reference in your own learning and creativity. My hope is to empower you with the language and foundation skills of frame-loom weaving to give you the confidence and freedom to design and weave your own unique pieces.

# ABOUT THIS BOOK

## GETTING STARTED

First we look at choosing a loom and selecting the materials and tools you'll need to get started. Before I delve into the foundation methods, I present a framework to get you thinking like a weaver and show you the elements that make up a simple woven piece.

## THE FOUNDATION

This is the basic recipe for creating a woven piece. It is a reliable method that will give functionality and durability to your work.

## LINE, SHAPE, TEXTURE

These are the foundation skills that will give rise to your ideas. Get to know them well and you will always find unique ways to adapt and apply them in your work.

## PLANNING & DESIGN

Frame-loom weaving is a free and creative process but your ultimate success will lie in how well you plan, design and finish your pieces. Before you begin, it is wise to consider how colours and materials interact, the structure required to hold the woven elements together and any finishing touches that can be applied to make your pieces standout.

## WEAVING VOCABULARY

The language of weaving can be quite unfamiliar and strange at first. If at any stage whilst reading this book you come across a new or unfamiliar term you can refer to the glossary at the back of the book for clarification.

# WHAT IS FRAME-LOOM WEAVING?

Frame-loom weaving is a method closely related to the traditional techniques of tapestry weaving. A dense woven fabric is formed by hand, your fingers working individual threads. This free-form process enables you to explore geometric and pictorial themes in your weaving, and introduce textual elements to create three-dimensional form.

It is a gentle and organic approach to cloth making. The loom, the tool on which the fabric  is woven, is free from any complex mechanical devices. In its most basic form it is just a humble frame, its primary job being, to hold a series of vertical threads taut while the filling is being woven.

As a frame-loom weaver, you are not bound by the conventions or limitations of traditional two-dimensional weaving styles. Once the foundations are understood and appreciated they can be applied in an infinite number of ways. Through thoughtful choice of colour and texture, the frame-loom weaver can create a fabric that is truly unique and wonderfully tactile.

PIECE NOTES
Constructed using the foundation method, two weft colours are woven in plain weave using half-hitches and Egyptian knot to convey a gradiant of colour.

# GETTING STARTED

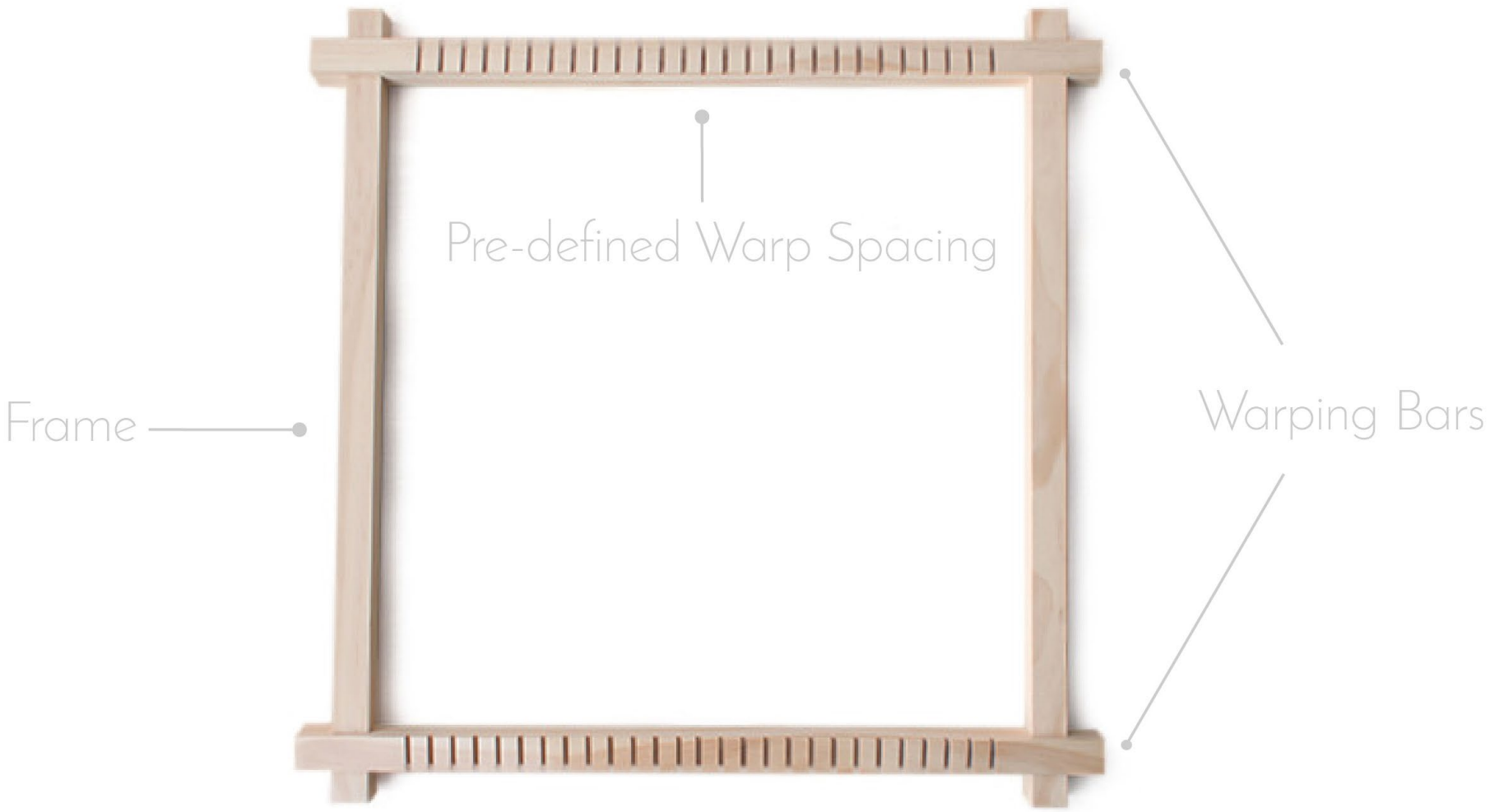
## CHOOSING A LOOM

To start weaving the only tool you really need is an inexpensive frame loom. They come in all shapes and sizes and if you're really handy you could even make one yourself!

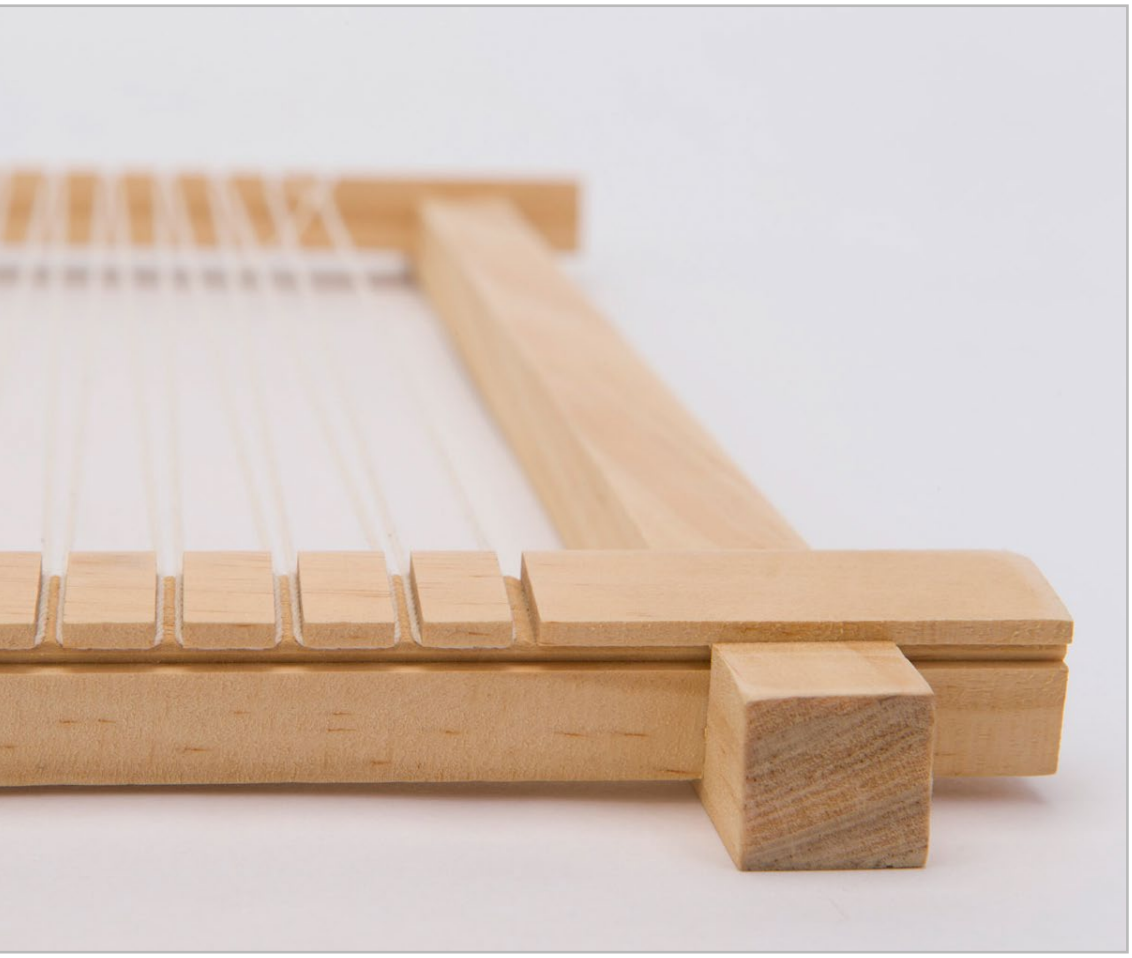
In this book I will focus primarily on looms with a predefined warp spacing. These looms generally consist of a timber frame with a series of nails, pegs or teeth along two opposite ends, on which the warp can be wound and held firm.

Its construction should be simple and robust, able to hold the warp threads under tension and spaced evenly whilst weaving. The need for a complex heddle system is generally unnecessary, as you will be manipulating both the warp and weft by hand.

Componants of a frame-loom



For a beginner, I recommend a loom with a warp spacing (sett) of 4 warp threads (ends) for every 2.5cm (4 ends per inch). This wide sett tends to cover quickly and will suit a range of materials and projects. This spacing will also allow for a finer sett of 8 ends per 2.5cm (8 ends per inch). To achieve this finer sett, warp with two threads and use several rows of plain weave to distribute and evenly space the warp.



When choosing a loom you should consider:

- The size of the pieces you want to make
- Where and how you will be using the loom
- How the pre-defined warp spacing might influence the look and feel of your pieces

## BUYERS GUIDE

The table below categorizes some common loom sizes and provides insight into how and when you might use them. I've also included some potential limitations to help inform your decision.

## TABLE OF COMMON LOOM SIZES

| SIZE (Warp Length) | USE | SITUATION | LIMITATIONS |
|---|---|---|---|
| Small<br>< 30cm (12") | Ideal for sampling and working small pieces | Good lap-loom or travel loom, very portable | Workable weaving area is quite small |
| Medium<br>30-50cm (12"-20") | Ideal for small to medium size pieces | Comfortable lap or table loom, semi-portable | Good all round loom but may not be as portable as a small loom |
| Large<br>> 50cm (20") | Ideal for large pieces. Or, can work multiple small to medium size pieces at one time | May need a stand or propping up to work comfortably | Substantial time investment required for large pieces. Can be cumbersome for working smaller pieces |

# THE WEAVER'S PALETTE

A woven fabric combines two elements, warp and weft. In the style of weaving that we explore here, the warp forms the structure of the piece and is predominantly hidden from view. While the weft forms the face of the fabric and is used to convey the visual elements, line, shape and texture.

The free-form nature of frame-loom weaving allows for unlimited choice when selecting weft materials for your pieces, making this style of weaving so exciting and unlike other fibre crafts.

## WARP THREAD CHARACTERISTICS

When designing any woven piece your choice of warp thread should be carefully considered, as it will form the foundation or your fabric and the structure on which you will weave. It should be strong and smooth and be able to withstand the friction and stretching created by the weaving action.

## TAPESTRY WARP

Cotton tapestry warp is well suited to frame-loom weaving, as it is designed with the rigours of weaving in mind. It generally consists of a number of cotton threads, hard twisted, for strength and durability. Additionally, the natural smoothness of cotton will help ensure your weft passes smoothly across the warp.

## WARP SUBSTITUTES

If you don't have tapestry warp on hand I recommend finding another strong 3 or 4 ply cotton thread such as mercerised crochet cotton. You can experiment with other yarns and materials too. Though try to avoid lofty yarns that have very little twist as they will be prone to breakage.

## SELECTING WEFT

When creating your first pieces knitting yarns are a great place to start, they are readily available and it is likely you already have some on hand. They come in many different colours, fibres and preparations, providing an endless source of inspiration.

Moving on from yarns, there are a variety of other materials that can be incorporated into your pieces. These include spinning fibres, like wool roving or top, strips of fabric, rope, string or twine, or elements taken from nature like grasses, flowers and other flora. You could also try weaving-in or attaching found objects.

## WORKING WITH COLOUR

When using yarns of different origin, it can be tricky to find hues that gel well with each other. Generally, I find colours of similar saturation and value create workable colour schemes that are pleasing to the eye.

If you find the perfect colour but the yarn is too light-weight for your project, don't worry, you can always use multiple strands of one yarn to make a thicker one.  Additionally, when working with multiple strands, swapping-out one thread of the main colour for another colour every few rows can be used to produce subtle colour gradients.

## SOURCING

Sourcing yarns is quite straightforward, you will generally find a large range of colours and fibres at your local yarn or craft store. Online market places like Etsy, make it easy to find one-of-a-kind yarns and spinning fibres. Try using search terms like hand-spun and hand-dyed, or mill-spun yarn for limited edition single origin yarns. Facebook buy-and-sell groups, specialising in hand-dyed and hand-spun yarns are also good places to find talented spinners and dyers offering unique yarns.

# THE WEAVER'S TOOLBOX

As you start exploring various techniques you may become interested in experimenting with the various tools available to the weaver. Some you will already have around the house and others are more specialised and specific to the craft.

I have compiled a list of the most common tools and a short explanation on how to use them and when you might find them most useful. Ultimately you should look for tools that are functional and comfortable to use, this often being determined by your preferred weaving style.

In the past, specialised weaving tools have been difficult to source. However, with the recent growth and popularity of weaving we can now source many of these items online.


TAPESTRY BOBBIN (1)

Traditional tapestry tool in which the weft yarn is wound around one end, and the other pointed end is used to beat down the weft as you weave. The bobbin is held in your dominant hand, parallel to the warp. It is then passed under a group of warp threads held up by your other hand. Once practiced, it is surprising how efficient this method is. It is well suited to most weaving stiches but is particularly useful for working pile weaves such as soumak and Turkish knot.

WEAVING NEEDLE (2)

Broad flat needle with large eye that can accommodate bulky materials. It is useful for working shapes and adding textural elements to your pieces. Handy when you are working small areas of detail where colour changes are frequent. Its broad flat shape can make it more comfortable to use than a tapestry needle.

COMB (3)

Traditional rug-weaving tool used to pack weft firmly in place as you weave. They come in all shapes and sizes and can be improvised by using items from around the house, such as a table fork.

SHUTTLE (4)

Broad flat tool in which weft yarn is wound around the tool lengthways. The shuttle is traditionally passed horizontally across the warp through an open shed. It can also be held and used similarly to a tapestry bobbin, where the shuttle is held parallel to the warp and passed under a group of warp threads held up by your other hand. It is useful for building up large areas of plain weave when colour changes are infrequent.

## SHED STICK

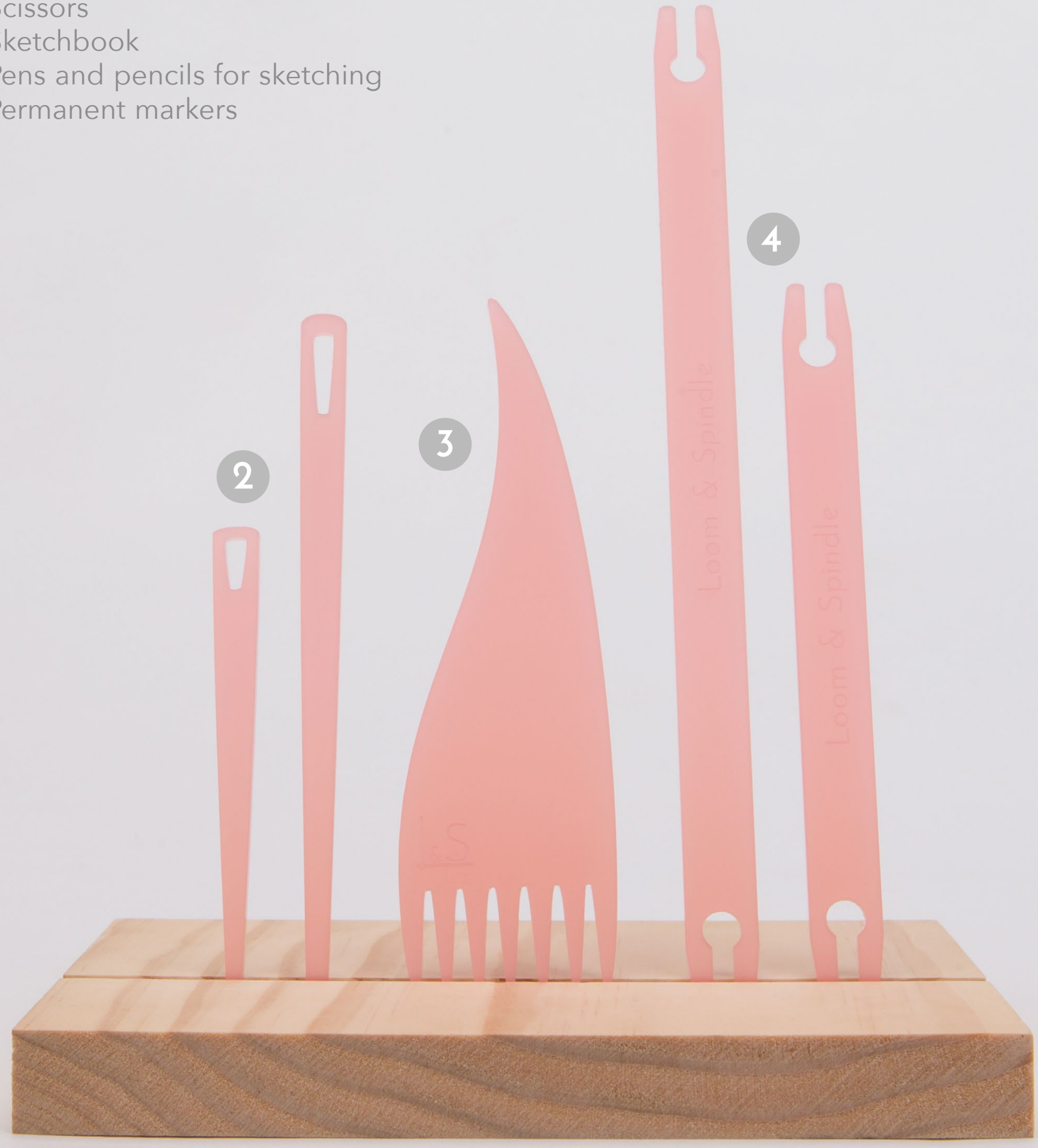
Long flat stick used to create an opening between warp threads, the opening being the shed. Useful when working with bulky yarns and fibres as the shed can be held open while the bulky yarn or fibre is passed across the warp.

## TAPESTRY NEEDLE

Large blunt sewing needle usually 7-9cm long made of plastic or steel. Useful for sewing openings between woven areas and hiding weft ends when finishing pieces.

## OTHER USEFUL ITEMS

- Scissors
- Sketchbook
- Pens and pencils for sketching
- Permanent markers



# WEAVING METHODOLOGY

These are my tips for becoming a more thoughtful and intuitive weaver. They were the key elements that helped improve and develop my weaving. Try and keep them in mind as you read through this book and start to plan and design your own pieces.

1. Get to know the foundation skills and language of weaving.

   - Become familiar with different weaving styles.
   - Get to know various construction methods.
   - Seek out as many resources as you can.

2. Consider how the foundation skills can be applied to give rise to your own creative ideas.

   Reflect on the various ways these elements can be further adapted through your choice of colour, materials, textures and warp spacing.

3. Experiment and weave samples.

   This really is the only way to learn how warp spacing, yarn weight and fibre interact and influence the look and feel of your woven piece.

4. Plan your pieces.

   - Sketch your designs and give thought to how your piece will be constructed.
   - Lay out your materials before you begin and assess the interaction between colour and texture.

PIECE NOTES
Lightly spun wool roving, woven on a pink cotton warp. A wide sett is used to highlight the twists and spirals of the fibre.

5 Did I mention plan your piece!

Before you start, find a solution to these design constraints:

- The size or your loom and weaving area.
- Your warp spacing and yarn weight.
- Securing warp ends.
- Removing the piece from the loom.
- Hanging or displaying your piece.

Can your desired effect be achieved?

6 Add quality and longevity to your work by using appropriate techniques and materials.

- Start with a solid framework.
- Secure both warp and weft appropriately.
- Consider any need for colourfastness, sun protection or pest resistance.

7 Record your insights.

Decide what you liked, what worked and why it worked.

If some elements didn't work as you had hoped, consider why and ask yourself what could be modified to improve that element next time.

8 Appreciate and enjoy the experience of creating a woven piece by hand.

In all of its various forms, hand weaving should be a gentle and organic approach to cloth making!

# ANATOMY OF A WALL HANGING

Before we delve into the foundation method for constructing a woven piece, I think it's important that I show you what a simple finished piece might look like. I've highlighted the elements that give the piece its form and function, providing a visual glossary of weaving terms that you can reference as you develop your weaving skills.

HEADER
The first row, or rows, that are woven onto the loom. The header is used to space the warp threads evenly across the loom before the body of the piece is woven. In this example, a countered soumak stich is used.

WARP
The vertical threads wound around the loom and held under tension. It provides the foundation and structure of a woven piece.

WEFT
The horizontal threads that pass over and under alternating warp threads. This interlocking of warp and weft completes the structure of a woven piece.

DOWEL/ROD FOR HANGING
A method used to secure warp ends and hang a finished piece.

SELVEDGE
The self-finished edge of the woven fabric.

PILE WEAVE
Describes any knotting technique used to create three-dimensional texture. It may include soumak and Turkish knots, and their many variations.

PLAIN WEAVE
A simple weaving technique that will form the foundation of most pieces.

FRINGING
A finishing technique that uses pre-cut lengths of yarn to form Turkish knots along the edge of a piece. Useful for supporting the weft and hiding warp ends when tying off.

PIECE NOTES
A simple woven sampler constructed using the foundation method. A strong cotton thread is used for the warp and a natural colour bulky weight wool yarn is used for the weft. It combines a range of plain and pile weave techniques.

# THE FOUNDATION

A good foundation is necessary to give your woven piece functionality and longevity. The techniques I present here are simple and straightforward, there is no complicated setup and weaving can begin almost immediately.

The first step is warping your loom. This is a fairly straight forward process as there is no need to measure or pre-cut the warp. It is simply wound directly onto the loom.

Next, I present a method for constructing a woven piece. It is unique in that the design will be woven upside down and only turned the right way up at the end to add the finishing touches. It is a method well suited to woven wall-art, as it results in evenly spaced loops along the top of the piece that can be used hanging.

## WHAT YOU'LL LEARN

- How to warp a frame-loom
- Foundation method
- Alternate construction methods

## NOTES ON FOUNDATION METHODS

- The methods presented are appropriate for any peg/tooth style frame-loom.
- At this stage I have purposefully omitted the specific weaving techniques used, as I want you to focus on how the piece is constructed.
- My construction method will require you to leave at least 7-10cm (3-4") of exposed warp at the end of your design. This allows enough space to cut the piece from the loom and tie off the ends. Remember to factor this in when choosing a loom and planning your piece.

# WARPING METHOD

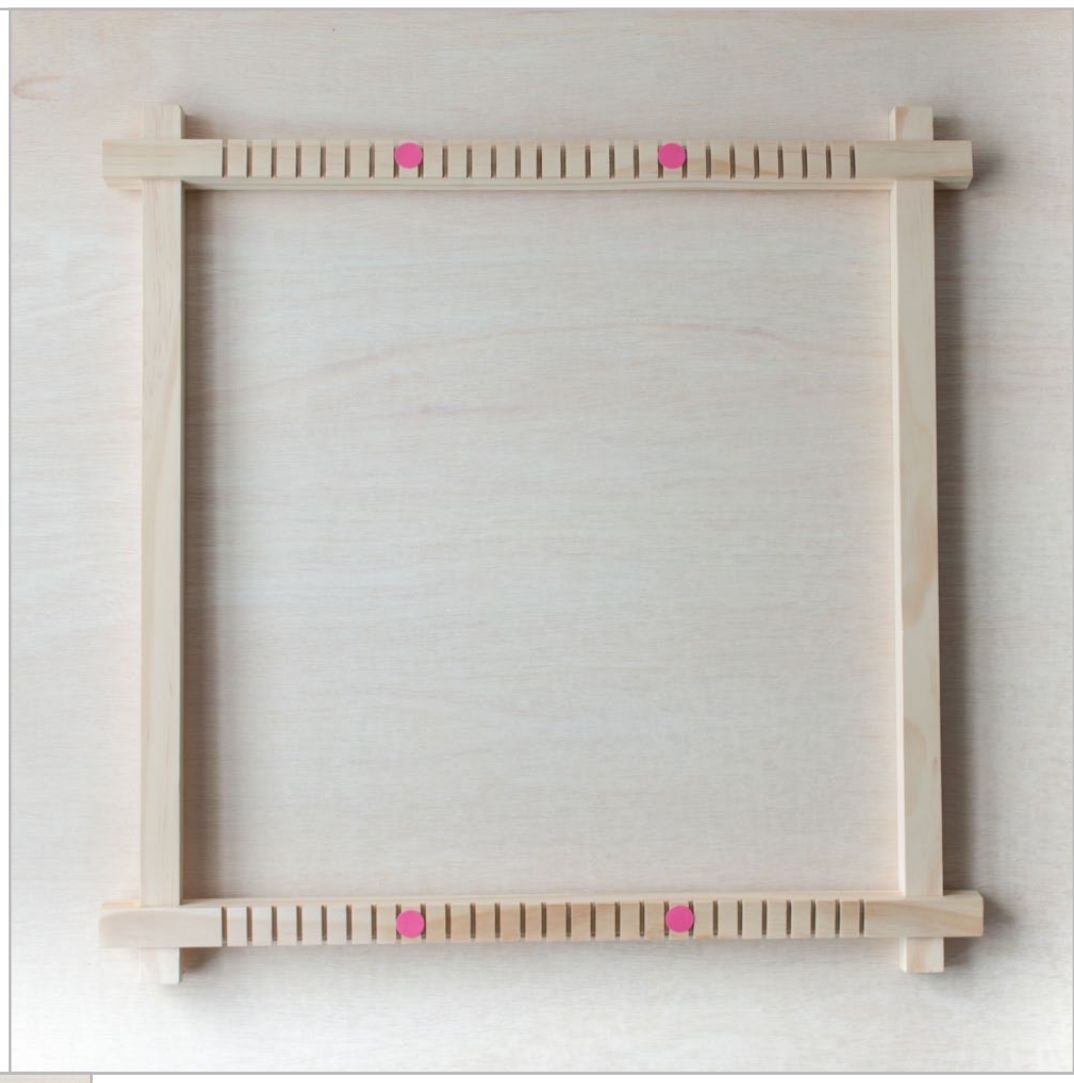
YOU WILL NEED

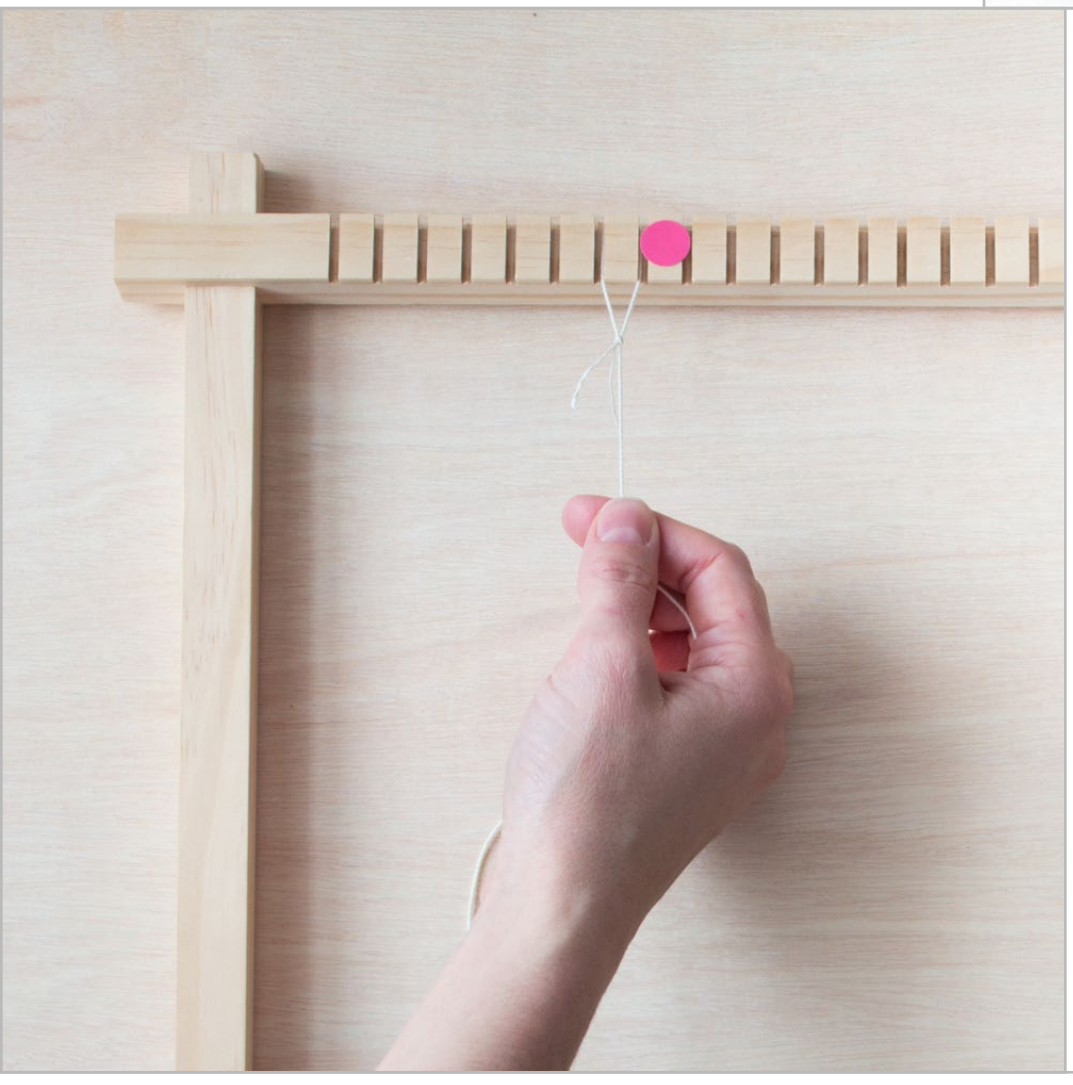
- A loom
- Warp thread

1 Having determined the width of your piece, decide how many teeth you will need to warp in order to accommodate your design.

In this example, my warp width comprises of 12 teeth and I will centre my warp on the loom.

I have marked the outer most teeth on both warping bars with pink dots, for reference as I warp.



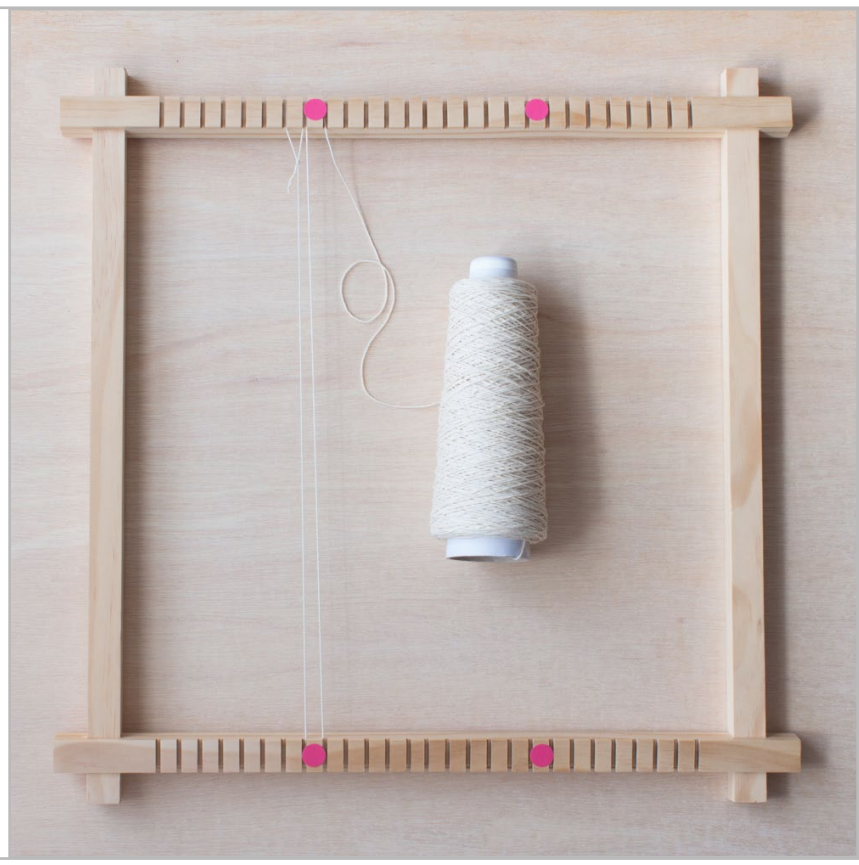


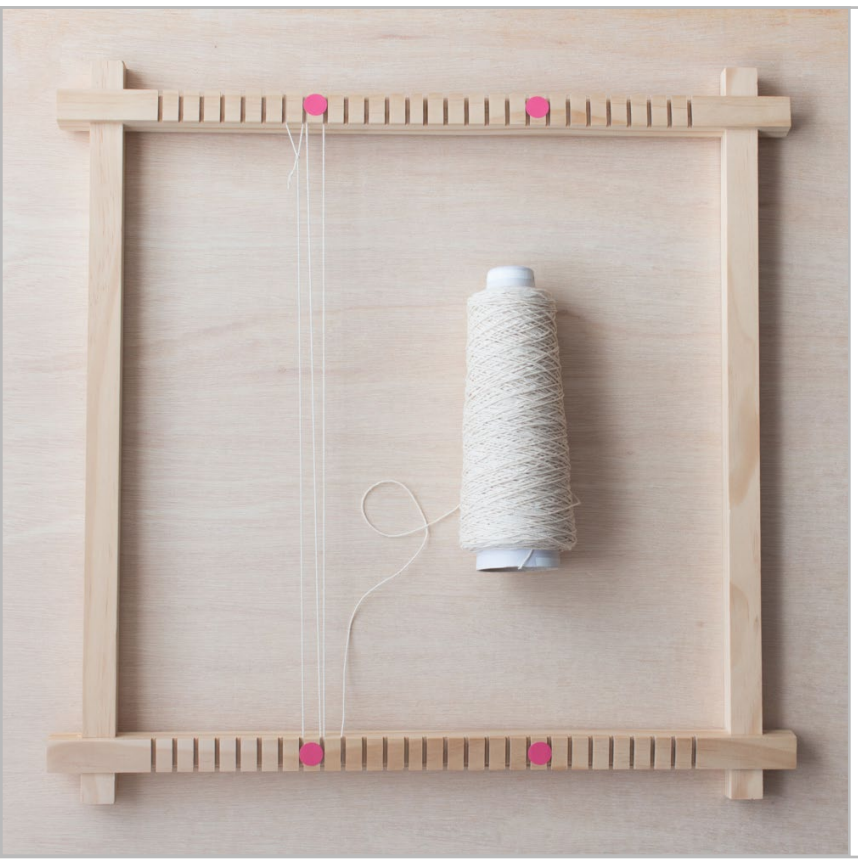
2 Take the end of your warp thread and tie a loop knot.

Starting at the top left of your loom, loop the thread around the tooth to the left of your defined warping area.

3 Carry the thread down to the bottom warp bar and wind it around the first tooth of the warping area.

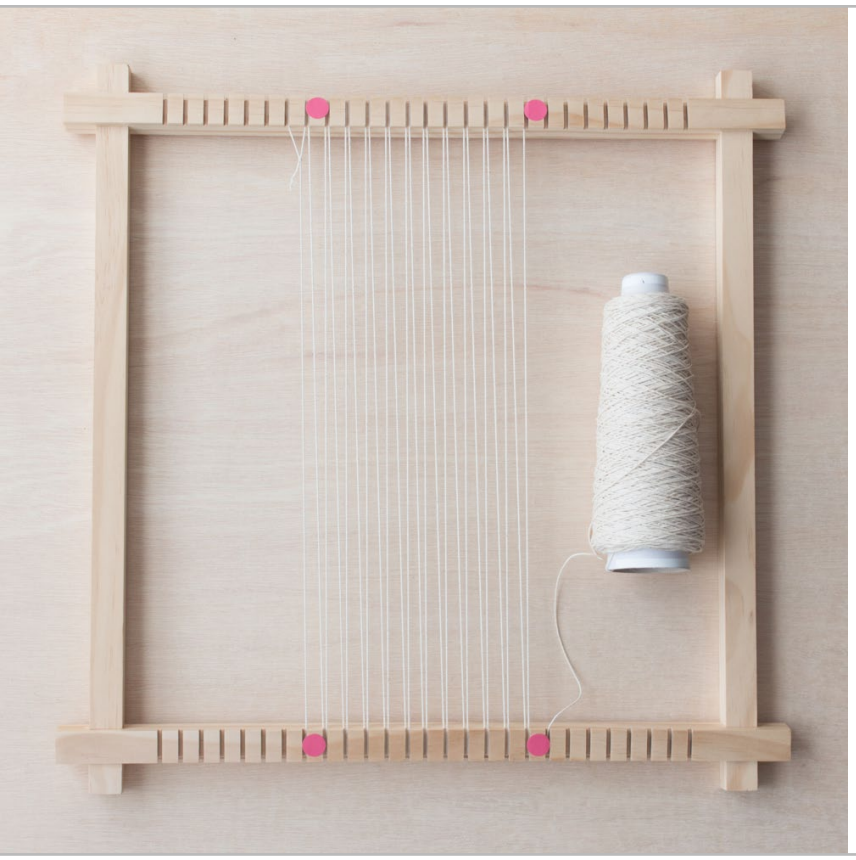
4 Keeping tension on the thread, carry it up to the first tooth of your warping area and wind it around the tooth.





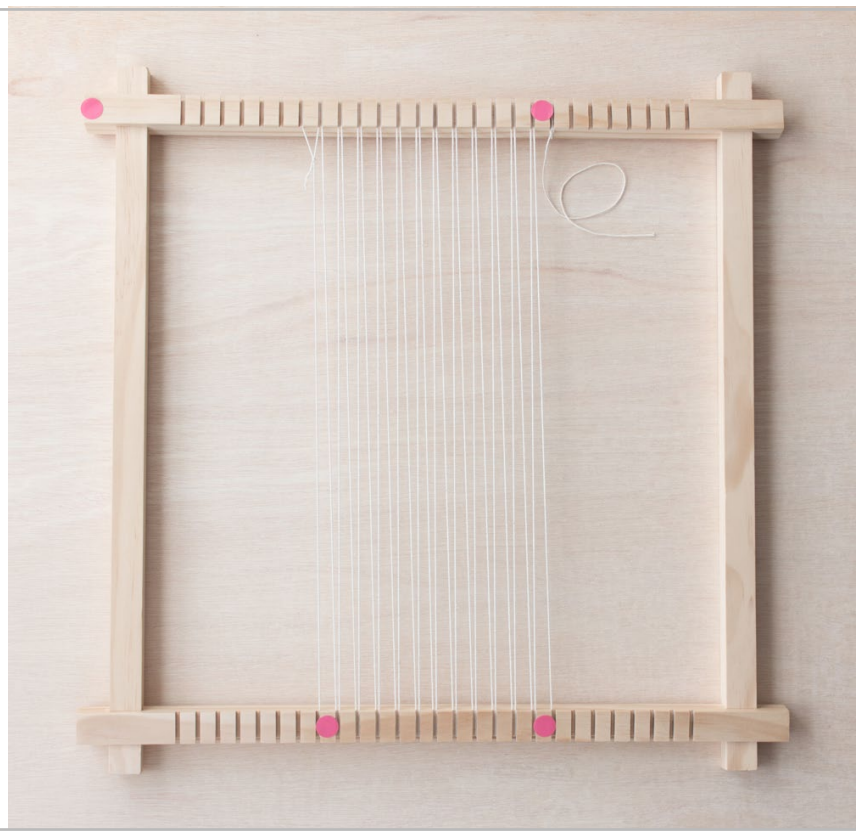
5 Maintaining tension, carry the thread down to the bottom warp bar and wind it around the second tooth.

The warping pattern will now start to emerge.



6 Repeat steps 4 and 5 until you reach to the last tooth on the bottom warp bar.

7 To finish, carry the thread up to the last tooth of your warping area and secure by wrapping the thread around the warp bar a few times and tying a knot.



## NOTES ON WARP TENSION

- The warp should have an even tension across the loom and feel quite elastic when plucked. For best results, check the tension as you warp and tighten any loose threads before tying off. It may be useful to weave a few sample rows at the beginning of your piece to check the tension before you begin your design.
- Uneven tension will emerge as a slight waviness across the fabric. If left unattended it may cause ribbing or buckling and is generally an undesirable characteristic in your finished piece.
- If uneven tension does not present itself until you have begun weaving, it may be remedied by inserting a shed stick across the affected area. The aim is to tighten the looser threads and create a more consistent tension across the loom.

# CONSTRUCTION METHOD

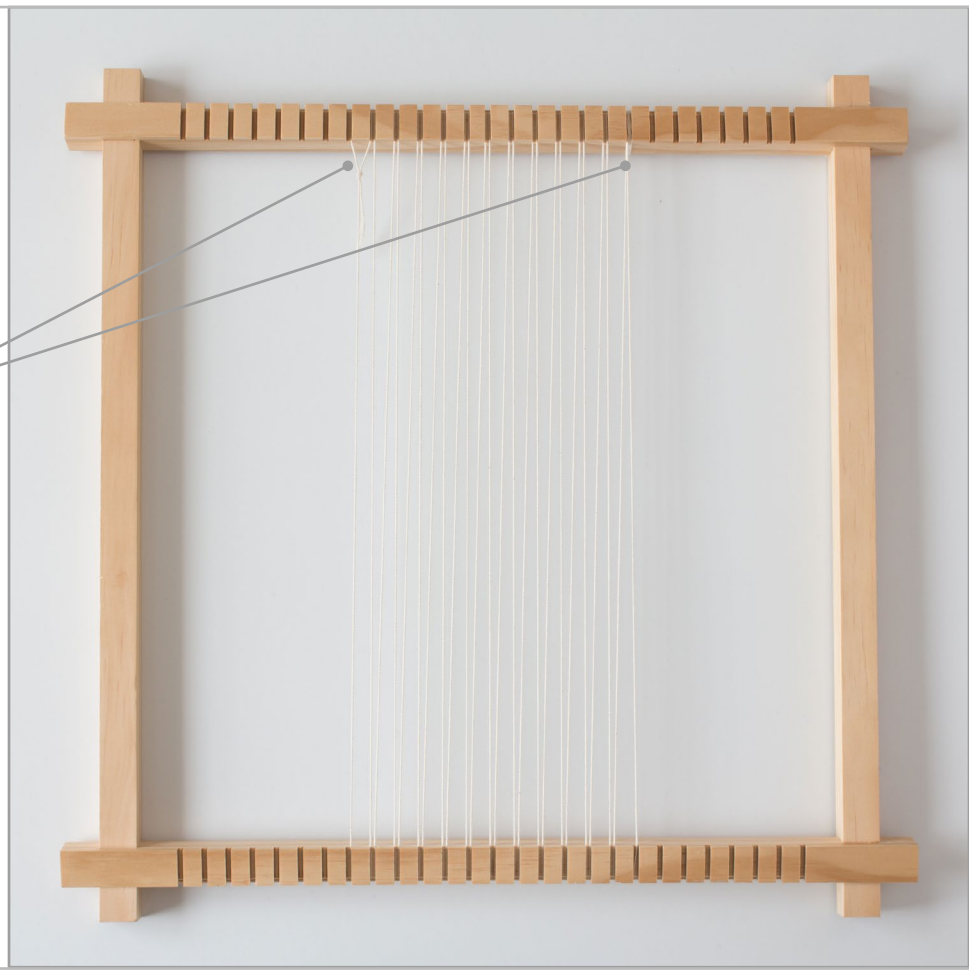
## YOU WILL NEED

- A loom
- Warp thread
- Your preferred weaving tools
- Weaving provisions – yarn, roving, twine, etc.

1. Warp your loom to a width that will accommodate your design.

   Ensure that you tie the warp on and off at the same end.

   Orientate the loom so the knots are furthest from you.



2. Weave a header row using two rows of soumak or other decorative knotting technique.

   This header row will help evenly space and stabilize the warp. It forms the top of your woven piece.

3 Begin your design by weaving a few rows of plain weave.

This will further improve the warp spacing.

4 Referring to your design, weave the body of your piece.

Review your work regularly and assess the progress of your design to keep everything on track.

Remember to leave at least 7-10cm (3-4”) of exposed warp for cutting and tying off.

5 Complete your piece with a decorative fringe.

Feel free to re-orientate your loom to find the most comfortable position to tie the knots.

While the piece is still being held taught, it is a good time to add any finishing touches or embelishments.

6 Turn the loom over so you are viewing the piece from the back.

Trim, secure and tie off loose ends as necessary.

7 Lay the loom out on a flat surface, still viewing the piece from the back.

Leaving as much warp length as you can, carefully cut the piece from the loom.

8 Secure the piece by tying off warp threads in pairs evenly across the back of the piece. A basic reef knot (square knot) is suitable.

Tie them closely to the woven area to prevent the weft from slipping.

9 With the piece still attached to the loom, turn the loom over so you are viewing the front of the piece and lay it out on a flat surface.

Lift the piece from the loom, carefully unhooking the loops from the teeth.

10 Carefully thread a dowel or rod through the loops.

11 Add any finishing touches.

Your piece is now ready for hanging!

PAGES 24-59 HAVE BEEN OMMITED FROM THIS SAMPLE

# ABOUT THE AUTHOR

Andrea Rothwell is a passionate free-form weaver, hand spinner and creative thinker based in Melbourne, Australia.

She began sharing her passion in 2014 when she launched her lifestyle craft business, Loom & Spindle.

In her first book, LINE SHAPE TEXTURE: A Creative's Guide to Frame-Loom Weaving, Andrea provides the beginner weaver with an in-depth look at the craft of frame-loom weaving.

It is the first book published under the Loom & Spindle brand.

NOTES FROM THE AUTHOR

"When I sat down to write this book my aim was to create a guide that would not only give you the foundation skills of frame-loom weaving but provide a framework in which you could express your creative self.

For this reason I haven't included projects, but instead provide insight on how foundation skills can be varied through design and application.

I've drawn on my own experience and extensive weaving library to provide you with an accurate and authentic guide to frame-loom weaving.

I hope by sharing this knowledge I can help you achieve creative freedom in your own woven pieces."

# ABOUT THIS BOOK

Thank you for reading!

This project has had its ups and downs, but passion and purpose have seen me through to the end.

This book is entirely self-published. It supports not only myself, but my young family too.

I am very proud that I can now share this work with you, but I need you help.

Please help me spread the word by sharing the front cover image with your friends.

Thank you for your support!

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# SHOP LOOM & SPINDLE

Loom & Spindle offer a range of frame looms and weaving kits for beginner and intermediate weavers. We also have a select range of tapestry warp and wool fibre for frame-loom weaving projects.

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