

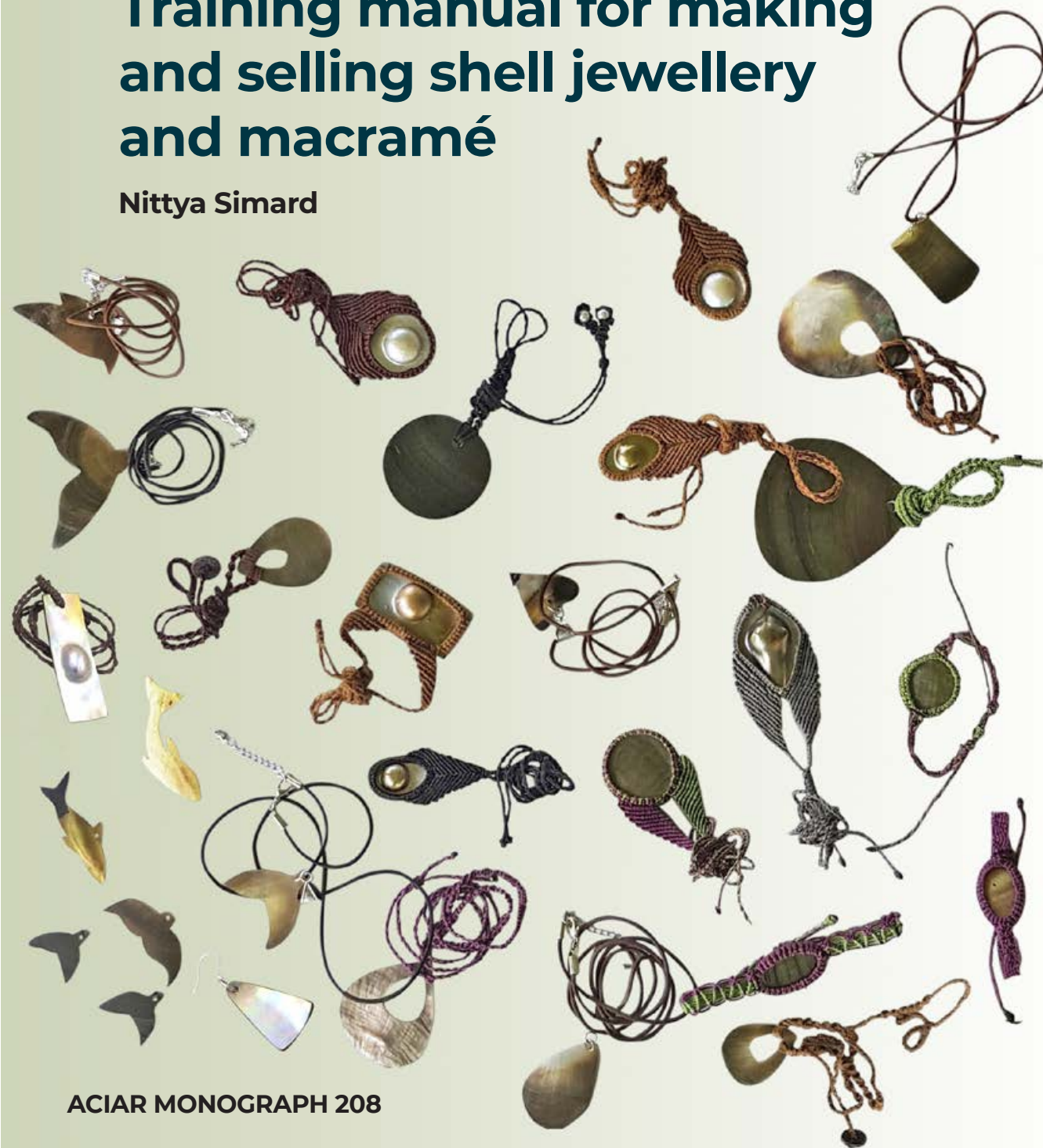


Australian Government

Australian Centre for  
International Agricultural Research

# Training manual for making and selling shell jewellery and macramé

Nittyta Simard







# Training manual for making and selling shell jewellery and macramé

Nitty Simard



**ACIAR**

2019

The Australian Centre for International Agricultural Research (ACIAR) was established in June 1982 by an Act of the Australian Parliament. ACIAR operates as part of Australia's international development cooperation program, with a mission to achieve more productive and sustainable agricultural systems, for the benefit of developing countries and Australia. It commissions collaborative research between Australian and developing-country researchers in areas where Australia has special research competence. It also administers Australia's contribution to the International Agricultural Research Centres.

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## FOREWORD

Australia has an extensive range of partnerships across the south-west Pacific aiming to assist in the sustainable development of Pacific Island Countries. Research partnerships facilitated by the Australian Centre for International Agricultural Research (ACIAR) have long been a distinctive and high-performing element of the Australian Aid program in the Pacific, and across the Indo-Pacific Region.

Shell-based handicraft production offers income-generating and livelihood-supporting opportunities for coastal communities in the Pacific region, particularly for women and girls. In many countries, the domestic tourist market generates healthy demand for such products, but many items on the shelves are imported. Visitors to Pacific island countries prefer to purchase authentic, locally made handicraft items as gifts, and they are increasingly aware of the economic and social benefits of such purchases, often to communities they have visited.

This manual was compiled to support shell-based handicraft skills training workshops in Papua New Guinea and Fiji, carried out as part of an ACIAR project focused on developing pearl industry-based livelihoods in the western Pacific. It covers basic handicraft design and assembly, use of tools and jewellery components and the use of macramé in shell jewellery production. The manual is designed as a companion to community shell-based handicraft training and is likely to find broad application within the Pacific region.



**Andrew Campbell**

Chief Executive Officer, ACIAR



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## PARTNERS

National Fisheries Authority (Papua New Guinea)

Ministry of Fisheries (Fiji)





## SECTION 1

# Introduction and getting started

This manual covers the basics of making jewellery using shells, macramé and other components.

Inspired by their culture and heritage, communities in Pacific island countries have been making jewellery and handicrafts for centuries. Tourism in the Pacific region plays an important role by supporting artisans and their locally made jewellery and handicrafts. The opportunities to produce and sell jewellery and handicrafts are numerous and include local markets, local and national shops, and even international markets through internet sales.

### BENEFITS

Jewellery-making has many benefits:

- it can be undertaken by everyone: women, men, people with disabilities, young adults, and elderly people
- it can be done from home, allowing artisans to manage their time between household responsibilities, family, and other work
- it can generate extra income, and even sufficient income for the household if done well
- products are small, lightweight, and non-perishable
- it requires minimal investment in tools and materials
- it does not require access to electricity.

## GETTING STARTED

To begin making jewellery, you will need access to a few jewellery-making tools, findings and other components, and raw materials such as shells. You will also need a suitable space to work. You might need:

- a table or flat surface with enough space to hold your work
- a comfortable chair or back support
- good natural light or a lamp, so you can easily see what you are working on
- containers and storage space to keep everything tidy and organised, and to keep your tools and supplies safe.

## KEY TO SUCCESS

The key to jewellery-making is experimentation. Never stop creating! Always try out new designs, concepts, and ideas to express your creativity. Innovation and quality are essential to a successful jewellery-making business. Carry a notebook or sketchpad so you can write down your ideas and sketch your designs.

## SECTIONS IN THIS MANUAL

The following sections of this manual guide you through the essentials of making shell-based jewellery and macramé. Section 2 looks at making shell pendants/pieces, including design, cutting tools, and how to cut, sand and polish shell. Section 3 outlines the jewellery-making tools, findings and components that you will use, as well as the composition of common metal components. Section 4 describes techniques for jewellery-making, particularly using findings. Section 5 presents the art of macramé, including how to make knots and other techniques. And Section 6 provides guidance on marketing and sales, pricing, and bookkeeping and diary keeping.



## SECTION 2

# Making shell pendants/pieces

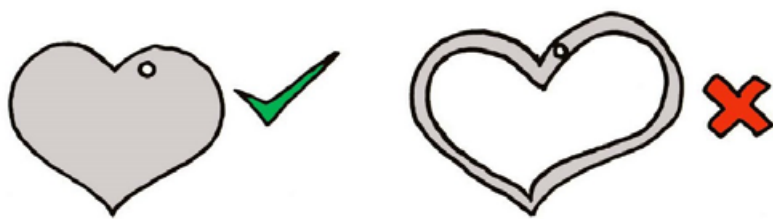
Pendants are the ornamental pieces of jewellery that hang from a necklace chain or cord. Earrings are made with earring pendants/pieces and bracelets are made with bracelet pendants/pieces. You can make your own beautiful and natural shell pendants/pieces with locally sourced shells. You can cut designs out of shell, or use the whole shell. The shell would also need to be sanded and polished to show the natural shine of the mother-of-pearl.

### DESIGNING SHELL PENDANTS/PIECES

When designing and cutting a shell pendant/piece to use with different types of jewellery there are various things to consider, including design, size, weight and thickness, and placement of a hole.

#### DESIGN

Designing shell pendants/pieces is important. The complexity of your design and your cutting skills will influence whether the design is possible. Designs that are difficult to cut may take too much time, and some designs may be hard to sand and polish. The shell you are using can also limit some design options; for example, some shells may be too fragile for long thin designs that can break easily. Always consider whether your design is possible with the shell you are using, and on the piece of jewellery you are making.

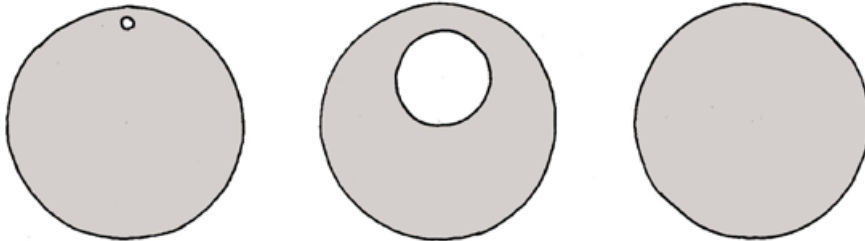


#### SIZE, WEIGHT AND THICKNESS

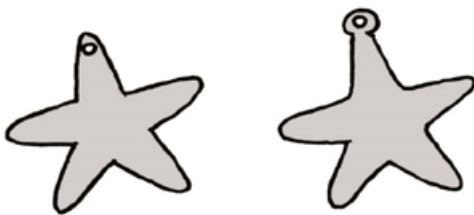
For different types of jewellery, you will need to consider the most suitable size, weight and thickness of the shell pendant/piece.

## PLACEMENT OF A HOLE

You need to think about how your pendant/piece will attach to the necklace, earrings, or bracelet. You have three options: you drill a hole in the pendant/piece to pass a jump ring through (left image), you cut a design that has a large hole area (middle image), or no hole or design is cut out of the shell pendant/piece, but you can wrap the shell pendant/piece using macramé (right image).



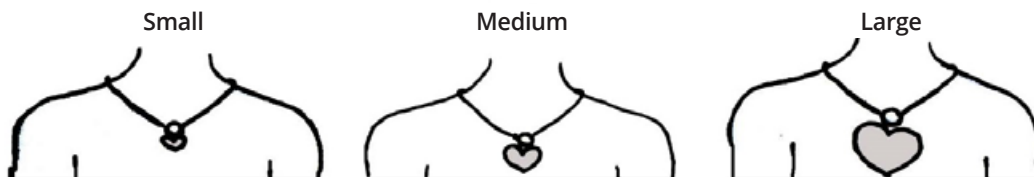
If you choose to drill a hole, you have two options: you can drill directly onto the design (left image), or include a hole as an extension to the design (right image).



Don't drill holes too close to the edge because the shell might break. Also, it is better to drill the hole before you sand and polish the shell pendant/piece.

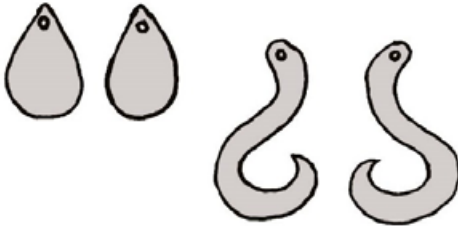
## NECKLACE PENDANTS

Most customers prefer standard size pendants for necklaces (around 3 cm × 3 cm), although some customers will prefer smaller or larger pendants. You might choose to offer a selection of different sizes. The size and shape of the shell might also determine the size of the pendant.

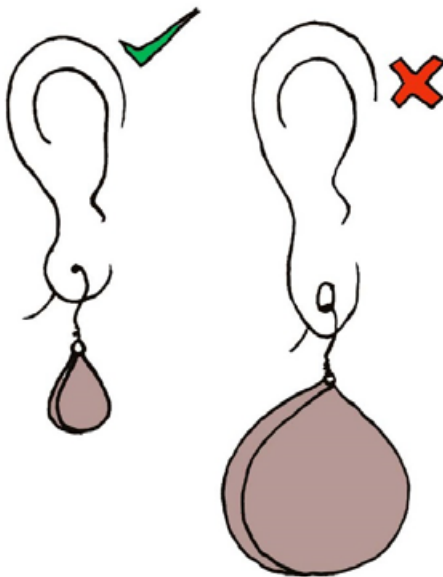


## EARRING SHELL PIECES

For earrings, you need to make two copies of the same design. Usually with shells, one side is better than the other. The side you want to feature will be the front, and the other side will be the back. Your designs should be a copy of one another in order to compose a pair (left image). Depending on the design, you may need to make a mirror image (right image).



When designing shell pieces for earrings, the size of your design and the thickness and weight of the shell are important to consider. Shell pieces for earrings generally need to be lighter than those for necklaces and comfortable to wear. Customers are less likely to want to buy heavy, uncomfortable earrings.



## BRACELET SHELL PIECES

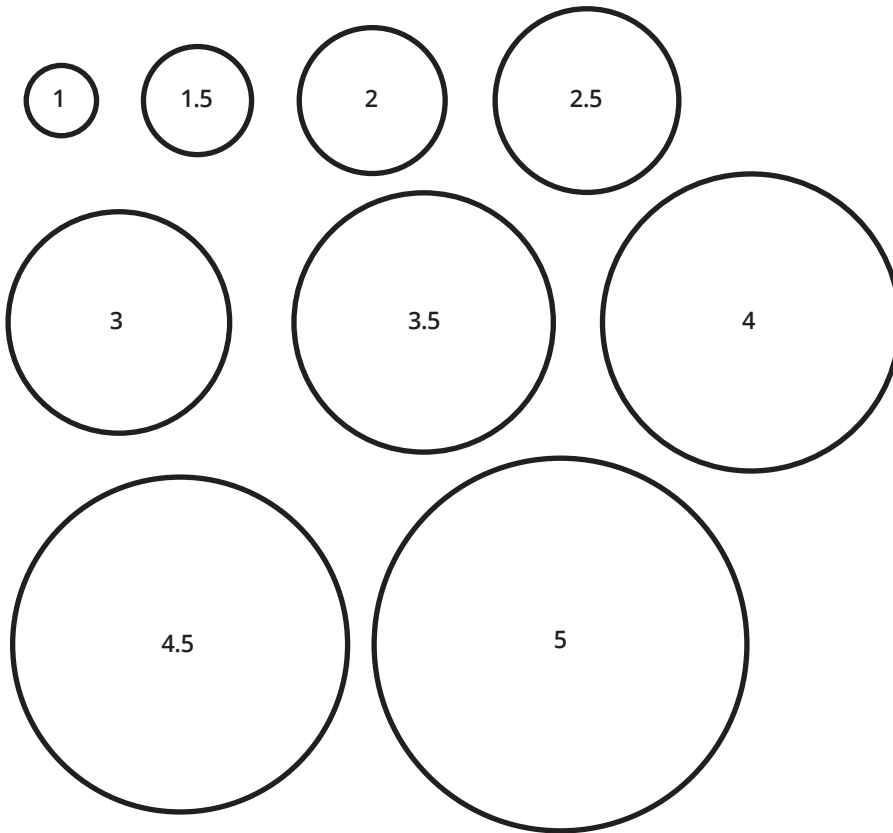
Shell pieces for bracelets can be either small or large in size, but they must be thick and durable. Keep in mind that bracelets are more likely to get bumped on things, so the shell pieces must not be too fragile; they should be strong and thick enough to resist cracking and breaking.

## STENCILS

Using stencils is an easy way to replicate simple design shapes such as circles, cabochons (ovals), teardrops, triangles, rectangles, and squares. You can make your own stencils with cardboard, thick paper, or a sheet of plastic. Simple stencils are provided below.

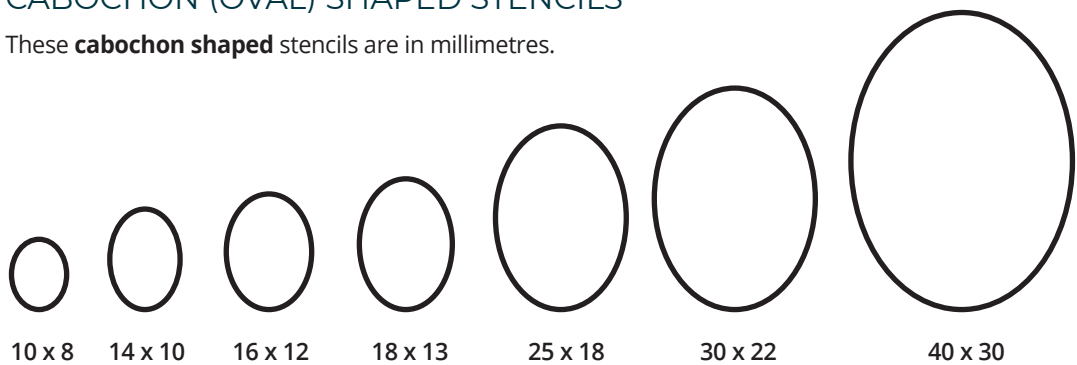
### CIRCLE SHAPED STENCILS

These **circle shaped** stencils are in centimetres.



### CABOCHON (OVAL) SHAPED STENCILS

These **cabochon shaped** stencils are in millimetres.





## CUTTING TOOLS

The tools you will find most useful for cutting shells are the coping saw and jewellery saw, fitted with the appropriate blades.

### SAWS

#### COPING SAW

The coping saw, used to cut wood, can also be used to cut thick shell, including to cut out shapes on the inside of the piece of shell.

The frame of the coping saw is not adjustable, so for cutting internal shapes, the coping blade can easily be removed from the frame, passed through a drilled hole in the shell, and reattached to the frame. Cutting then starts from the hole.

It is easier to cut out shell designs using the coping saw initially, and then later refine the shell pendant/piece using a jewellery saw.

#### COPING BLADE

The coping blade is made of hardened steel. It is thicker and coarser than jewellery and fretsaw blades, and is less likely to break. Be careful when turning the blade during cutting because the blade is not flexible and will not easily turn, and the blade can become damaged if twisted.

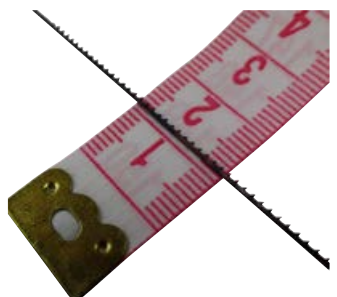
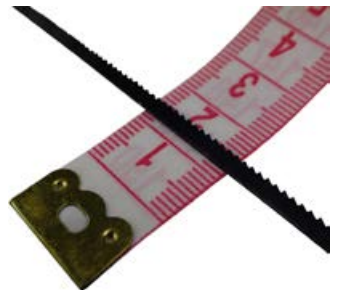
#### JEWELLERY SAW

The jewellery saw (also known as a piercing saw) is a smaller, more delicate version of a coping saw. The jewellery saw is used to cut thinner pieces of shell, and to refine designs already cut with a coping saw. It is also used to cut fine details in very thin shell pieces.

The length of the jewellery saw frame can be changed by adjusting the tension screw. The jewellery saw can fit different lengths and types of blades. Fretsaw blades and jewellery blades are used with jewellery saws. You can change blades to suit the type and thickness of shell.

#### FRETSAW BLADE

Fretsaw blades can be used with jewellery saws. The fretsaw blade is the largest blade you can use with a jewellery saw, and is smaller than the coping blade. The fretsaw blade is fragile and can break when cutting shell, so you need to be careful.



### Fretsaw blade specifications

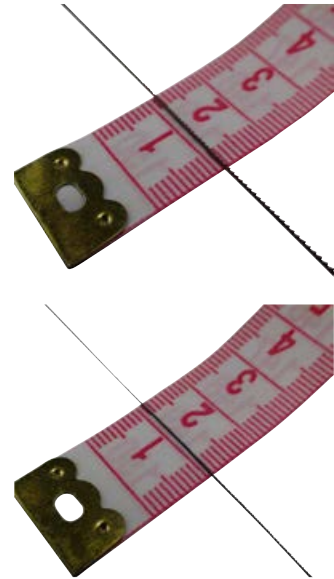
Blade size/ Grade	Blade thickness (millimetres)	Blade width (millimetres)	Teeth per centimetre	Drill size (millimetres)
FS18 18TPI	0.60	1.5	7	1.5

### JEWELLERY SAW BLADE

Jewellery saw blades are made specifically for jewellery saws. Jewellery saw blades come in different sizes (although they are all smaller than fretsaw blades). You should become familiar with the sizes so you know which ones to buy. Jewellery saw blades are even more delicate than fretsaw blades and can easily break, so be careful when using them.

The top right image shows a jewellery blade size 4 and the bottom right image shows a jewellery blade size 2/0.

Jewellery saw blade sizes vary from large (size 8) to small (size 8/0).



### Jewellery saw blade specifications

Blade size/ Grade	Blade thickness (millimetres)	Blade width (millimetres)	Teeth per centimetre	Drill size (millimetres)
8/0	0.16	0.32	35	0.30
7/0	0.17	0.33	33	0.30
6/0	0.18	0.36	30	0.40
5/0	0.20	0.39	26	0.40
4/0	0.22	0.44	25	0.50
3/0	0.24	0.48	22	0.50
2/0	0.26	0.51	21	0.55
1/0 (Grade 0)	0.28	0.58	20	0.60
1	0.30	0.63	19	0.70
2	0.34	0.70	17	0.70
3	0.36	0.74	16	0.80
4	0.38	0.80	15	0.80
5	0.40	0.84	14	1.00
6	0.44	0.94	13	1.00
7	0.48	1.01	12	1.20
8	0.50	1.14	11	1.20

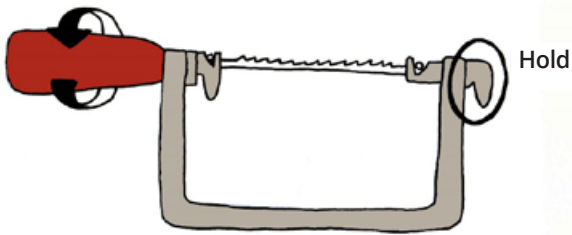
### ASSEMBLING SAWS AND BLADES

#### ASSEMBLING A COPING SAW WITH COPING BLADE

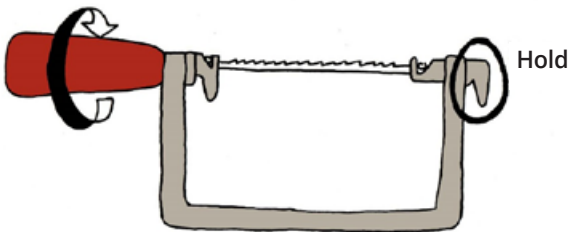
When buying a coping saw, it usually comes with a blade already fitted in the frame. You must know how to remove and change a blade in case you break or damage the blade, or when it becomes blunt.

The coping saw's handle can turn left and right to tighten the blade on the frame. While turning the handle, hold the top part of the frame with your other hand so the blade does not twist.

To tighten the blade, turn the handle to the right.



To loosen the blade, turn the handle to the left.

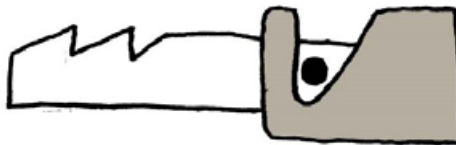


At the top and bottom of the blade, there are little metal bars (holding pins) that go through the blade, and help hold the blade in place. They must fit inside the top and bottom 'hooks' of the coping saw frame.

Front view



Side view

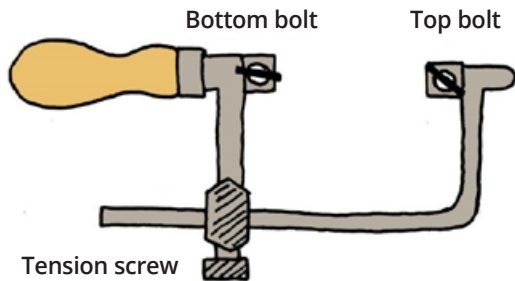


Fit the top bar of the blade into the top hook of the coping saw frame, then loosen the frame to fit the bottom bar of the blade into the bottom hook of the frame. When everything is in place, you can tighten the frame by turning the handle to the right.

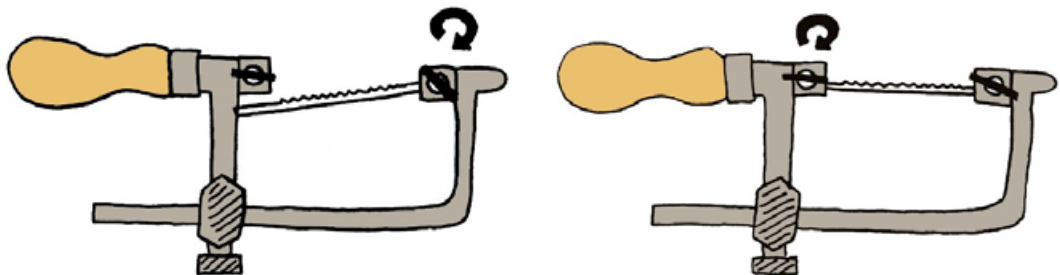
## ASSEMBLING A JEWELLERY SAW WITH FRETSAW AND JEWELLERY BLADES

Blades for the jewellery saw can easily break or get damaged while cutting, so you must know how to remove and change blades with confidence.

The jewellery saw frame has two bolts, top and bottom, that turn to tighten the blade onto the frame. The bolts are turned by hand, but you can also use pliers (preferably chain-nose pliers) to help tighten.



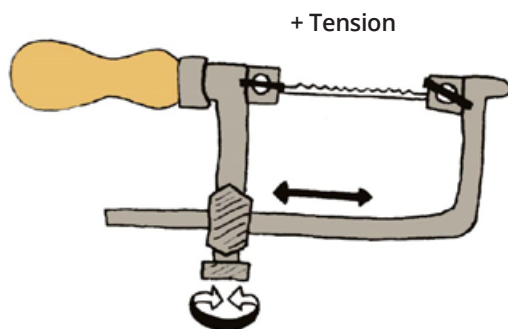
Fit the blade onto the top bolt and tighten as much as you can with your hand or pliers. Then fit the bottom part of the blade to the bottom bolt and tighten well.



Make sure there is tension on your blade. Unlike the coping saw frame, where tension is created when you tighten the handle and blade, with the jewellery saw frame you must make the tension yourself by adjusting the frame.

Use the tension screw on the frame to adjust the tension on your blade. You know the tension is good when the blade 'sings' when you string it, or when the blade is firm.

If you do not have enough tension on your blade, the blade will be too loose to cut and will bend or come out of the frame while cutting. It may even break.

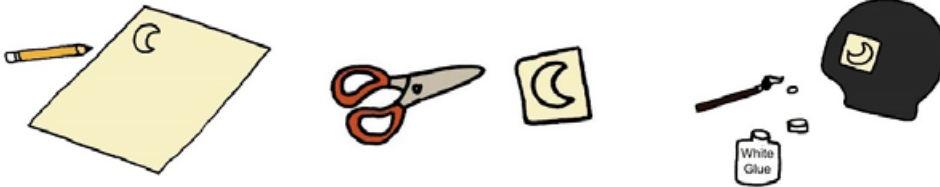
**TIP: Choosing the right blade**

To choose the right blade for cutting your design, pay attention to the teeth on the blades. The appropriate blade should have around three teeth for the thickness of the shell you want to cut.

## HOW TO CUT SHELL

Once you have chosen your shell to cut, you will need to have your design ready. Make sure your design is cut out on a piece of paper. You can also draw your design directly onto the shell using a pencil, but be careful to ensure that the pencil marks don't rub off before you finish cutting.

- 1. Attach your design to the shell.** Use craft glue or white glue to paste your design onto the shell.



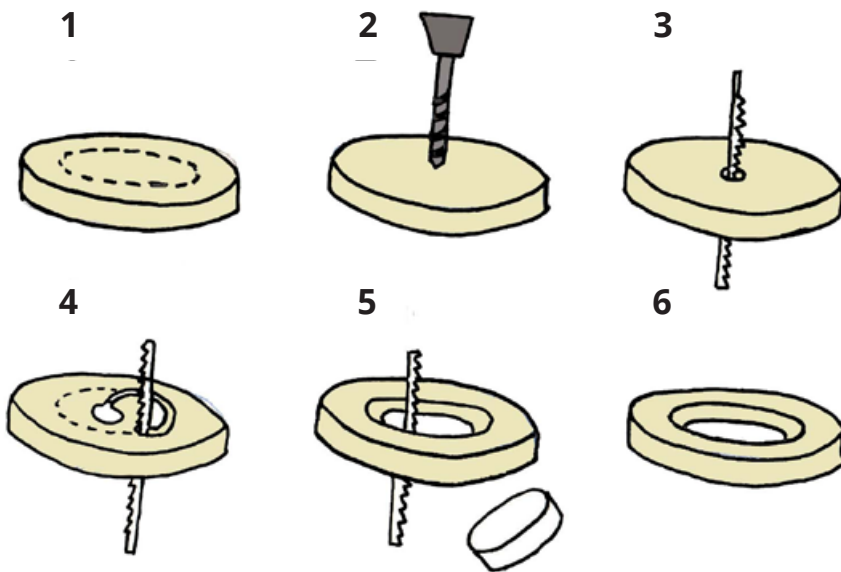
- 2. Choose your saw.** You will need to determine the appropriate saw frame and blade to use for the design and shell. If the shell is thin, you would probably use a jewellery saw. You will also need to choose whether to use a fretsaw blade or jewellery saw blade, and if you are using a jewellery saw blade you will need to determine what size blade to use.

If your shell is thick or large (or both), use the coping saw to cut out the area around the design. Then use the jewellery saw and the appropriate blade to refine the design.

- 3. Cut your design.** Carefully cut along the lines of your design with accuracy. If you are cutting out a design from the inside of the shell, follow the instructions for doing this (given below).
- 4. Remove the stencil.** After cutting, remove the paper.
- 5. Drill a hole.** If your shell pendant/piece needs a hole to pass a jump ring through, drill a hole (not too close to the edge!).
- 6. Loosen the saw.** When you are finished cutting the shell, loosen the tension of your saw blade. If you do not, the tension will stress the blade and may cause it to break the next time you use it. Also, do not leave the saw frame and blade in the sun, as this can cause the blade to warp.

## HOW TO CUT OUT DESIGNS FROM THE INSIDE OF THE SHELL

1. Trace (or visualise) where you want to cut.
2. Drill a hole inside the area you want to cut.
3. If using a coping saw, take out the blade from the saw frame and fit the blade through the hole you just drilled. Set the blade back on the saw frame. If using a jewellery saw, adjust it so the blade fits through the hole.
4. Follow your tracing to cut the inside of your design.
5. When you are finished the inside piece will fall out.
6. Remove the blade from the interior of your design.

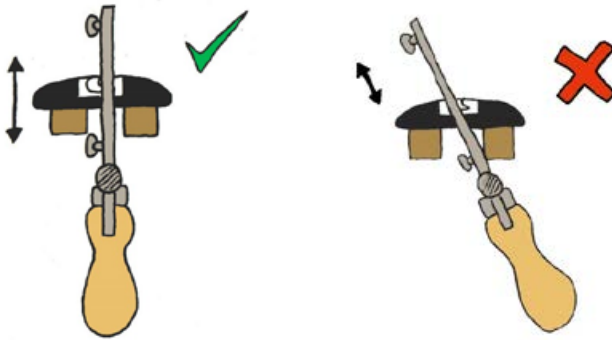


## TECHNIQUES AND GUIDANCE

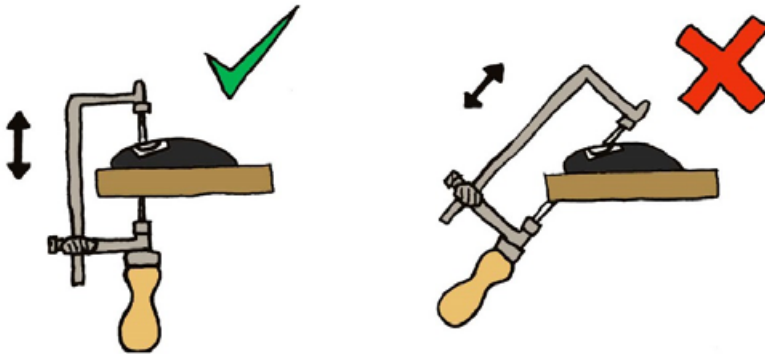
Cutting with saws is not overly difficult, but there are things you need to know to help you cut the correct way and not damage your blade and shell pendant/piece.

### CORRECT TECHNIQUES

- Cut straight and not at an angle. The edges of the piece of shell must be straight.



- Cut upright, not pushing down the blade. This will avoid too much tension on the blade.



- Cut with the saw handle at the bottom.
- Cut at a consistent, steady pace.
- Cut slowly when making round shapes. If you need to cut a sharp angle, start from a new cutting point.

### THINGS NOT TO DO

- Do not cut with the saw handle at the top.
- When cutting, do not rush, then go slowly, and then rush again. The blade may overheat and break.
- Do not turn sharp for narrow angles, such as 90 degree angles.





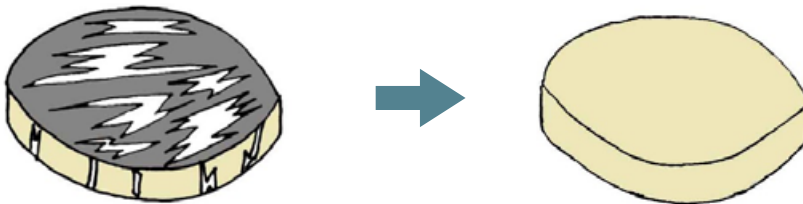
**TIP: Use candle wax on the blade**

Friction will cause the blade to heat up. Too much heat can make the blade more likely to break. To prevent the blade from getting too hot, use candle wax on the blade. This will also make cutting easier, because the candle wax will melt with the heat of the blade and act as a lubricant.

**HOW TO SAND SHELL**

Sanding your shell will beautify your shell pendant/piece. It is the final step in preparing your shell pendant/piece to be used in jewellery-making. It will remove the scratches made by the saw and the impurities you see on both sides of the shell.

Once you have cut out your shell pendant/piece in the design you want and drilled a hole if one is required, it is time to sand your shell. Note that sanding takes longer than cutting, and can be time consuming. Make sure you are in a comfortable position.



To sand your shell, you will need sandpaper and needle files.

- Sandpaper comes in different grits. The grit size of the sandpaper indicates the roughness of the sandpaper. The smaller the grit size, the coarser the sandpaper, and the larger the grit size, the finer the sandpaper. The grit number should be printed on the back of the sandpaper.

**Coarse**    60 → 120 → 240 → 400 → 600 → 800 → 1200 → 2000    **Fine**

- Needle files are long thin pieces of metal with a coarse grit. They are useful to sand the inside of corners and designs cut from inside the shell. Needle files do not have different grit sizes, but you can wrap a piece of sandpaper around the file to sand using a different grit.

Using a different sandpaper grit with each step, from coarse to fine, progressively you will sand the shell until the surface and edges are smooth.

Please note, if you have scratches on the inside of the shell – the shiny layer (mother-of-pearl) – you should only use fine sandpaper, grit 400 to 1200.



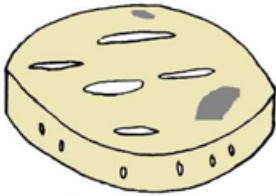
**1. Sand with grit 60**

Sandpaper grit 60 is the roughest and is used first. Grit 60 is good for removing the back layer of the shell and the deep scratches and marks made by the teeth of the saw when you cut the shell.



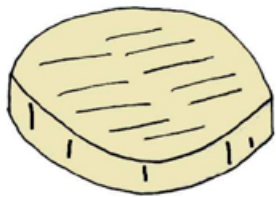
**2. Sand with grit 120**

Once you have removed all the bigger, deeper scratches on the sides and on the back of the shell, you can go down a sandpaper grit, to grit 120. You will be able to reduce the size of the scratches that were made by grit 60. You will still see scratches after using grit 120.



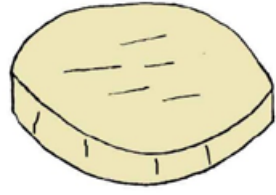
**3. Sand with grit 240**

After grit 120, use sandpaper grit 240 to reduce the scratches made by grit 120. You will still see smaller scratches after using grit 240.



**4. Sand with grit 400**

Using sandpaper grit 400 is the turning point for sanding, because the scratches on the shell become much less visible. To see the progress of your sanding work, put the shell into the sun and tilt it to see the surface. The sunlight will reflect the scratches and show you where to continue sanding.



**5. Sand with grit 600**

Continue with sandpaper grit 600 to remove the very small scratches made by grit 400.



**6. Sand with grit 800 to 2000**

Now you can use the finest or smoothest sandpaper – grit 800 or 1200, or even 2000 – to finish sanding your shell pendant/piece.

## POLISHING SHELL

To give your shell pendant/piece an extra level of shine, after sanding it you can polish it.

Waterproof sandpaper with a fine grit (grit 400, 600, 800, 1200 and 2000) can be used to polish the shell. (Waterproof sandpaper is usually coloured blue or yellow on the back.) Wet the waterproof sandpaper and sand the shell pendant/piece as above. The water will also help to polish the shell to a shine. You can reuse waterproof sandpaper several times – just let it dry after use.

You can also polish shell after sanding by using Brasso, a metal polishing liquid. Wet a piece of denim or cotton rag, and polish the shell with Brasso until the liquid evaporates to a dry paste. Then with a different, dry rag, rub off the Brasso paste until it is completely gone.

### **TIP: Make your own shell polish**

Instead of using Brasso, you can make your own shell polish at home if you wish. You need white vinegar, salt, and a spray bottle.

Add two cups (= 473 millilitres) of vinegar to the spray bottle and 3 tablespoons of salt. Shake the spray bottle vigorously to mix the vinegar and salt. Spray the liquid directly onto the shell and use rags to rub the liquid until it is dry.

## NOTES: MAKING SHELL PENDANTS/PIECES



## SECTION 3

# Jewellery-making tools, findings and components

Once you have made a selection of shell pendants/pieces, you can use them to make necklaces, earrings and bracelets. This section outlines the tools, findings and other components you will need to assemble jewellery.

## TOOLS

### PLIERS AND WIRE CUTTERS



**Wire (or side) cutters** are used to cut wires and small shells.



**Bent-nose (or flat-nose) pliers** have a nose that is slightly curved. They are used to form loops and other shapes in wire, flatten crimps, and attach components. They are often used in combination with chain-nose pliers.



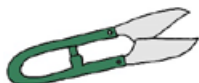
**Round-nose pliers** have straight, round noses that reduce gradually in size towards their pointy tips. They are used for looping and shaping wire into curves.



**Chain-nose pliers** are similar to bent-nose pliers, but the nose is straight to the tips. Sometimes chain-nose pliers have wire cutters at their base.

### OTHER USEFUL ITEMS

Household items you will need to assemble jewellery include a tape measure, cutting sewing scissors, super glue, pencil and eraser, brushes, white or craft glue, and scissors.



## FINDINGS AND OTHER COMPONENTS

'Components' is a general term used to refer to the various materials and elements that form part of a piece of jewellery. They include jewellery findings and stringing materials.

There may be a local shop near you that sells jewellery findings and components. Otherwise, consider having a look online. There are plenty of websites from which you can order jewellery supplies, and if you meet certain criteria, such as minimum orders, you may be able to purchase items wholesale or at a discounted price.

### JEWELLERY FINDINGS

There are many different types of functional and decorative jewellery findings to use in your jewellery-making. Some findings are specifically designed for different types of jewellery (e.g. earring hooks). This section outlines a selection of common findings.

#### JUMP RINGS



Jump rings are small metal loops with a single opening. They are used to hang shell pendants/pieces, and attach and connect clasps, pins, earring hooks, and other findings. They come in different sizes, the most common being 4 mm for earrings, and 5 mm and 8 mm for bracelets and necklaces.



#### BAILS



Bails are usually made of metal or plastic. They are used to attach shell pendants/pieces to necklaces, earrings and bracelets. Different types of bails include slide-on bails, pinch bails and glue-on bails.



#### TIP: Use a decorative bail

Instead of using a simple jump ring to hang a shell pendant/piece onto a necklace, consider using a bail to add a decorative element to your jewellery.





### CHOKER CLAMPS OR RIBBON CLAMPS

Choker clamps or ribbon clamps are fold-over rectangular clamps that squeeze together flat around the end of a choker, ribbon or wider piece of cord, to make a finishing. Clasps or other findings can be attached to the loop on the clamp. Although clamps have grips to hold the cord, it is a good idea to also glue the clamp to make it extra secure.



### CRIMP ENDS

Crimp ends act like choker clamps but they are narrow and are used for cord.



### CLAMSHELL ENDS

Clamshell ends are placed over a knot at the end of cord, to cover the knot. Use chain-nose pliers to close the clamshell over the knot. Clamshell ends have a loop for attaching a clasp or other findings.



### CRIMP TUBES

Crimp tubes are small metal pieces that are pressed or flattened over cord or beading wire, to finish the ends or to hold beads in place.



### CORD END OR CONE END CAPS

Cord end (or cone end) caps are decorative findings made of metal, used to embellish beads or shells in jewellery-making. Some caps have a hole to pass cord through; others do not and the cord must be glued inside the cap.



## CLASPS

Clasps are the fasteners used to open and close the two ends of a necklace or bracelet. Two common types of clasps are lobster and toggle clasps (although there are others).



**Lobster clasps** are shaped like a lobster's claw and have a spring-operated pincer. The lobster clasp is easy to operate and is reliable.



**Toggle clasps** have a bar on one side and large ring on the other. To attach, the bar slides through the ring sideways.



## PINS

Eye pins, head pins and ball pins are pieces of straight, rigid wire with different end types that are used for connecting other findings and components, making beaded drops, or hanging shell pendants/pieces.



**Eye pins** have a loop on one end. They are often used with beads and to hang shell pendants/pieces.



**Head pins** have a flat head on one end that acts as a stopper for beads. They are used to make beaded drops.



**Ball pins** have a ball on one end, again to act as a stopper. They are used to make beaded drops.



## CHARMS



Charms are decorative trinkets, usually made from metal, with a loop to attach to necklaces, bracelets and earrings. They come in an abundance of designs and various sizes (although they tend to be small).





## FINDINGS FOR EARRINGS

**BALL POSTS**

Ball posts are studs that have a loop on which to hang a pin or shell pendant/piece. A nut or clutch is used at the back to hold the earring in place.

**NUTS OR CLUTCHES**

Nuts or clutches are made of metal or plastic, and are the back fitting to the ball post, holding the earring in place. One common design is the butterfly nut (pictured), made of metal.

**FRENCH HOOKS OR EAR WIRES**

French hooks slip through the earlobe and have no closure at the back. They have a loop on which to hang a pin or shell piece.

**KIDNEY HOOKS OR EAR WIRES**

Named for their shape, kidney hooks slip through the earlobe and have a hook closure at the back. They have a groove on which to hang a pin or shell piece.

**HOOPS**

Hoops are round wires that can be unlatched at the top to slide beads, shell pieces and findings onto, and then fastened. They have a loop at the top for attaching earring hooks.

**TIP: Storage ideas**

Use storage containers to store your cords, findings and other components. Look for containers with inbuilt dividers, and lids that close tightly to avoid accidental mixing of findings. Airtight boxes or containers are ideal as these will protect the components from corrosion.



## STRINGING MATERIALS

Stringing materials are the cords used to make jewellery such as necklaces and bracelets. They include chains, different types of cord, and wire.

### CHAINS

Chains are a series of linked loops. Two examples are cable chains and curb chains.



**Cable chains** have loops of the same size, and every other link interlocks perpendicular to the next link.



**Curb chains** have loops of the same size that interlock and twist so that all the loops are parallel to each other and the chain lies flat.



### CORD

Cord is any flexible material used to string beads, shell pendants/pieces, bails, and findings. Many different types of cord exist. Each type of cord comes in different colours and thicknesses. Here are a few examples.



**Genuine or imitation leather** is usually tubular in shape (although it can come flat or braided). Leather cord is best used for necklaces and bracelets.



**Suede leather** (both genuine and imitation) is usually flat and rectangular (and can come braided). Suede leather cord is best used for necklaces and bracelets.



**Elastic cord** is made from rubber and is stretchy, and does not require any findings such as a lobster clasp. Elastic cord is best used for bracelets.



**Natural cord** is made from plant material. You can buy it in stores, or hand make it if you have the knowledge. The advantage of natural cord is that it gives a 'natural' and 'earthy' look, but make sure it is not itchy to wear.



**Macramé cord** is usually made from cotton, polyester or nylon. Macramé cord can be waxed, allowing the tips of the cord to be cut and burned instead of using super glue.



**Rubber cord** is made from natural or synthetic materials, is tubular in shape and has a shiny finish. Rubber cord is best used for necklaces and bracelets.

**Fishing line** is also used in jewellery-making. Fishing line is a good basic cord to practise jewellery-making, and is best used for necklaces and bracelets.

## WIRE

Wire is a flexible metal strand that comes in varying levels of firmness. There are several different types of wire, such as bending wire and beading wire.



**Bending wire** is a more rigid strand of metal, available in different thicknesses or gauge (see below), which can be bent to form different shapes and designs. It can also be used instead of pins to string beads and to make your own earring hooks.



**Beading wire** is a more flexible strand, composed of tiny metal wires that are twisted together and coated with nylon. It is often used for stringing beads on necklaces, bracelets, and earrings. You need to use crimp tube findings with beading wire, to hold the beads onto the wire.



## MEASUREMENTS

Jewellery, findings and other components are often measured in millimetres (mm), centimetres (cm), metres (m), or inches.

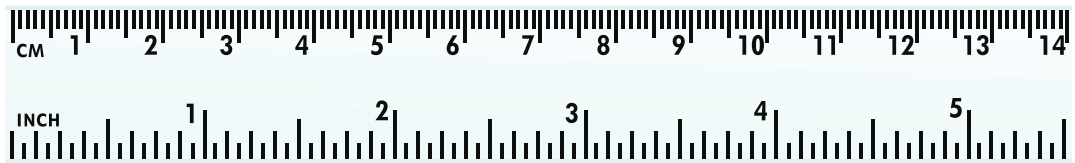
10 mm = 1 cm

100 cm = 1 m

1000 mm = 1 m

1 cm = 0.39 inch

2.54 cm = 1 inch



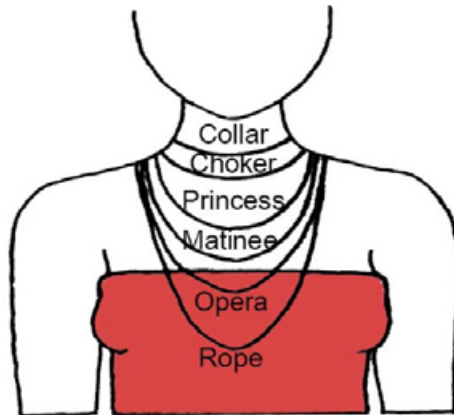
## THICKNESS OF WIRE

The thickness of wire (including wire components such as pins, earring hooks, and jump rings) is written as gauge or in millimetres.

Gauge	Millimetres	Gauge	Millimetres
10	2.6	21	0.7
11	2.3	22	0.65
12	2.1	23	0.6
13	1.9	24	0.5
14	1.6	25	0.45
15	1.5	26	0.4
16	1.3	27	0.36
17	1.1	28	0.3
18	1	29	0.28
19	0.9	30	0.25
20	0.8		

### LENGTH OF NECKLACES AND BRACELETS

The length of necklaces and bracelets varies. Also, necklace lengths have specific names.



Necklace	Inches	Centimetres
Collar	12	30
Choker	16	40
Princess	18	45
Matinee	20	50
Opera	24	60
Rope	30	75

The standard length sizes for bracelets are small, medium, and large.

Bracelet sizes	Inches	Centimetres
Small	6-7	15-17.5
Medium	7-8	18-20.5
Large	Above 8	Above 21

## COMPOSITION OF METAL COMPONENTS

Metal jewellery-making components are generally made from base metals, precious metals, plated metals, or alloys. The composition of metal components is important to consider for several reasons. It will affect the cost of the components and therefore the item of jewellery, the quality of the jewellery, and the aesthetic appeal of the jewellery. Importantly, some people are allergic to certain metals, so taking this into consideration can avoid losing potential customers. It is also advisable to use components that do not contain lead.

## ALLOY COMPONENTS

The term 'alloy' means that the component is made from a mixture of two or more different metals. Alloys can be made from 'base' metals such as brass, which are less expensive, or 'precious' metals such as gold, which are more expensive than base metals.

### A WARNING ABOUT THE DANGERS OF LEAD IN ALLOYS

At one time, lead was a common element in alloy components because it is cheap and can be easily moulded. Still today, lead can be found in alloy components, and cheap findings and charms are likely to contain lead. However, lead is known to be toxic and related to health problems, especially for children (who may put the components in their mouth), so try to choose 'lead-free' components for your jewellery.



## BASE METAL COMPONENTS

Base metal components are made from metals that are not precious metals. Base metals can be 'plated' with a thin layer of precious metal such as gold, silver, or other metal on the surface of the component, or non-plated.

### COMMON BASE METALS

**Aluminium** is silver in colour, and does not rust.

**Brass** starts out yellowy gold in colour, and can change colour with age.

**Copper** is reddish orange to greenish, and being a highly reactive metal it can change colour over time. Where it comes into contact with skin, it can discolour the skin green.

**Nickel** is silver in colour. It is a metal that people are commonly allergic to.

**Rhodium** is silvery white, and highly resistant to corrosion (i.e. it hardly rusts). It is generally considered a safe metal for people with metal allergies.

**Stainless steel** is slightly greyer than silver in colour. It is also resistant to corrosion (it hardly rusts), although there are different degrees of corrosion resistance for this metal (the best is 316 stainless steel).

## PRECIOUS METAL COMPONENTS

Precious metals are rare metals that are more expensive than base metals. Precious metals are 'noble' metals because they are highly resistant to corrosion (they hardly rust).

### COMMON PRECIOUS METALS

**Argentium silver** is a tarnish-resistant silver variation alloy of at least 96% silver.

**Fine silver** components are often stamped with '.999' meaning that at least 99.9% of the component is made of pure silver. The fine silver components are less durable and more expensive than the .925 sterling silver.

**Gold filled** components are made with a thick layer of karat gold overlaying a base metal.

**Karat gold** components can be made of pure gold (24 karat), but commonly they are composed of 14 karat (14 parts gold out of 24; the remaining 10 parts are other metals). Gold components can come in different colours (e.g. yellow, rose, green, or white).

**Silver filled** components are made with a thick layer of .999 or .925 sterling silver overlaying a base metal. The layer of sterling silver is thicker than silver plating.

**Sterling silver** components are often stamped with '.925' meaning that at least 92.5% of the component is made of silver. The metal can tarnish to a dark colour, but can be polished back to a bright silver shine.

## PLATED COMPONENTS

Base metal components can be plated. Plating is the thin layer of one metal covering the surface of a different metal or alloy.

### COMMON PLATED COMPONENTS

**Antique brass or bronze plated** components have a thin layer of brass that has been darkened covering a base metal to give an aged appearance.

**Antique gold plated** components have a thin layer of karat gold that has been darkened covering a base metal to give an aged appearance.

**Antique silver plated** components have a thin layer of sterling silver that has been darkened covering a base metal to give an aged appearance. It can tarnish like sterling silver.

**Copper plated** components have a thin layer of copper covering a base metal.

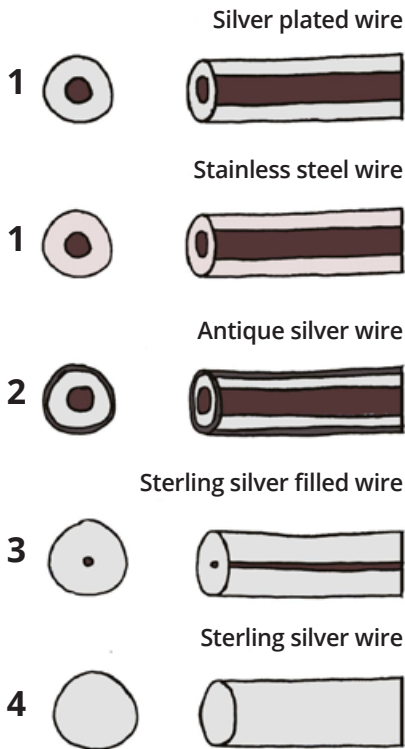
**Gold plated** components have a thin layer of karat gold covering a base metal.

**Gun metal plated** components have a thin layer of black nickel covering a brass base metal. The colour ranges from gun blue to dark grey to shiny black.

**Silver plated** components have a thin layer of sterling silver covering a base metal. Silver plated is the same colour as sterling silver, and can tarnish just as sterling silver can.

## THE DIFFERENCE BETWEEN PRECIOUS, FILLED, ANTIQUE, AND PLATED COMPONENTS

This illustration uses the example of silver to show different variations of the same metal.



1. Silver plated and stainless steel components have a thin layer of silver or stainless steel covering a base metal. If the top layer wears away, the base metal inside will be exposed to the outside and corrosion may occur, resulting in rust.
2. Antique silver components have a thin layer of silver and have an aged appearance because the outer layer of silver has been darkened through oxidation.
3. Sterling silver filled components have a layer of silver that is hundreds of times thicker than silver plated components. The base metal inside the component is unlikely to be exposed to the outside.
4. Sterling silver components are 100% silver and will not rust.

## POLISHING TARNISHED METAL

Some metals can become tarnished – that is, they lose their lustre or metallic shine, or become discoloured – as a result of exposure to air and moisture. There are things you can do to avoid the metal components of your jewellery tarnishing, such as keeping your jewellery dry and storing it properly. If it does become tarnished, you can use a polishing cloth or store-bought polishing powder to remove it. Also, check out the internet for home remedies on how to remove tarnish from different types of metal.



## ALLERGIES TO METAL

Some people are allergic or sensitive to certain metals, and may have adverse reactions when those metals touch their skin. Symptoms include redness, rash, itch, blistering, swelling or pain. Therefore, it is important that you know what type of metal your components are made from – so you can tell the customer if they ask. Metals that are commonly known to cause allergic reactions include nickel and lead, but there are others. It is advisable, where possible, to use hypoallergenic metals (i.e. metals that do not cause allergies) such as rhodium and stainless steel, and precious metals such as sterling silver and karat gold. This is particularly recommended for earring hooks.

## OTHER REACTIONS TO METAL

The acidic nature of skin and perspiration (sweat) makes it problematic for some people to wear jewellery with metal plated components. Acidic skin can erode the plating, exposing the base metal underneath, which can cause corrosion and rust. In addition, the jewellery can stain the skin a green or darkened colour. This occurs more in people who sweat a lot, or spend time in moist or hot environments, and have naturally higher acidic sweat and oily skin. Instead, these people may choose to buy jewellery made with precious metals, such as sterling silver and karat gold, so it is a good idea to have available a selection of jewellery made with precious metals.

## **NOTES: JEWELLERY-MAKING TOOLS, FINDINGS AND COMPONENTS**



## SECTION 4

# Jewellery-making techniques

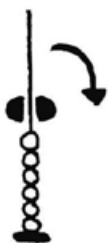
You will need to know some basic techniques to get started making jewellery. This section outlines techniques for working with findings.

### MAKING LOOPS ON WIRE PINS

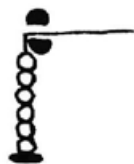
When using eye pins, head pins and ball pins, you will need to make a loop at the top of the pin to attach to an earring hook or hang from a cord.

#### MAKING A LOOP USING ROUND-NOSE PLIERS

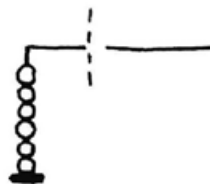
1. After you string your beads or shell pendant/piece onto the pin, position your chain-nose pliers where you want to bend the wire (such as just above the top bead).
2. Use chain-nose pliers to bend the wire at a 90 degree angle.
3. Cut off any excess wire beyond about 1 cm (or less if you want a smaller loop).
4. Grasp the end of the wire with round-nose pliers. Use the thinner part of the nose of the pliers to create a smaller loop, and the thicker part to make a larger loop.
5. Roll the wire around the pliers forming a loop. Ensure the loop is complete and there are no gaps, so the pin does not slip off the earring hook or cord.



1



2



3



4



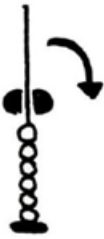
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## MAKING A WRAPPED LOOP

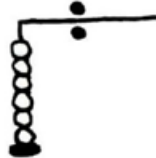
Wrapped loops are more secure than simple loops. For example, if the thickness of the pins is thin (gauge 24 and higher) then a simple loop will not stay close and will open if the pin is pulled. A wrapped loop can fix that problem by securing the pin. It also gives a different look.



1. After you string your beads or shell pendant/piece onto the pin, position your chain-nose pliers where you want to bend the wire. This time, leave at least 3 mm above the top bead. You will need at least 2.5 cm of wire above the bend to make the loop and wrapping.
2. Use chain-nose pliers to bend the wire at a 90 degree angle.
3. Form a loop above the bend using round-nose pliers.
4. Grasp the loop with chain-nose pliers in one hand, and with your other hand hold onto the pin, wrap the tail end of the wire back around the central wire several times. Wrap as tight as possible. Cut off any excess wire with wire cutters.



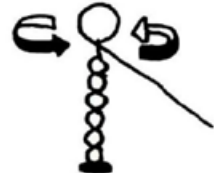
1



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4

### TIP: Handling round-nose pliers

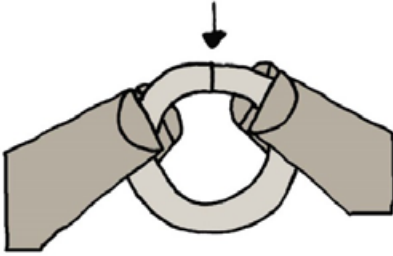
To make a smooth, round-shaped loop in wire pins, the position of your wrist when using the round-nose pliers is important.

Instead of having the palm of your hand facing towards the pin you are holding between the tips of the round-nose pliers, have the palm of your hand facing away from the pin.

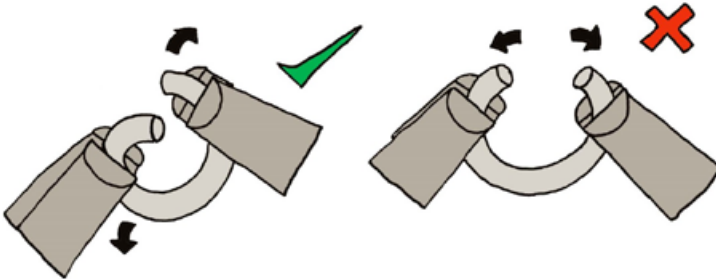
## OPENING AND CLOSING JUMP RINGS

Jump rings are small metal loops with a single opening, used to hang shell pendants/pieces and attach and connect clasps, pins, earring hooks, and other findings.

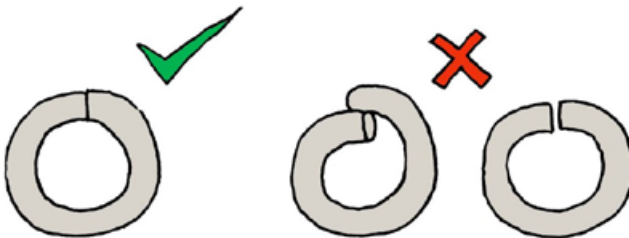
1. With chain-nose pliers, hold the jump ring next to the cut in the ring. Hold the opposite side of the jump ring with another pair of chain-nose or flat-nose pliers.



2. Slide the two sides open by pulling one side towards you (or down) and the other side away from you (or up). Never open a jump ring by pulling from the left and right, because this will destroy the original circle shape of the jump ring, and it will be difficult to bring the two ends back together.



3. Once the jump ring has been looped through the finding, bring the ends of the jump ring back together the same way. You want to close the cut perfectly so that the jump ring does not slide out of the other component.



## USING JUMP RINGS ON EARRINGS

Jump rings can be used to connect shell pieces or pins to earring hooks. Depending on whether you want your shell piece to face sideways or forwards will determine how many jump rings to use.



### EARRINGS FACING SIDeways

If you want your shell piece to face sideways only, there will be a left earring and a right earring, and the earrings will face in the opposite direction to each other. Use one jump ring per earring to connect your shell piece to the earring hook.



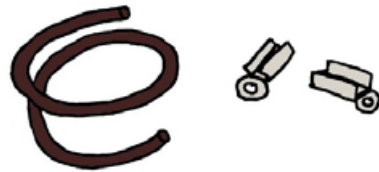
### EARRINGS FACING FORWARDS

If you want your shell pieces to face forwards (they will move sideways too), both earrings will be similar (and not specifically left and right). Use two jump rings per earring. The jump ring used in the shell piece should be larger than the jump ring used in the earring hook.

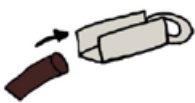


## ADDING CRIMP ENDS TO A CORD

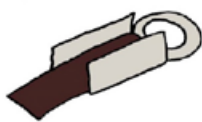
Crimp ends are used to finish a cord and provide a hook on which to attach clasps. You will need chain-nose pliers to add crimp ends.



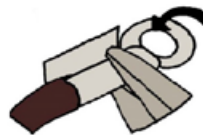
1. Fit one end of the cord into a crimp end.
2. To make the hold stronger, you can apply super glue inside the crimp end.
3. Use the chain-nose pliers to push down one side of the crimp end so that the hold is very tight.
4. Push down the second side of the crimp end and press firmly.



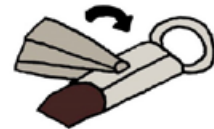
1



2



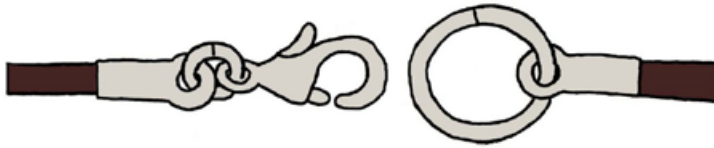
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4

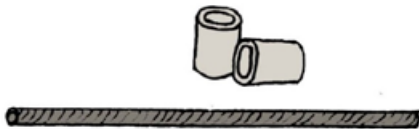
## ATTACHING A LOBSTER CLASP TO A CRIMP END

Lobster clasps are a type of fastener used to open and close the two ends of a necklace or bracelet.



1. Open a large jump ring (8 mm) by bending the ends away from each other.
2. Hook the jump ring through one end of the crimp end (or chain).
3. Close the jump ring firmly, aligning the ends so that there is no gap.
4. Open a small or medium jump ring (3 mm or 5 mm) and hook it through the other end of the crimp end (or chain). Attach the clasp to the jump ring and close it properly.

## USING CRIMP TUBES ON BEADING WIRE

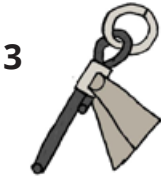


Crimp tubes are small metal pieces that are pressed or flattened over cord or beading wire, to finish the ends or to hold beads in place. You will need chain-nose pliers for this. First, you can add a crimp tube at one end of the wire to block beads from falling out. Then string beads on the wire and finally close the end of the wire with another crimp tube. In the example below, the wire is folded and passed through a jump ring. This can be done for bracelets and necklaces.

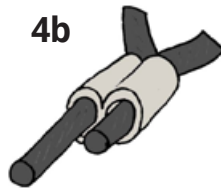
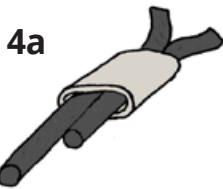
1. Slide a crimp tube onto the folded beading wire. The beading wire is already passed through a closed jump ring.
2. If your beads pass through two wires, fold the beading wire in half, as shown in image 2a. If your beads can only pass through one wire, then fold only the tip of your beading wire, as shown in image 2b.



- Use the chain-nose pliers to push the crimp tube flat.



- You can leave the crimp tube flat, as shown in image 4a. Or to make it more secure, you can fold the crimp tube a second time onto itself, using chain-nose and bent-nose pliers, as shown in image 4b.



## ATTACHING CRIMP TUBE COVERS



You can leave the crimp tubes exposed or, for a neater finish, you can hide them using crimp tube covers.

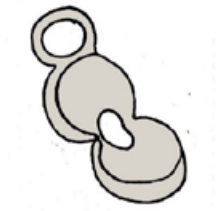
- Fasten the crimp tube to the beading wire, as described above.
- Use chain-nose pliers to hold the crimp tube cover and slide it over the crimp tube.
- Push the crimp tube cover down with the pliers, being firm but careful not to break it.





## USING CLAMSHELL ENDS

Another way to hide the crimp tubes is by using clamshell ends. Clamshell ends have a loop on which to attach other findings, so you do not need to attach a jump ring to the beading wire.



1. Fasten the crimp tube to the beading wire, as described above, but this time without attaching a closed jump ring.
2. Slide the clamshell end along the wire until you reach the crimp tube.
3. Use chain-nose pliers to fold the clamshell end and close it.



1



2



3

## NOTES: JEWELLERY-MAKING TECHNIQUES



## SECTION 5

# The art of macramé

Macramé is the art of tying knots in patterns, or knotting string. Macramé is practised all over the world, and is used to make items such as bags, hammocks, guitar straps, belts, flowerpot hangers, dog collars, key chains and, of course, jewellery!

You can use macramé in making necklaces, earrings, bracelets, and ankle bracelets. It can be used in jewellery for both men and women to wear. You can incorporate decorative beads and shell pendants/pieces into your macramé jewellery.

Anyone can learn how to do macramé – you just need patience and practice! With practice, you can improve and perfect your techniques, and your work will look professional.

This section outlines materials, knots, and other techniques used in macramé.

### MATERIALS TO GET STARTED

#### MACRAMÉ CORD

Macramé cord is also called rope, string, or fibre. It is a yarn made from materials such as cotton, linen, hemp, or jute, and comes in different colours and thicknesses. You will need to consider what cord is best suited to your project.

Cord is used in abundance in macramé, so finding a supply of cheap and good-quality cord is important. Often you will use at least 5 metres of cord for a necklace. To save money, you might like to make your own cord at home using plant materials. When starting out and practising, use cheap, thick cord that is easy to untie if you make a mistake.

Depending on the knot you are tying, macramé cord plays one of two different roles: working cord or holding cord.

- Working cords are the cords that you move around, and wrap around holding cords. Knots are tied using working cords.
- Holding cords are positioned on the inside of working cords, and generally are not moved around during the process (unless you are following a zigzag pattern). Working cords are tied around holding cords.

## OTHER ITEMS

In addition to macramé cord and any beads or shell pendants/pieces you'd like to incorporate, you will need the following items.



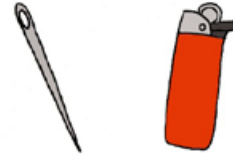
- **A clipboard or hard piece of board**  
You will need to work on a flat surface to see your work properly. A clipboard is ideal, because you can clip the cord to the top, but otherwise you can use any hard piece of board and clips.

- **Clips**  
Even when using a clipboard, it can be helpful to have extra clips, such as bulldog clips, to hold cord away.



- **A soft piece of cardboard and flat head clothespins**  
For some macramé work, you will need extra ways to hold your work in place, and one way is to pin the cord to a piece of cardboard.

- **A sewing needle**  
Choose a needle with an eye large enough to pass your cord through.

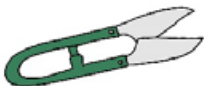


- **A lighter**  
Waxed cord can be burned to melt and finish macramé work.



- **Super glue**  
When you do not use waxed cord, you cannot use a lighter to melt and finish the cord ends. You will need to use super glue to finish your macramé work.

- **Tape measure**  
You will use this to measure your cord at the start of your work, and to measure your finished work to check the length.



- **Cutting sewing scissors**  
Note that these are different to household scissors.

- **Cheap, thick, practice cord**  
When you start out learning the macramé knots, this cord will be easy to untie if you make a mistake.

## MACRAMÉ KNOTS

You can make a simple item using just one, two, three, or four basic macramé knots. As your technique in making basic knots becomes better and you feel more confident, start to experiment with the more advanced techniques to create more complex designs. This section guides you through the most commonly used knots in macramé. The knots at the start of the section, such as overhand knot and lark's head knot, are simple. Towards the end they become more difficult, such as double half hitch knot.

### OVERHAND KNOT

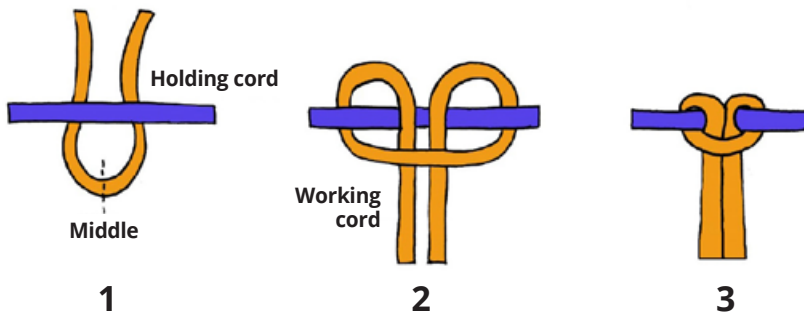
This is a very simple knot. It is the same kind used to tie shoelaces. To tie the knot, make a loop with the cord, bring the end of the cord through the loop and pull tight.



### LARK'S HEAD KNOT

This knot is used to attach or mount a cord to another cord, ring, or other support.

1. Fold the cord in half to create a loop, then bring the loop under the holding cord from the top.
2. Bring the ends of the cord through the loop.
3. Pull the ends snugly over the holding cord to finish.



To do a reverse lark's head knot, resembling a double half hitch knot (see below, you bring the loop under the holding cord from the bottom, rather than the top.):

1. Fold the cord in half to create a loop, then bring the loop under the holding cord from the bottom.
2. Bring the ends of the cord through the loop.
3. Pull the ends snugly over the holding cord to finish.

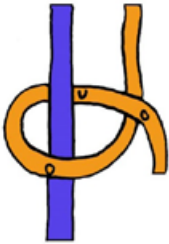
## LARK'S HEAD SENNIT

A lark's head sennit is a row of lark's head knots tied vertically over one or more holding cords to form a chain (or sennit). Two separate knots are used and repeated.

1. The first knot passes OVER the holding cord, then UNDER the holding cord, and through the loop.
2. The second knot passes UNDER the holding cord, then OVER the holding cord, and through the loop.

If the working cord is on the left side of the holding cord, then you must always pull the knot from the left. Conversely, if the working cord is on the right side, you pull the working cord from the right.

If you see that the pattern does not look the same at one point, it is probably because you accidentally tied the same knot twice. In that case, pull out the last knot(s) to correct the mistake. Image 3 shows how it should look.



1



2



3

## HALF-KNOT OR HALF SQUARE KNOT

A half-knot is the first half of a square knot. If you continue to make the same half-knots, you will get a spiral knot (pictured on the right).

The example shown below begins with four cords clipped on the clipboard. The two cords in the middle are the holding cords (purple), and the two cords (orange and yellow) on the outside are the working cords.

The half-knot can be either a left half-knot or right half-knot. The direction is decided by which working cord you move first.



### LEFT HALF-KNOT

1. Move the left working cord over the two holding cords heading right.
2. Pass the left working cord under the right working cord.
3. Move the right working cord under the two holding cords and over the left working cords on the left side.
4. Pull both left and right working cords together while keeping the holding cords straight.



### RIGHT HALF-KNOT

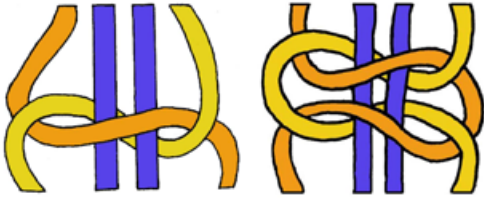
1. Move the right working cord over the two holding cords heading left.
2. Pass the right working cord under the left working cord.
3. Move the left working cord under the two holding cords and over the right working cords on the right side.
4. Pull both left and right working cords together by keeping the holding cords straight.



## SQUARE KNOT OR FLAT KNOT

The square knot consists of two opposite half-knots (left half-knot and right half-knot). It is the most popular knot used in macramé.

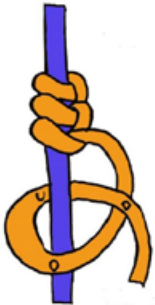
Always tie the left half-knot first, then the right half-knot, to create a square knot.



## VERTICAL HALF HITCH KNOT

The vertical half hitch knot is a simple knot that creates a spiral pattern when tied in a chain or sennit. The knot uses one working cord and one holding cord.

1. Bring the working cord over the holding cord.
2. Loop the working cord around the holding cord, back under, and through the loop.
3. Pull tightly.
4. Tie each loop exactly the same way repeatedly until you are satisfied with the length.

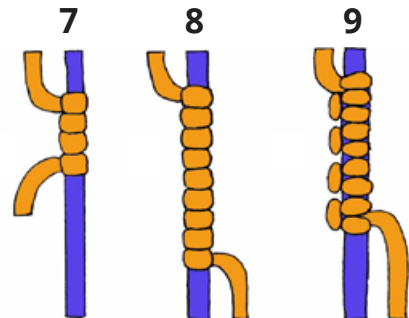
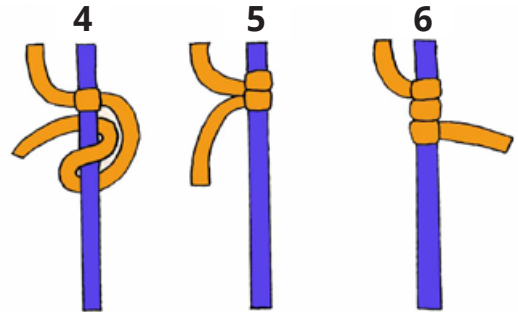
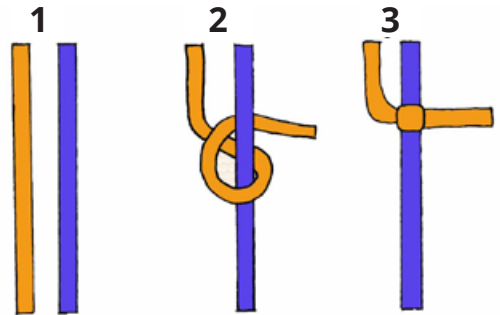




## TATTING KNOT

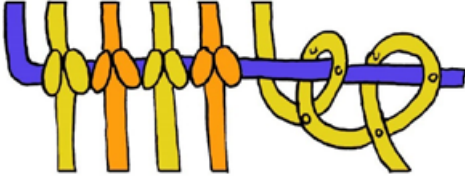
The tating knot is similar to the lark's head knot, but rather than doing the knot from the side, you do it from underneath.

1. The left cord is the working cord and the right cord is the holding cord. Take the working cord from the left side to the right side by passing under the holding cord.
2. The working cord continues by going over the holding cord and then under, pulling from the opposite side that it came from (i.e. pulling towards the right).
3. Keep pulling towards the right (or opposite side that it came from) to make a knot.
4. Now the working cord goes to the left, passing under the holding cord. The working cord continues over and under the holding cord, finishing on the left side.
5. Pull to the left (or opposite side that it came from) to form another knot.
6. Continue, repeating steps 2 and 3.
7. Continue, repeating steps 4 and 5.
8. From the top view, you see a line of knots. That is what you want to see – straight and consistent.
9. If you look from the side, you will recognise what looks like the lark's head sennit.



## HORIZONTAL DOUBLE HALF HITCH KNOT

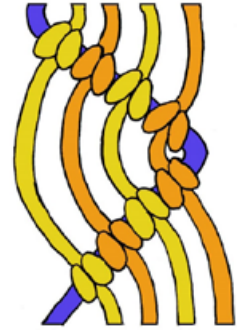
A double half hitch knot consists of two loops tied over a holding cord. The knots form a 'wrapped' appearance over the holding cord.



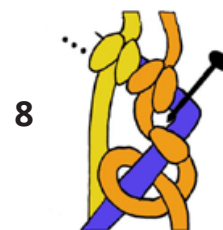
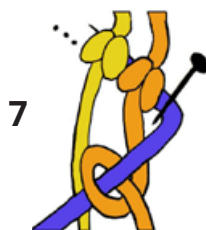
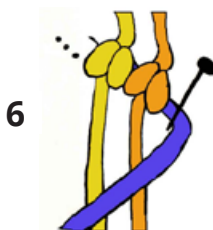
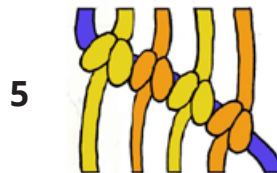
1. The first cord on the left side (purple) is the holding cord. Bring the holding cord on top of the rest of the cords. The rest of the cords are working cords. You can either hold the holding cord in your hand or clip the cord to the board to hold it. If you choose to hold it in your hand, make sure it is always positioned the same way.
2. Do the first knot with the cord (yellow) that is the closest to the holding cord.
3. Remember this knot is a DOUBLE half hitch, so you need to make the loops two times with one working cord.
4. Move to the next cord (orange) on the right and repeat the knot, tying it over the same holding cord.
5. Continue to the next cord (yellow).
6. Continue with each cord until all of the working cords are attached to the holding cord. Always make sure the working cord is under the holding cord when tying the double half hitch knot.

## DIAGONAL DOUBLE HALF HITCH KNOT

The diagonal double half hitch knot is a variation of the horizontal double half hitch knot. Similar to the horizontal double half hitch knot, for the diagonal double half hitch knot there is one holding cord and multiple working cords. Before you begin, you will need to secure several cords (at least four cords) to your clipboard, arranged vertically (top to bottom).



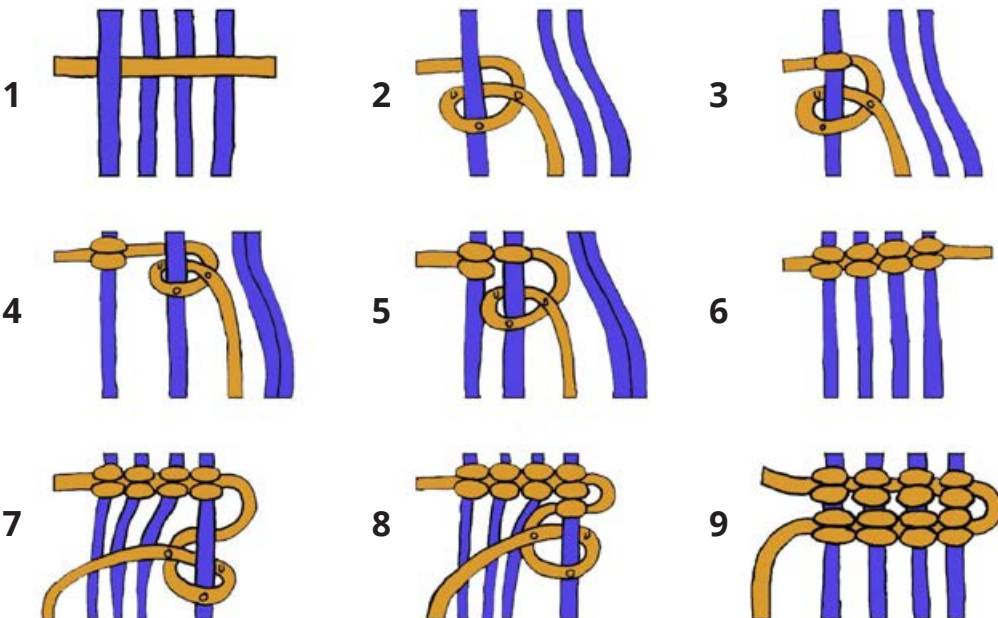
1. Use the first cord, furthest to the left (purple), as the holding cord.
2. Secure the holding cord diagonally to the right. You can secure it with a pin or clip, or just hold it in your hand. Make sure it is taut (not slack).
3. Moving left to right, tie the first half hitch knot with the second cord on the left (yellow). Bring the working cord over the holding cord, and then under it. Then the cord passes over itself at the bottom.
4. Pull the first half hitch knot tightly. Tie another one to complete the double half hitch knot.
5. Use the rest of the cords on the right to complete the row of double half hitch knots. Each double half hitch knot will be slightly lower on the holding cord than the one before it. The row of double half hitch knots will have a diagonal direction to the right.
6. Use the same holding cord and position it to the left.
7. Attach the working cords to the holding cord starting with the cord furthest to the right because you go from right to left now. Start with the orange cord.
8. Repeat the double half hitch knot.



## VERTICAL DOUBLE HALF HITCH KNOT

The vertical double half hitch knot is another variation of the double half hitch knot. Contrary to the horizontal double half hitch knot, for the vertical double half hitch knot, you have several holding cords and one working cord. Before you begin, you will need to secure the holding cords to the clipboard, attached vertically (top to bottom).

1. Clip a working cord to the clipboard horizontally. Make sure the working cord passes under the first holding cord on the left. You will tie the vertical double half hitch knot moving left to right.
2. To make the first half hitch knot, bring the working cord over then under the holding cord, moving clockwise. Pull the end to the right, passing the working cord over itself. Tighten the first half hitch knot.
3. Make the second half hitch knot the same way, placing it below the first half hitch knot. Tighten this knot. At this point you have completed one vertical double half hitch knot.
4. To make the second vertical double half hitch knot, move the working cord under the next holding cord on the right. Repeat steps 2 and 3. Make sure there is little space between the knots and tighten.
5. Continue tying vertical double half hitch knots on all your holding cords the same way.
6. When you reach the end of the holding cords, you reverse the direction (right to left) by bringing the working cord under the holding cord furthest to the right.
7. Tie the double half hitch knots the same way as described above – over then under then over – but the knot should be tied rotating in a counter-clockwise direction.
8. The working cord will be heading left now.
9. Continue tying the double half hitch knots to the left, tightening the knots firmly to make sure the rows are close together.



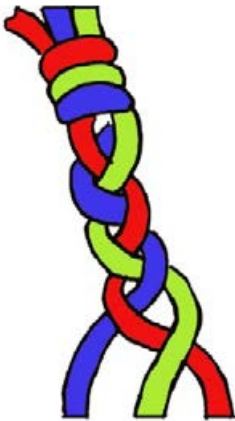
## MACRAMÉ TECHNIQUES

After you have learned, practised, and memorised the macramé knots, you can move onto macramé techniques. Techniques generally use two or more macramé knots, and they take more practice than macramé knots because they are more difficult. In this section you will also find two different types of braiding techniques, which are very useful in jewellery-making. Instructions for macramé techniques refer to waxed macramé cords. The same techniques can be used with non-waxed cords, but non-waxed cords should be super glued and then cut, instead of cut and burned.

### BRAIDING WITH THREE CORDS

Braiding (or plaiting) is a useful technique and is commonly used in making necklaces and bracelets. Three-cord braids are flat.

1. Attach three cords to your board, or clip or tie them together.
2. Bring the left cord over the centre cord. This cord now becomes the centre cord.
3. Bring the right cord over the centre cord. This cord now becomes the centre cord.
4. Follow this pattern, repeating left and right, to form a braid.

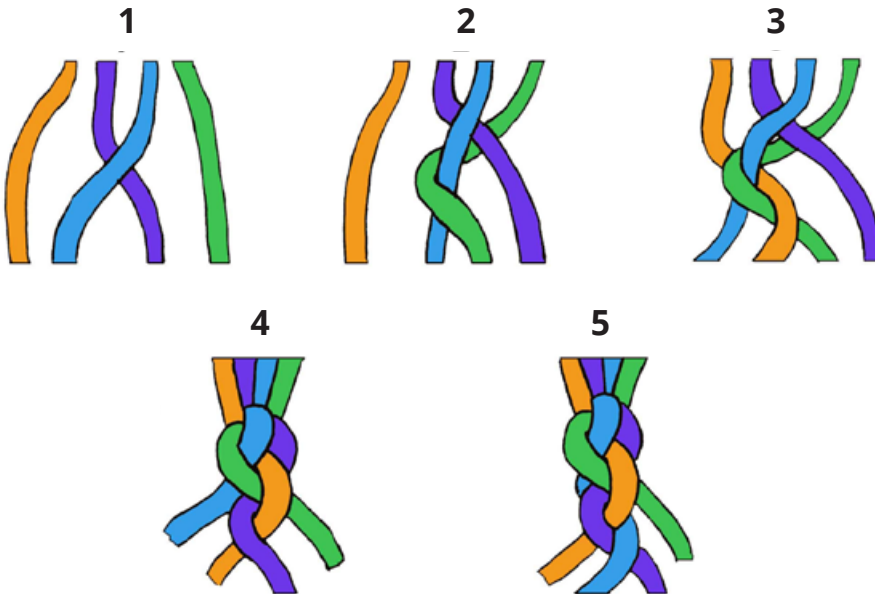


## BRAIDING WITH FOUR CORDS

Four-cord braiding is mostly used for necklaces and bracelets. Four-cord braids are round.

1. Attach four cords to your board. Cross blue cord over purple cord.
2. Move green cord under purple and blue cords just below the crossing point. Fold green cord towards the right crossing over blue cord. Green cord ends up between purple and blue cords.
3. Move orange cord under both blue and green cords. Cross orange cord over green cord.
4. Now you should have two cords on each side. Move the 'free' blue cord (the cord that is on the upper left side) under the cords in the centre to go back to the same side.
5. The 'free' green cord (the cord that is on the upper right side) is now the cord outside on the right. Move green cord under the crossed area and cross it back over to the right.

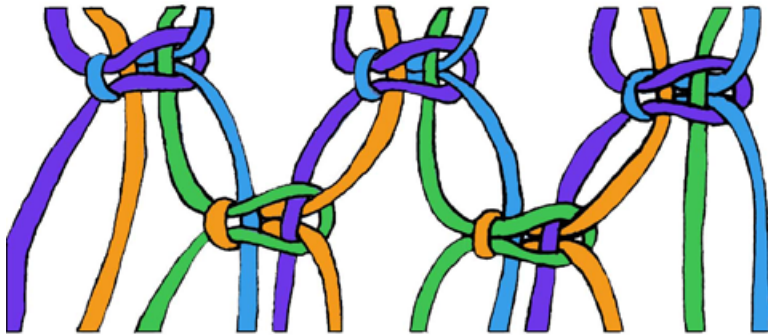
Continue braiding like this.



## ALTERNATING SQUARE KNOTS

Alternating square knots form a woven pattern that can be tied together to make a solid texture, or tied further apart to make a net-like texture.

1. To form the pattern, tie a row of square knots (refer to page 46) using four cords for each knot.
2. For the next row, pull the first two cords on the left aside.
3. Tie a square knot with the next four cords on the left, which consist of two cords taken from two square knots from row 1.
4. The finished knot will sit directly in the middle of the two square knots above it in the previous row.
5. Continue down the row. When you start the next row, go back using the first four cords on the left repeating the row of square knots tied in row 1.
6. Continue to alternate rows to complete the pattern.

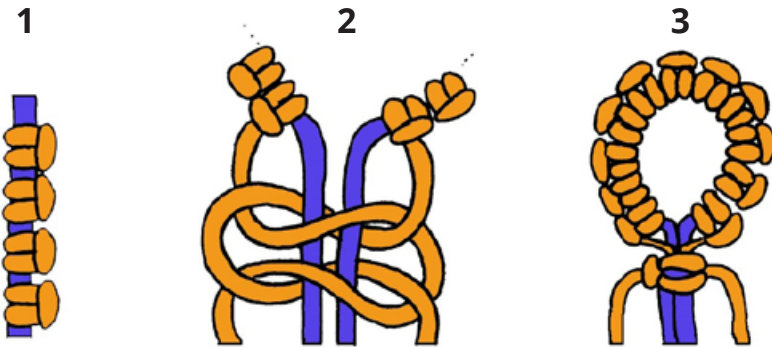


## BUTTONHOLE CLASP

This technique uses the lark's head knot and square knot. It is useful for making buttonholes for bracelets and necklaces.

Make sure the working cord is longer than the holding cord.

1. Make a sennit (or chain) of lark's head knots (refer to page 43). To check if your sennit of lark's head knots is long enough, fold the sennit in half in a loop shape, and see if you can pass your button through it.
2. Once you are happy with the length of the sennit, clip it, folded at the middle, onto your clipboard. Join the ends of the holding cord (purple) together to form the buttonhole by doing a square knot (refer to page 46). The working cord should still be the working cord (on the outside) and the holding cord should still be the holding cord (on the inside).
3. Make sure you tighten firmly.



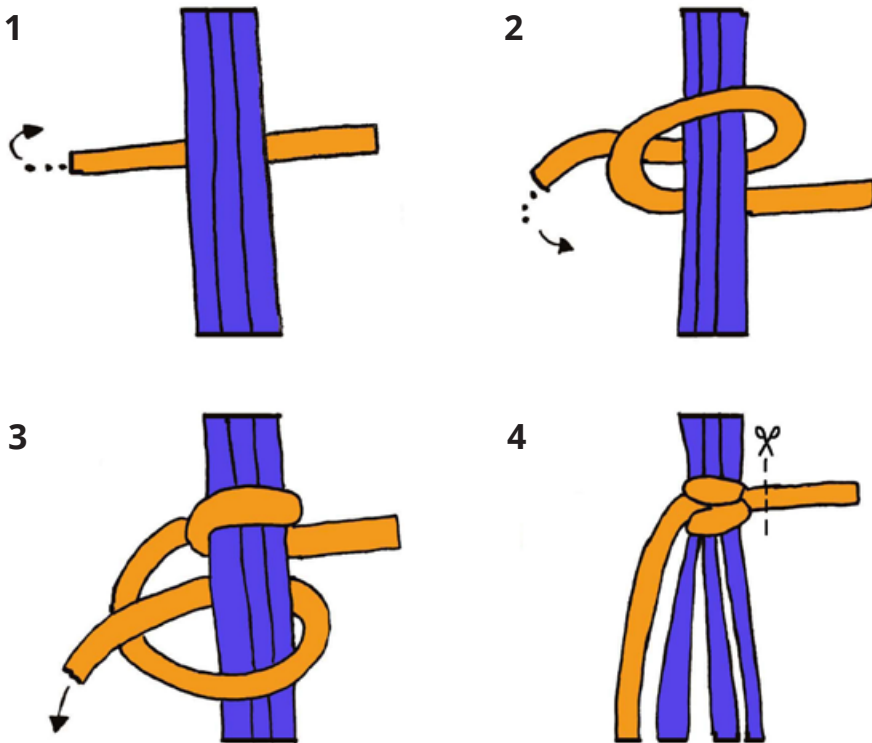


## ADDING A CORD

Sometimes you will want to add a cord to your pattern, perhaps because you need more cords to attach your shell pendant/piece, or one cord is too short and you need a longer cord. To do this, you can use the vertical double half hitch knot (refer to page 50) or you can use the lark's head knot (refer to page 43).

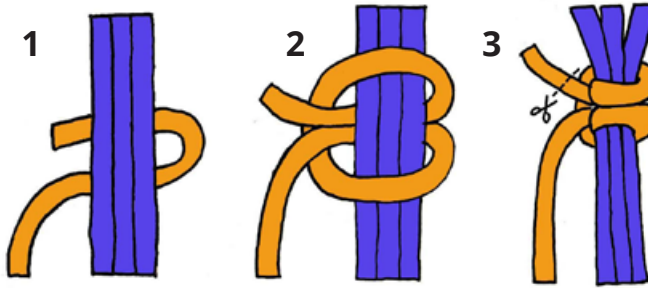
For the vertical double half hitch knot technique used in the illustration, one cord is added to three other cords.

1. Take the end of the working cord to be added and pass it under the other cords (holding cords). The long end of the working cord is on the left and the short end of the working cord is on the right of the holding cords.
2. Now bring the long end of the working cord over the holding cords and above the first end of the working cord.
3. Continue with the long end of the working cord over the holding cords again, but below the first loop you just did, pass the long end through the loop and pull tight.
4. Cut and burn the cord (where shown in image 4). Now you have four cords to work with.



For the lark's head knot used in the illustration, one cord is added to three other cords.

1. Fold the end of the cord (working cord) like in image 1. You do not need a very long end on one side. Pass the loop you made under the three holding cords.
2. Bring the ends of the working cord to pass through the loop.
3. Pull tightly and you are finished. Cut and burn the cord (where shown in image 3). Now you have four cords to work with.

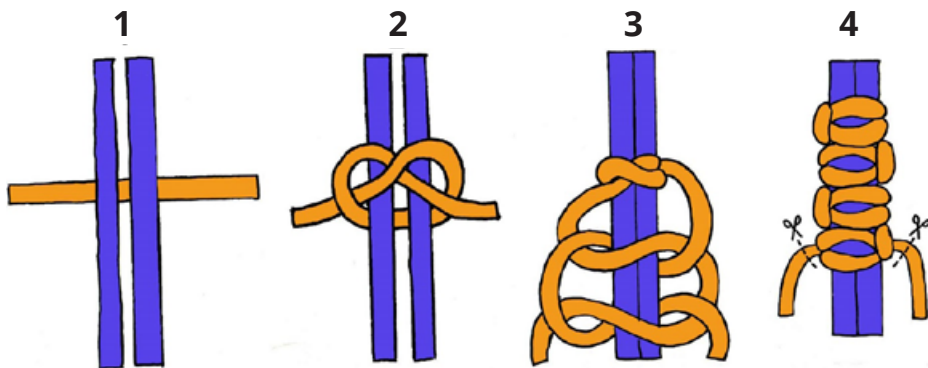


## SLIDING KNOT

Sometimes it is difficult to estimate the optimal length or size to make a necklace or bracelet. Using a sliding knot allows the cord to be adjusted in length, making it versatile and allowing your customer to fit the jewellery to size. Also, using a sliding knot can avoid the need for attaching a clasp.

A sliding knot is made using the square knot (refer to page 46). Before you begin, place the cords that will be in the middle of the sliding knot on your clipboard vertically.

1. Using a piece of cord around 30 cm long (or less), pass the cord under the vertical cords until it is centred.
2. Do a simple overhand knot (refer to page 43) to attach the cord to the vertical cords. Pull tight.
3. Now you have four cords to make square knots. Make between two to five square knots. Always pull tight.
4. When you are done, just cut and burn the working cords (outside cords) where shown in image 4.



## WRAPPING

Wrapping is a technique to wrap a shell pendant/piece for necklaces, bracelets, and earrings. Wrapping is often used as a first step to very complicated macramé patterns. If you can perfect your wrapping skills, your possibilities for macramé patterns will be endless! Wrapping is usually done around round and cabochon (oval) shaped shell pendants/pieces, but can also be done with triangle shapes, tear drop shapes and rectangle shapes. For wrapping, you do not need to drill holes in your shell pendant/piece.

You can finish the wrapping by doing a macramé bail (see 'Making a bail' on page 61) to slide onto your necklace. By doing so, you can avoid using a jump ring.

There are two basic wrapping techniques, both of which use the lark's head knot and the overhand knot (refer to page 43).

### WRAPPING TECHNIQUE 1

You need one working cord, with a length of at least 10 times the perimeter of the shell pendant/piece you want to wrap. You also need two holding cords, with a length of around 40 cm each.

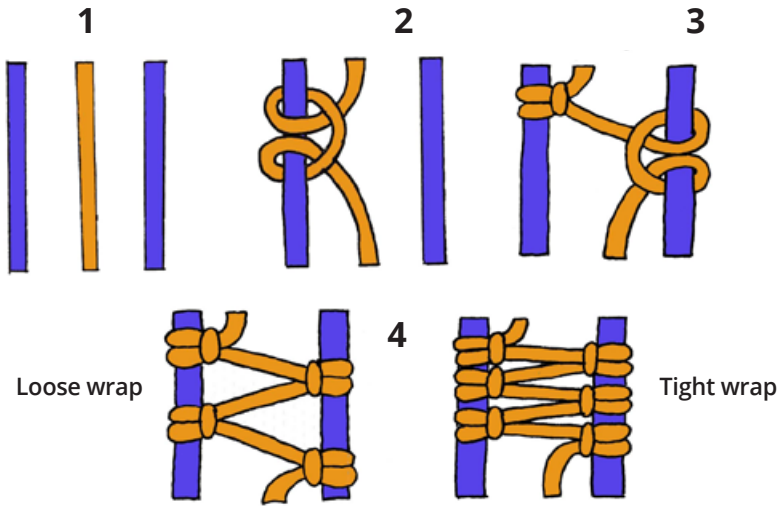
1. Place your three cords on the clipboard, with the two holding cords on the outside and the working cord on the inside. Make sure there is at least 10 cm of cord free at the top of the clipboard. That will be important for closing the wrapping and if you want to make a bail later. The space in between the holding cords (purple) should be slightly larger than the width (side) of the shell pendant/piece you want to wrap.
2. The working cord should always stay in the middle between the two holding cords. Start by attaching the working cord to the left holding cord by doing a lark's head knot (over-under-over, and under-over-under). Pull the working cord back to the middle between the two holding cords.
3. Now attach the working cord to the right holding cord by doing the same knot. Do not forget to pull the working cord back to the middle.

The pattern should look like a zigzag.

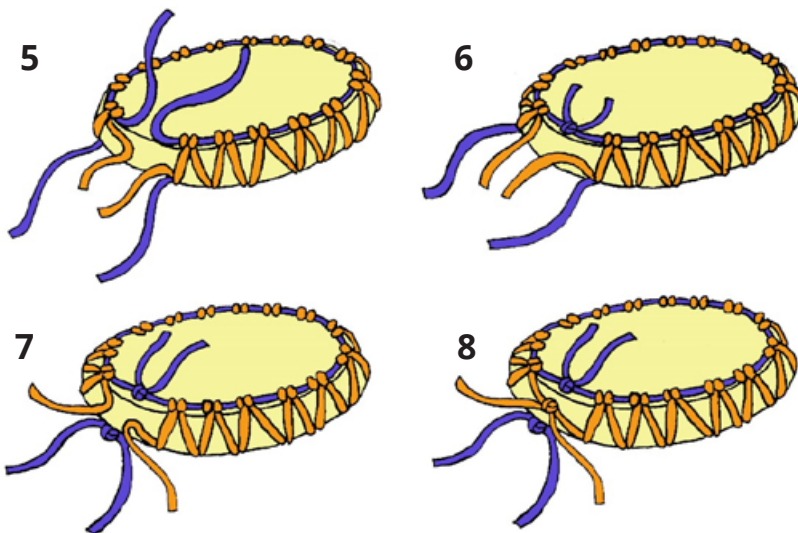
Make sure your lark's head knots are pulled tight.

The difficulty of this technique is to keep the width of the wrapping consistent. To help keep the distance between the two holding cords the same, you can use pins to hold down your knots on a piece of cardboard clipped on your clipboard.

4. Continue going left and right with the working cords making lark's head knots. Once the length of your knots is enough to wrap around your shell pendant/piece, stop there. Always finish the working cord on the opposite side you started. In the image, the wrapping started on the left side, so it is stopped on the right side. Wrapping can be done loose (left image) or done tight (right image). When it is loose, the lark's head knots are not touching each other, and when it is tight, the lark's head knots are touching or are nearly touching each other.



5. Place your wrapping around the shell pendant/piece to see how it fits. The ends of the cords should meet.
6. First close one side of the wrapping without the shell pendant/piece. Use overhand knot to tie together the opposite ends of a holding cord (purple). Then place the shell pendant/piece inside.
7. Now close the wrapping with the shell pendant/piece inside by using overhand knot to tie together the opposite ends of the other holding cord (purple).
8. Use overhand knot to tie the ends of the working cords (orange). The shell pendant/piece should be wrapped very tight inside. If the wrapping moves around too much, your shell pendant/piece will fall out. You can undo your overhand knots and redo them if necessary until you are satisfied with the wrapping.

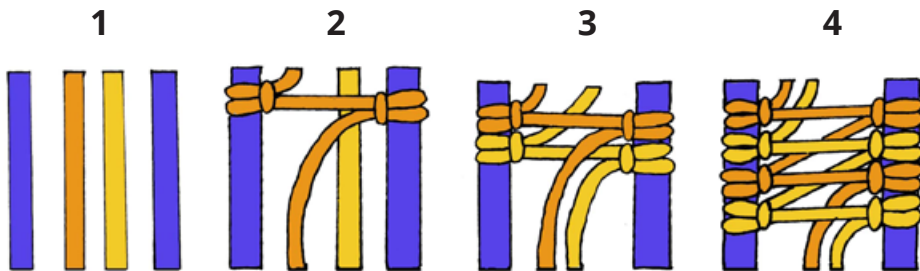


If you are finished with the wrapping, cut and burn the ends of the cords. If you are going to do a bail with the cords, do not cut them.

**WRAPPING TECHNIQUE 2**

You need two working cords, with a length of at least eight times the perimeter of the piece you want to wrap (i.e. your shell pendant/piece). You also need two holding cords, with lengths of around 40 cm each.

1. Place your four cords on the clipboard, with the two holding cords on the outside and the two working cords on the inside. Make sure there is at least 10 cm of cord free at the top of the clipboard. That will be important for closing the wrapping and if you want to make a bail later. The space in between the holding cords (purple) should be slightly larger than the width (side) of the shell pendant/piece you want to wrap.
2. The working cords should always stay in the middle between the two holding cords. Start by attaching one working cord (orange) to the left holding cord by doing a lark's head knot (over-under-over, and under-over-under). Then attach it to the right holding cord with a lark's head knot.
3. Do the same with the second working cord (yellow). Attach it to the left holding cord first, then the right holding cord using the lark's head knot. Remember to pull the working cords back to the middle between the two holding cords.
4. Continue steps 2 and 3 to make the pattern look like a double zigzag. Make sure your lark's head knots are pulled tight and are sitting right under each other. Once the length of your knots is enough to go around your shell pendant/piece, stop there.



The difficulty of this technique is to keep the width of the wrapping consistent. To help keep the distance between the two holding cords the same, you can use pins to hold down your knots on a piece of cardboard clipped to your clipboard.

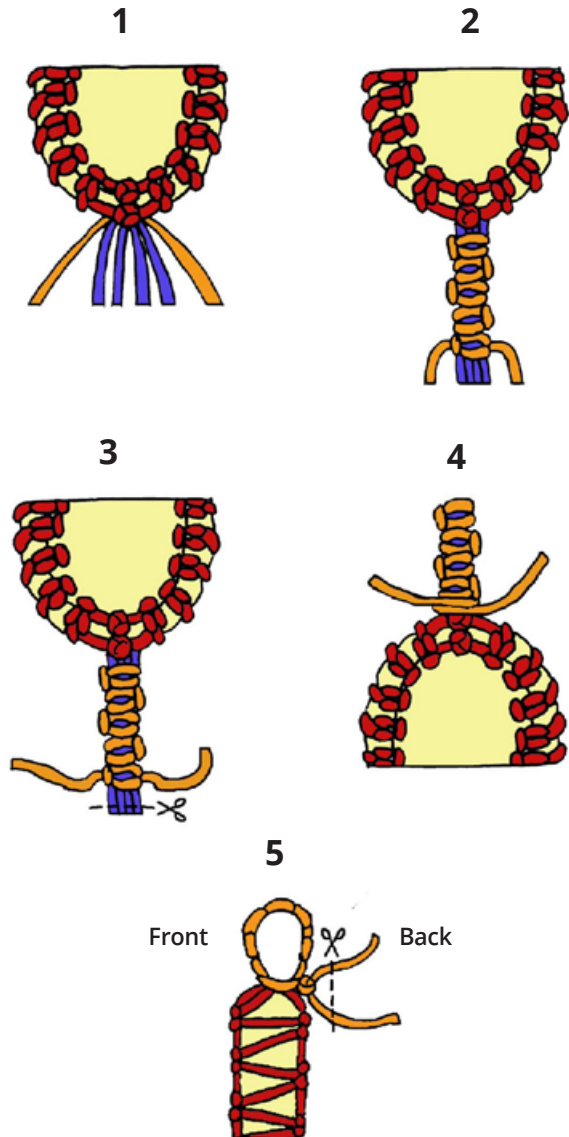
Close the wrapping like the steps 5 to 8 in wrapping technique 1.

## MAKING A BAIL

Bails are used to attach shell pendants/pieces to necklaces, earrings, or bracelets. They are often made of metal or plastic, but they can also be made using macramé, and provide a decorative alternative to using a jump ring. At the end of wrapping your shell pendant/piece, you can create a bail using the ends of the cords.

Use pins to pin through the wrapping of your wrapped shell pendant/piece onto your cardboard because you should never use the clip of the clipboard to clip shell. If you do, you can break your shell pendant/piece and waste your work.

1. Bring all the cords together and pick the two longest ones from all of the cords. Those cords will be your working cords. All of the other cords will stay in the centre and be holding cords.
2. With the working cords you are going to make square knots. Make several square knots, enough to fold in half and have a loop big enough for a necklace cord or chain to pass through.
3. When you are done, cut and burn all the holding cords that are in the middle. Do not cut and burn the working cords just yet.
4. Make a loop with the square knots and wrap the ends of the working cord (orange) around the base of the loop. That loop is your bail.
5. Use overhand knot to tie the ends together at the back of the shell pendant/piece. Cut and burn the ends.



## **NOTES: THE ART OF MACRAMÉ**





## SECTION 6

# Marketing and sales, pricing, and bookkeeping and diary keeping

You have learned how to make your own jewellery and you are thinking of selling your jewellery products. Selling jewellery can be very appealing because it can become a living income for your family and yourself. However, selling jewellery is not just about selling – there is a lot more to consider before you jump into selling your jewellery right away.

When you are going to start selling jewellery, you are going to start in the informal sector. It means you will not have a registered business and you will not have to pay taxes or GST. It is encouraged to test your market sales first before committing to going into the formal sector. To enter the formal sector, there might be conditions (depending on your country or government) that you need to comply with. In general, to enter the formal sector you need to purchase a business name and register your business. Beware, you can end up filling in lots of forms and paperwork for taxes and revenues. You will quickly become overwhelmed if you start in the formal sector, and you might even lose money. Take one step at a time, and start in the informal sector to build up your confidence, your market, your sales, and your reputation.

Do not make a large quantity of jewellery – like hundreds of pieces – for your first sale. Start with around 20 pieces in total of necklaces, bracelets, and/or earrings. Pick your best pieces, price them, advertise them, market them, and observe how your sales go. Be open to comments and critiques from customers and observers so that you can adapt your next products and increase your income.

If you still feel ready to start selling after reading the advice above, this section will guide you to learning the essentials of marketing and sales, pricing, and bookkeeping and diary keeping.

### MARKETING AND SALES

The word ‘marketing’ means everything to do with advertising and selling your product. Your marketing strategy is a specific plan of action that outlines where and how you are going to advertise and sell your jewellery. Having a marketing strategy will help to set you up for success.

The word ‘marketing’ is the action of promoting and selling products, such as identifying your customers, advertising your products, and setting up a selling platform. It is encouraged to write down your ‘marketing plan’, ‘marketing outline’, or ‘marketing strategy’ to remind yourself how you are going to sell jewellery. You can change your strategy at any time – you decide everything – but keeping track of what you are doing will help not repeating the same mistakes and will help you to improve your sales.

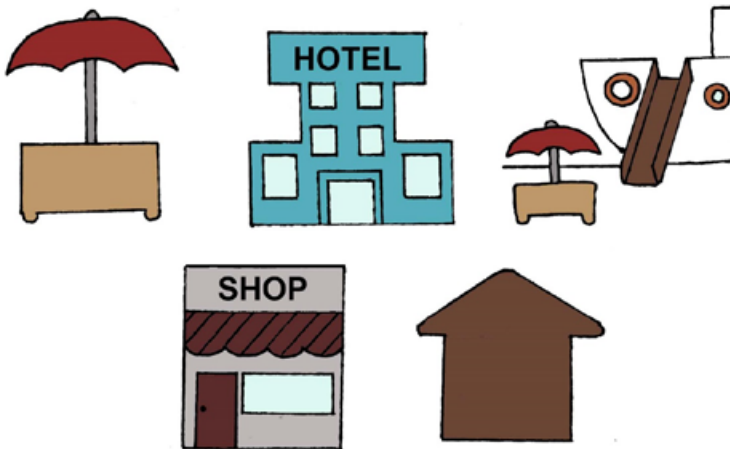
When preparing your marketing strategy, think about things such as:

- where you will sell your jewellery
- if selling at markets, how you might display your jewellery, and interact with customers
- identifying who all your customers might be
- how and where to advertise your jewellery or market stall
- whether you might prefer to just either make or sell jewellery.

## WHERE WILL YOU SELL YOUR JEWELLERY?

Write down a list of all the places where you might be able to sell your products. Examples might include:

- gift shops in hotels and airports
- stand-alone shop or a shop in a mall complex
- regular markets
- special events, such as festivals, expos, fashion shows, national days
- cruise ship disembarkation area (if allowed)
- at your own house.



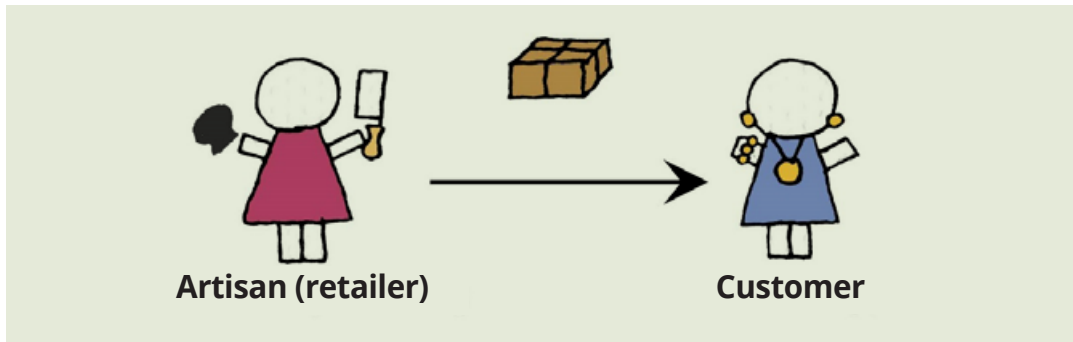
### Now... think outside of the box!

Do you think you might be able to sell outside of your area – outside of your city, island, province, region, or country?



You are not limited to selling your jewellery where you live. These days it can be easy to send products to other areas.

**You can sell directly to customers through the post or courier.**



**You can wholesale to retailers who will sell to customers through their shop.**



A great way to sell directly to customers who live in other areas – whether they live in the next province or in another country far away – is through the internet. Sites on the internet to consider selling or marketing your jewellery include:

- **Facebook** – a great and easy tool for advertising and selling your products
- **Etsy** – specialising in handmade products, though this is a website for more advanced sellers and producers
- **Instagram** – not for selling, as such, but great for advertising your products through photos
- **Own website** – you can create a website to sell jewellery by yourself or with other artisans.



### Advantages and drawbacks of Facebook, Etsy, Instagram, and building a website

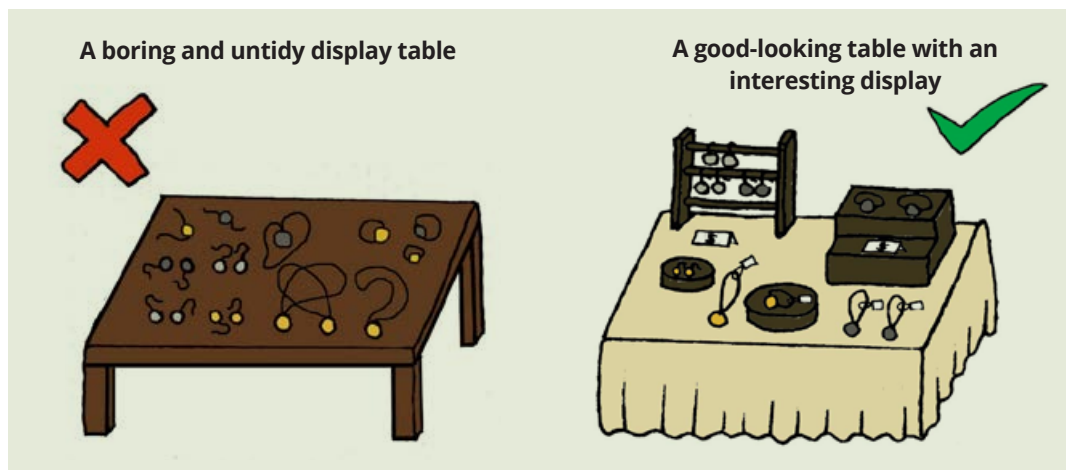
	Advantages	Drawbacks
<b>Facebook</b>	<ul style="list-style-type: none"> <li>• Free to use</li> <li>• Popular</li> <li>• Can share photos and information</li> <li>• Can target a specific market through advertising (Facebook fees apply)</li> <li>• Need minimal data/internet</li> </ul>	
<b>Instagram</b>	<ul style="list-style-type: none"> <li>• Free to use</li> <li>• Popular</li> <li>• Highlight on photos</li> <li>• Good for advertising</li> <li>• Need minimal data/internet</li> </ul>	<ul style="list-style-type: none"> <li>• Need to regularly post new posts to keep your popularity building</li> </ul>
<b>Etsy</b>	<ul style="list-style-type: none"> <li>• Popular</li> <li>• Specific platform for handmade products</li> <li>• Can target a specific market through advertising (Etsy fees apply)</li> </ul>	<ul style="list-style-type: none"> <li>• Not free to use (Etsy fees)</li> <li>• Sharing photos and information is limited (Etsy fees)</li> <li>• Need large amount of data/internet</li> </ul>
<b>Website</b>	<ul style="list-style-type: none"> <li>• Own space to create your online shop</li> <li>• Can give a professional impression to people if done well</li> </ul>	<ul style="list-style-type: none"> <li>• Not free to use (website fees)</li> <li>• Need to attract people to see and buy through the website, and may take time to become a popular website</li> <li>• Need large amount of data/internet</li> </ul>

### Advice for online marketing

- Remember, when selling through the internet, use top-notch photographs of your well-presented jewellery, and include accurate descriptions of your items. This will help to ensure your jewellery sells, and that your customers are happy with their purchase. Happy customers often become repeat customers, and they leave positive feedback or good reviews about you!
- Choose the method that suits you the best. Starting with Instagram or Facebook is encouraged because they are free. (That said, there are always some costs involved. All online opportunities need internet access, which means purchasing mobile data or paying for internet access. You also need access to a smartphone, a tablet device, or a computer.)
- If you want to accept online payments, you will need to set up an online bank account with your bank, and use a reliable and safe bank payment method such as PayPal.

## SELLING AT MARKETS

If you decide to sell through market stalls, think carefully about how you might present your products and your stall. Having an attractive display will entice people to look closer and hopefully buy.



### Tips for creating a sturdy, attractive, welcoming market stall

- **Ensure your table is sturdy but easy to transport**
  - Use a table with trestles or fold-out legs, heavy enough to withstand a gust of wind, but light enough to be portable.
  - Bring a comfortable fold-out chair so you are not standing on your feet all day.
- **Use a tablecloth to cover your market table**
  - Cover the legs of the market table and hide your bags underneath.
  - Consider using a neutral colour, such as grey, black, white, or brown.
  - Avoid flashy colours and designs that might distract from the beauty of your jewellery. Use a plain tablecloth instead.
- **Use props to present some of your jewellery**
  - It can look a bit boring to have jewellery displayed flat on a table. You can attract more visitors to your table if you display your jewellery vertically, because it looks more interesting and visitors will spot your jewellery from afar.
  - Use props that are made from natural materials, such as those your jewellery is made from (e.g. seashells). Props made out of weaving or wood can be very attractive.
  - Avoid using metal props because they can rust.
  - Avoid using cheap-looking plastic props because they can devalue your jewellery.

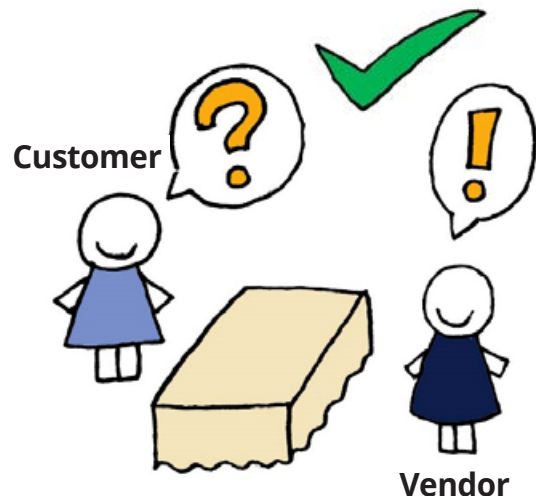
- **Put price tags on your jewellery**
  - This will make it easier for people who are shy or reluctant to ask the price.
  - It will avoid you having to constantly repeat the price (or remember the exact price).
  - It will make your jewellery more professional looking.
- **Clean your jewellery and display it nicely**
  - Make sure your jewellery is clean at the start of the day, and polish it with a cloth throughout the day.
  - Ensure your jewellery components are not rusty; if they are, then you need to change them.
  - Check to see that your jewellery remains nicely displayed, such as ensuring that earring hooks are straight.
  - Make sure you show the 'good' side of your jewellery (especially for macramé).
- **Keep your stall area clean and tidy**
  - Clean around your market table and take away any rubbish. This will make your stall look more professional and attract more customers.

### INTERACTION WITH CUSTOMERS

Positive interaction and engagement with customers is key to selling your wares, building a good reputation, and having repeat business (return customers).

### TIPS FOR POSITIVE INTERACTION WITH CUSTOMERS

- Smile at people (simple but effective).
- Don't be shy. Greet your visitors by saying 'Hello', 'Good morning' or 'Good afternoon'.
- If you feel comfortable, you could say something more, such as 'Can I help you?', 'Are you looking for anything in particular?', or 'If you have any questions, please just ask'. This will help to make visitors feel more welcome. (But avoid being pushy and too talkative.)
- If you can, stay by your table all the time. If you need to leave, even for a short time, try to have someone stand in for you (or ask another stallholder to look out for customers at your stall). You wouldn't want to lose a sale because your table was unattended!
- Ensure you are well presented.
- Showcase your jewellery by wearing it yourself. Avoid wearing flashy cheap jewellery if you are selling your own handmade seashell jewellery.



- Know your products and the materials they are made of. Visitors might ask 'What is this made of?', 'What shell is this?', or 'What is the quality of this metal?' They may just be interested, but also they may need to know because of allergies and skin sensitivities, or because of international customs restrictions. Be informed so you can inform your visitors.
- Be honest about your products. If you are not, customers might later discover this and leave a bad review. Worse, if you are not honest about the metal components or their quality, the customer might have an allergic reaction and end up at the hospital.

## WHO ARE YOUR CUSTOMERS?

Think about the different kinds of customers you could potentially have, and the different characteristics that will influence their purchase of your products. There are probably four main kinds of customers: locals, tourists, internet buyers and retailers.

### LOCALS

- Locals love products that have a cultural significance to their origins or to the country in general.
- Locals love wearing unique jewellery that makes them feel different to others.
- Locals do not have any customs restrictions, so any seashell or coral can be used to make jewellery for the local market.

### TOURISTS

- The quality of jewellery is crucial to tourists because they may have travelled to many countries and can compare the quality of jewellery from other places.
- Tourists love buying local handmade products that support local people, especially women and young people.
- Tourists are keen to buy natural products made from natural materials, such as seashells.
- Given that tourists have already shown interest in your country by travelling there, they are likely to want something that represents your country, such as a souvenir symbolising the country's culture or national emblem.
- Tourists will have international customs restrictions on what they can bring back into their country. Some seashells and corals are on the customs restriction list based on the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). These include:
  - sea turtle shells and bones
  - giant clamshells
  - black coral
  - nautilus shells.



## INTERNET BUYERS

- Internet buyers will rely on photos, feedback from other visitors/customers, and conditions on shipping and returns before they commit to purchase online.
- They should be able to communicate with you (by email or a messaging application) and you should always communicate back.
- Internet buyers should have payment options such as cash and bank transfer.
- Internet buyers should have shipping options such as standard and registered postage, or be offered local pick up.

## RETAILERS

- Retailers will often be locals and will probably be living in other parts of the country than you. It means that retailers plan on reselling your jewellery where your market does not reach.
- Retailers are people who want to buy your jewellery in large quantities and get a discounted price.
- If you (or a group of artisans) can manage the production of large quantities of jewellery, you can decide to sell to interested retailers.
- Retailers can be from the informal sector and from the formal sector.
- Depending on the retailer, you might have to have a contract with conditions such as minimal quantity per order, price per quantity, and dates of delivery.

## ADVERTISING

How is your customer going to learn about you and your products?

Advertising yourself and your work is important, especially when you're starting out in business and you don't have existing or returning customers. There are many ways to advertise. Here are just a few ideas.

- Wear your own jewellery! When people compliment you on your jewellery, take the opportunity to talk about your craft and let people know how or where they can purchase your jewellery.
- Use cultural events or fashion events to have your work worn by dancers, masters of ceremonies (MCs), models, or any important people to showcase your jewellery.
- Use social media sites such as Facebook and Instagram to post good pictures of your jewellery. Say a few words about your work, and where or how people can buy the jewellery.
- Make flyers and posters about your craft or market stall (and include your contact details) to put on community and workplace noticeboards.
- In your advertising, use words that capture people's interest:

'handmade'      'supports local women and young people'  
 'made by hand'      'supports a sustainable livelihood'  
 'locally made'      'crafted using local materials'  
 'made with local seashells'  
 'supports women's empowerment'      'made without electricity'



## TO MAKE... OR TO SELL (PRODUCTION VERSUS SALES)

Now that you have learned how to make your own jewellery and sell it, you will soon realise that it can be time consuming and overwhelming for one person to do everything: collecting shells, producing shell pendants/pieces, doing macramé, assembling jewellery, selling the jewellery and doing all the marketing and bookkeeping! But there are different options that are open to you. You might decide to focus on just one part of the process.



### TIP

There are many ways that a person can participate in jewellery-making and earn a living from it. It is up to you to decide what you want to do, depending on what you enjoy, what your skills are, how much time you have, how many other commitments you have, and so on.

### FOCUSING ON JEWELLERY PRODUCTION

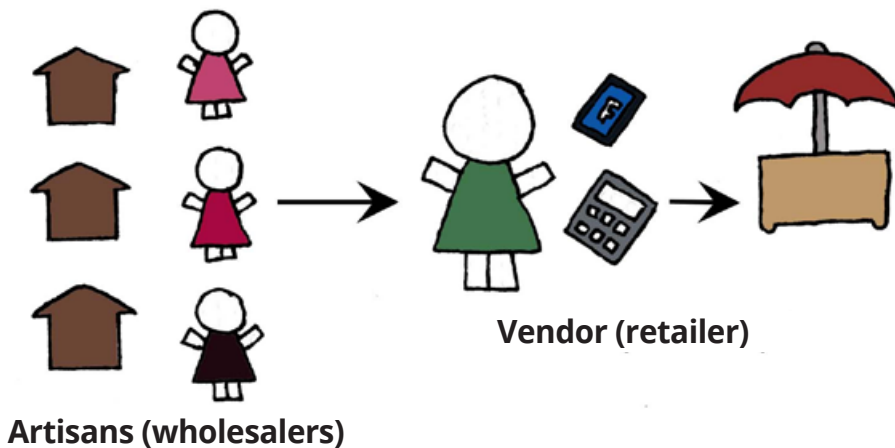
You could choose to focus on one part of jewellery production such as making shell pendants/ pieces: cutting, grinding, sanding, and polishing. Or you might choose to focus on macramé work, or assembling jewellery. Another type of work you could do is fishing and cleaning shells for artisans to use in their jewellery.

If you specialise in one of these areas of jewellery-making, you would be helping other jewellery-makers by making these products and services available for them to buy.



### FOCUSING ON SELLING JEWELLERY

If you enjoy running market stalls, or are good at advertising, marketing and sales, then you might consider focusing your skills on buying jewellery from artisans (wholesale) and reselling the jewellery yourself (retail).



## PRICING

'How much money should I charge for my jewellery?' This can be a tricky and daunting question for anyone new to jewellery-making or new to running their own business. This section will guide you through the process of pricing your jewellery.

The price of jewellery, just like other products found in stores, should be determined by a formula. If you 'guess' a price, you might undercharge or overcharge for your jewellery.

How to find the 'right' price for your jewellery can be determined by the 'retail' formula.

### FOR A PERSON:

$$(\underline{M + T + P + O}) \times PM = R$$

$$(\underline{\text{Material cost} + \text{Time/labour cost} + \text{Packaging cost} + \text{Overhead}}) \times \text{Profit Margin} \\ = \text{Retail price}$$

### FOR A GROUP:

$$[(\underline{M + P + O}) \times PM] \times \underline{T} = R$$

$$[(\underline{\text{Material cost} + \text{Packaging cost} + \text{Overhead}}) \times \text{Profit Margin}] \times \underline{\text{Time/commission}} \\ = \text{Retail price}$$

Let's break down the formula into different parts.

**M** = **Material cost**

Material cost relates to things such as the components and findings you used to make the item of jewellery. These also include consumable tools and supplies, such as sandpaper and blades. However, these do not include tools and supplies that you use over the long term, such as a saw frame, needle files, and pliers; these should be considered as part of your overhead.

### Example of how to calculate the cost of silver plated findings for earrings:

Lucy bought 100 pieces of earring hooks at \$5 and 200 pieces of 4 mm jump rings at \$4.

To calculate how much one pair of earring hooks (2 pieces) costs:

100 pieces = 50 pairs of earring hooks

\$5 divide by 50 pairs = \$0.10 for one pair of earring hooks

To calculate how much one jump ring costs:

\$4 divide by 200 pieces = \$0.02 for one jump ring

Lucy made one pair of earrings using one pair of earring hooks and four jump rings. What is the cost of the findings?

$$\mathbf{\$0.10 + (\$0.02 \times 4) = \$0.18}$$

## T = Time/labour cost

For a **person**, this relates to how long it took you to make the piece of jewellery. The best way to know this is to time yourself while making jewellery. Try to see how many pieces of jewellery you can make in one hour so that you can calculate what the time cost is for one piece, based on your hourly rate. You can start by using the national minimum hourly rate.

For a **group**, time is calculated differently. The person working in a group who has created the jewellery receives a commission for the time they spent making the jewellery. For instance, if the person receives 20% commission, the 'T' from the formula will be '1.2'. That means that from the retail price of the jewellery, the person receives 20% from it and 80% goes to the group's funds. The 80% is to be spent on the other costs (e.g. materials, packaging, and overhead costs).

## P = Packaging cost

Packaging is essential and must be considered in your formula. Packaging can include the envelope, box, label, sticker going onto the box, 'Thank you' card, and so on.

These three parts of the formula – Material, Time/labour, and Packaging costs – are unique to each jewellery product.

## O = Overhead cost

Overheads are any general expenses you incur making and selling your jewellery. This can include transport fees, market stall fees, shop rent, banking fees, phone charges, and cost of purchasing tools and equipment. It should be a set value for all jewellery products. The set value should only account for a small proportion of the total overhead because these expenses are not unique to a given item.

You must add the three cost categories and your overhead allotment together. You multiply this sum by the profit margin.

## PM = Profit Margin

The profit margin percentage can be adjusted based on competition and other factors. If you want your profit margin to be 20%, multiply by 1.2; for 50%, multiply by 1.5; and for 100%, multiply by 2.

Profit percentage	Profit margin number	Profit percentage	Profit margin number
10%	1.1	110%	2.1
20%	1.2	120%	2.2
30%	1.3	130%	2.3
40%	1.4	140%	2.4
50%	1.5	150%	2.5
60%	1.6	160%	2.6
70%	1.7	170%	2.7
80%	1.8	180%	2.8
90%	1.9	190%	2.9
100%	2	200%	3

## R = Retail price

When you sell your jewellery directly to customers, you are the retailer. Retail prices are used for selling individual pieces of jewellery to customers.

When you sell your jewellery to other businesses who will resell your jewellery (e.g. in their shop), they will normally expect a discount. That means they want wholesale prices for bulk orders.

What is the difference between **retail** prices and **wholesale** prices?

Retail	Wholesale
Selling at a higher price, prices are higher	Selling at a lower price, prices are lower
Selling one piece or a small number of pieces in individual transactions	Selling a minimum quantity of pieces in one transaction

It is up to you to decide on your wholesale conditions, such as the minimum wholesale quantities and the wholesale prices. You might stipulate that a buyer needs to order 10, 20, 50, or 100 pieces of jewellery in one transaction to qualify for the wholesale price.

Even when you sell at a lower price for wholesale, you can potentially make more money than selling retail price because you will be selling more pieces of jewellery.

**W** = Wholesale price

Wholesale prices are lower than retail prices.

Your **profit margin** for wholesale prices should be around half your profit margin for retail prices. The **material, time/labour, packaging,** and **overhead** costs are exactly the same as the ones that are in the retail price formula.

Although you are selling your jewellery for less at wholesale prices, you are selling in larger quantities than retail. You are not losing money because all your costs are still accounted for in the formula.

**FOR A PERSON:**

$$(\underline{M + T + P + O}) \times (PM/2) = W$$

**FOR A GROUP:**

$$[(\underline{M + P + O}) \times PM/2] \times \underline{T} = W$$

**TIP: Pricing unique shell jewellery**

Because seashells are unique, it can be difficult to guarantee large quantities of the exact same shell jewellery; therefore, it may be best to apply wholesale prices to jewellery that is easily replicable, or make it clear to wholesale buyers that pieces of jewellery are unique and designs will differ across pieces.

## BOOKKEEPING AND DIARY KEEPING

Bookkeeping means the keeping of records of all financial transactions related to your business, including what you buy and how much you spend, and what income and profit you make.

It is important to keep track of how much money you spend on materials and how much you earn from your jewellery sales, so you can be sure you are making a profit. If you are not making a profit, or if your profit is not providing the income you want or need, you will need to change something; for example, you might need to increase the price of your jewellery.

Have a notebook to write down everything you buy and sell, to keep track of your jewellery-making business. When you buy anything for use in your business, keep the receipt.

Use your notebook to:

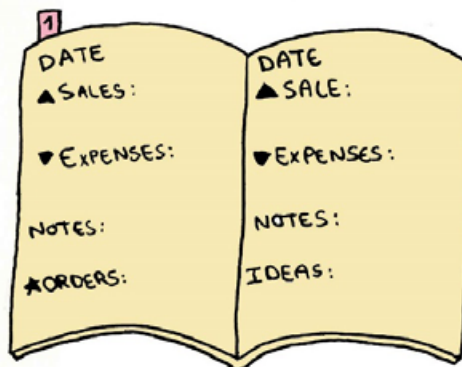
- keep track of what you spend on components, tools, materials, labour, or any other costs
- keep track of your profits through jewellery sales
- make an inventory of your jewellery prices.

As well as bookkeeping, you should have a diary (they may both be in the same notebook). A diary can be used to:

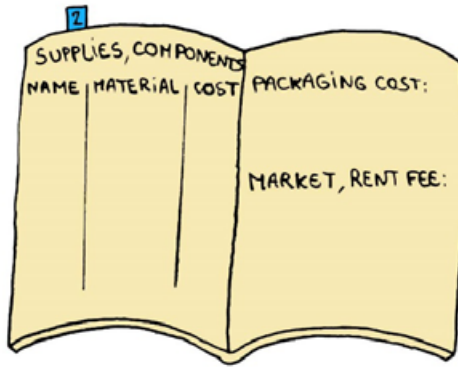
- write down orders
- write down ideas and sketch designs for jewellery-making.

## IDEAS FOR USING YOUR NOTEBOOK

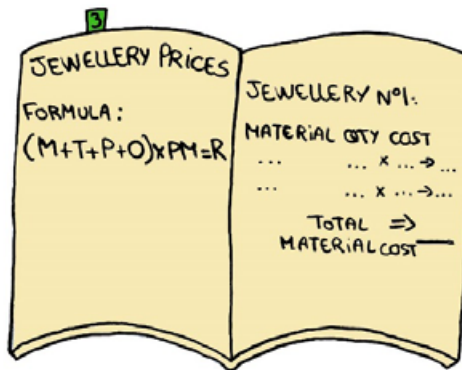
You might like to divide your notebook into different parts. For example, Part 1 can be used to write down sales, expenses, notes, orders, and ideas.



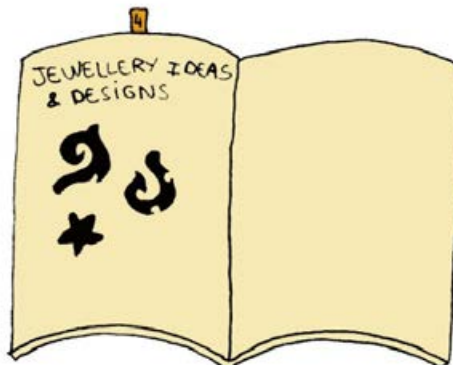
Part 2 can be used to list supplies and components you use for your jewellery. For each component, write down its cost for a specific quantity. Also use this section to write down other regular expenses for your jewellery such as postage costs and packaging costs.



Part 3 can be used to write down the prices of your jewellery. First you need to calculate the cost of your materials and time. You need to decide on what your mark up (profit margin) will be (discussed above).



Part 4 is the place where you can write down your ideas and sketch designs for future reference.





## **NOTES: MARKETING AND SALES, PRICING, AND BOOKKEEPING AND DIARY KEEPING**



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