chapter 1

Beads and Beading Supplies

Beads are the key components of any beaded design, and they are available in a wide array of materials, colors, shapes, and sizes. This chapter provides a review of bead types and characteristics, as well as the essential tools, equipment, and supplies you'll need to perform common beading tasks and to complete your designs.

Beads, Pendants, and Charms

You can purchase beads, pendants, and charms at craft stores, bead shops, travelling beads shows, and on the Internet. They are usually categorized by material, size, and shape.

GLASS BEADS

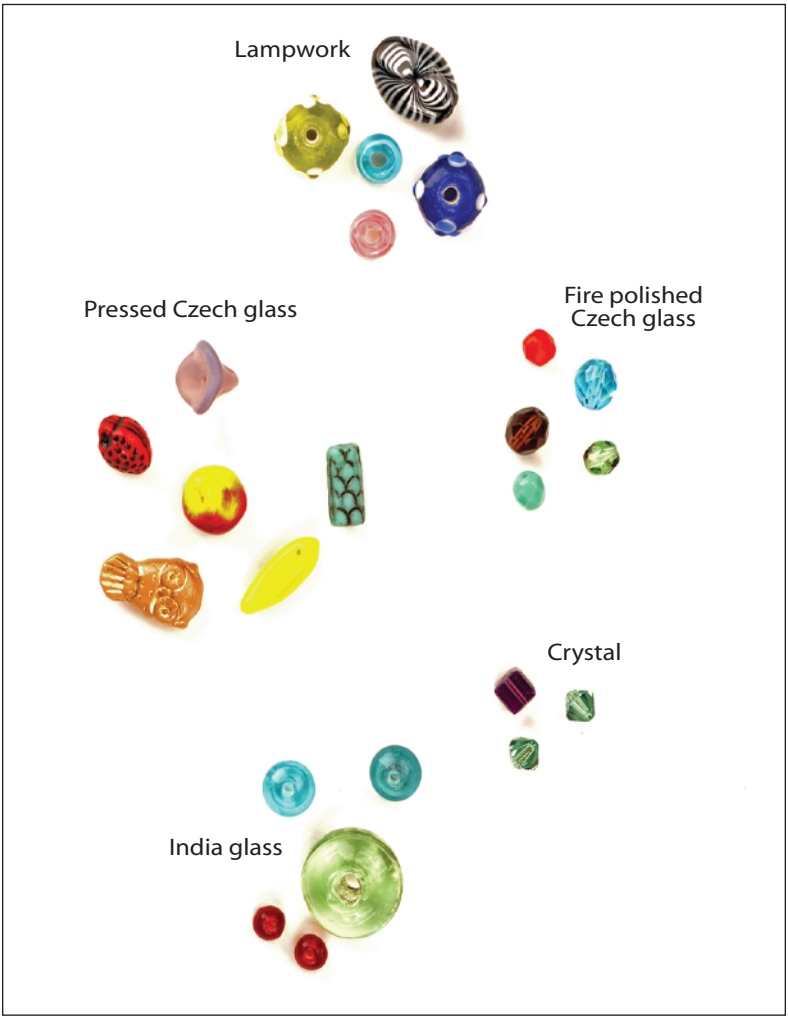
Glass beads are available in just about any color and style you can imagine. Their quality is often linked to where and how they are made. For example, many glass beads currently made in China and India are less consistent in size and color than glass beads from Europe.

Some of the most popular European glass beads are made in the Czech Republic and are commonly referred to as *Czech glass beads.* Some Czech glass beads are *pressed,* or manufactured in molds. You can find them in a lot of fun shapes like flowers, animals, and even fruit. Other Czech glass beads are *fire polished.* Fire polishing is a special process that gives glass extra shine and sparkle. But fire-polished glass beads are not quite as eye-catching as *crystal beads.* Crystal is glass that contains a small amount of lead. The highest-quality crystal beads are made in Austria and the Czech Republic, but less expensive variations are also manufactured in China.

Seed beads and *cylinder beads* are tiny glass beads commonly used to create woven beaded fabric. You can also use them to make thin, beaded strands. The highest-quality seed and cylinder beads are manufactured in Japan and the Czech Republic.

Although most glass beads are made by machine, some are individually handmade. *Lampwork beads* are an especially popular style of handmade glass beads. They are crafted by manually applying molten glass to metal rods.

Other beads are created by a combination of mechanical and handmade methods. For example, some manufactured glass beads are *hand faceted,* or cut to have multiple flat surfaces, to mimic the look of gemstone beads.



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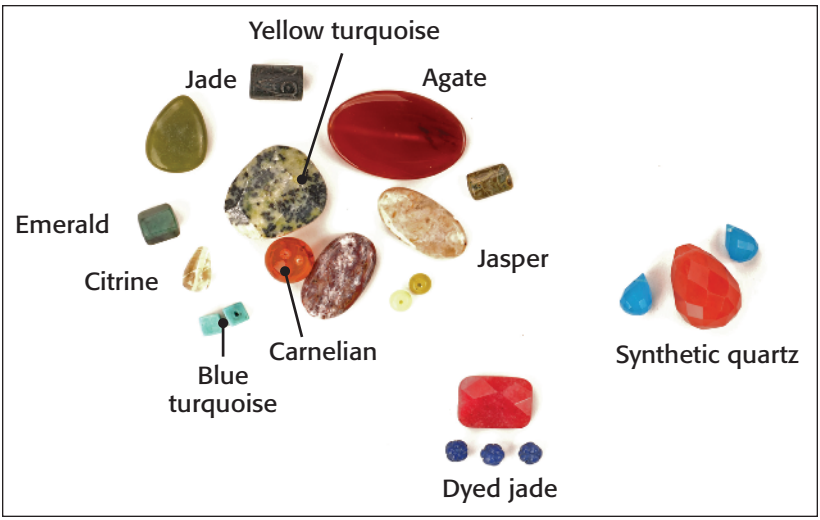
GEMSTONE BEADS

Most gemstone beads are made from *semiprecious* natural stone. Semiprecious stone is more abundant, and less costly, than the *precious* gemstones used in fine jewelry settings. Agate, jade, quartz, jasper, and turquoise are examples of common semiprecious stones. You can also find semiprecious varieties of more expensive stones like ruby, amethyst, emerald, and citrine.

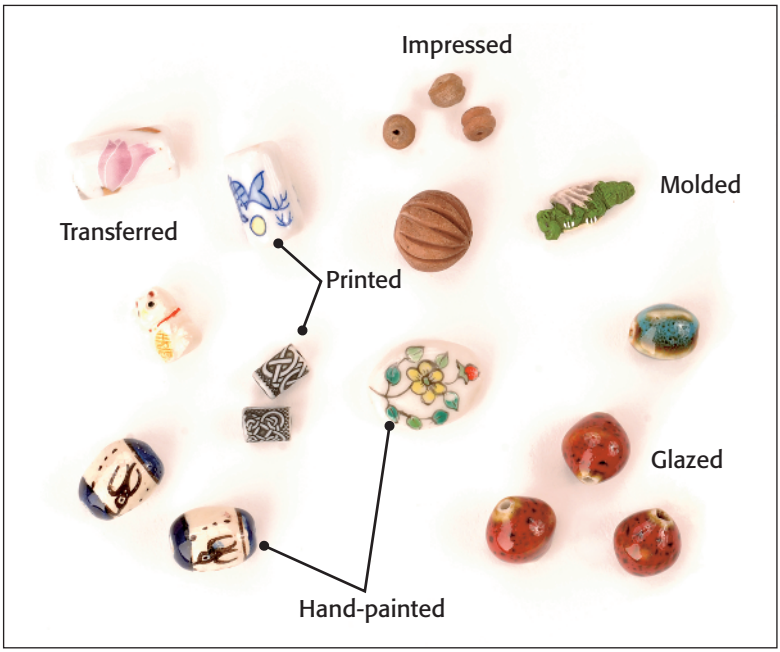
Gemstone beads are usually shaped by hand. Like glass beads, their quality and cost often depend on where they were made. Some of the most affordable gemstone beads are made in India. They are colorful and beautiful, but their shapes and sizes are less consistent than more expensive gemstone beads from China.

Many gemstone beads are *treated*, which means that they may be dyed, oiled, heated, irradiated, or injected with waxes. Treatments improve the look of lower-quality stones, but treated stones remain less valuable than higher-quality, untreated stones. Treated gemstone is not the same as *synthetic* gemstone. Synthetic gemstone beads are not really made from stone; they are another material made to look like stone. Many synthetic stones—especially synthetic quartzes—are made from glass. They can be very beautiful, but they are considered inferior to natural stone.



CERAMIC BEADS

Ceramic beads are made from earthen clay. They can have a simple, natural look or be highly decorative. Colorful ceramic beads are usually painted, printed, or glazed. With *painted* ceramic beads, the paint is brushed on or the beads are dipped into paint. A coat of lacquer may be applied to seal the paint in place. *Printed* ceramic beads are either stamped with paint or have designs *transferred* onto them from other surfaces. Transferred designs are usually applied using heat, but otherwise they are similar to stamps. Printed and transferred designs are less time-consuming to create, and more regular in appearance, than hand-painted designs. *Glazed* ceramic beads are coated with colored or clear glass.



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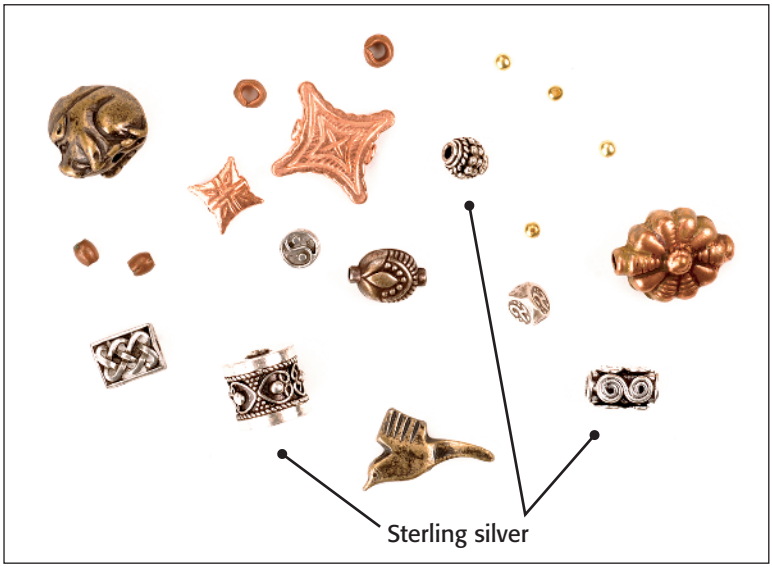
METAL BEADS

Metal beads can be made of *precious* metal or *base* metal. The most common precious metals used in handmade jewelry are sterling silver and gold. Base metals include more common, less expensive metals like copper, brass, nickel, tin, or aluminum. *Alloys* are mixtures of two or more types of metal.

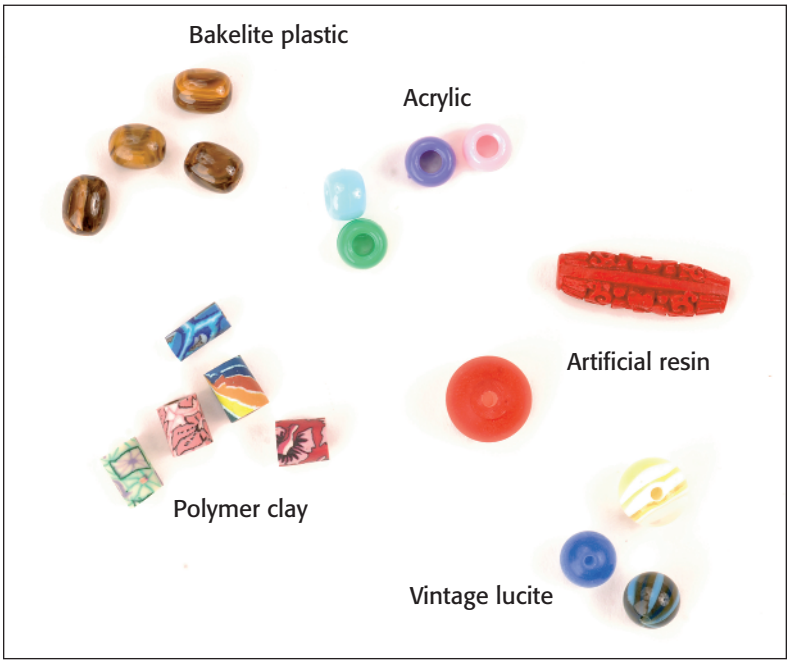
Surface finishing is a technique used to change the color of a metal's surface. Dark metal finishes are often referred to as *oxidized* or *antiqued*. *Plated* metal is coated with a very thin layer of another metal.

Most solid metal beads are *cast,* or molded. Hollow metal beads are often made of two stamped sheets of metal joined together at the seam.



PLASTIC BEADS

While some plastic beads are inexpensive and of low quality, others are pricey and highly collectible. Beads made from hard vintage plastics like *Bakelite* and *celluloid* are especially sought after. *Artificial resin* is a soft plastic used to make bright, colorful beads, or to replicate natural materials like amber and cinnabar. (In fact, modern beads called "cinnabar" are usually made from red or black resin, because natural cinnabar is highly toxic.) Some basic plastic, or *acrylic,* beads are coated to look like metal beads. Others look like carved bone, tortoise shell, or pearls. *Polymer clay beads* are also made of plastic.



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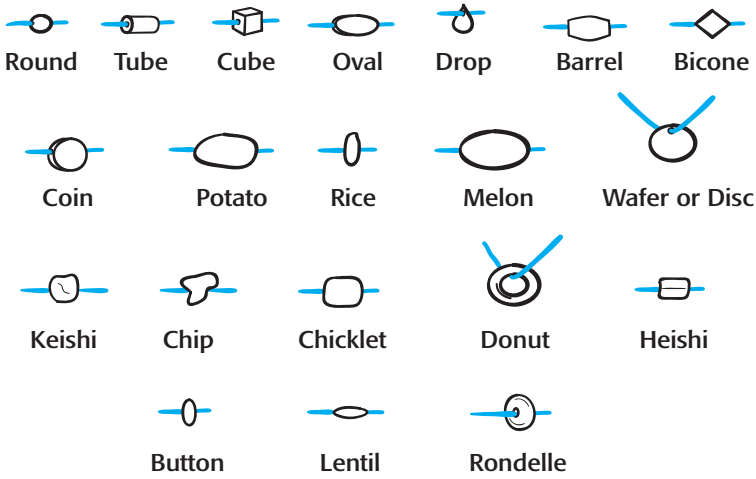
ORGANIC BEADS

Organic beads are made of materials that come from living things. *Pearl*, which is formed by water creatures called *mollusks,* is an all-time favorite organic bead material. Other organic bead materials include wood, seeds, shell, amber, bone, and horn. *Amber* is a very lightweight material made from the natural resin of ancient trees. *Bone* and *horn* beads typically derive from the byproducts of large livestock like cows and sheep. Beads made from these materials are usually handcrafted, and many are hand carved.

BEAD SHAPES

Beads are available in many shapes. Here are the most common shapes you will encounter when bead shopping.



STANDARD BEAD SIZES

With the exception of tiny seed beads, bead sizes are typically described in millimeters. The size of a round bead is its *diameter,* which is the same measurement as either its *length* (the distance between the two openings of the drill hole) or its *width* (the distance between the other two sides of the bead). The sizes of other shapes of beads are often described by both their length and width. Typically, length is the first measurement given, but sometimes width is provided first. (For this reason, it's important to examine the bead in question to understand its width versus length.)

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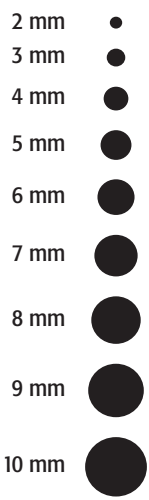
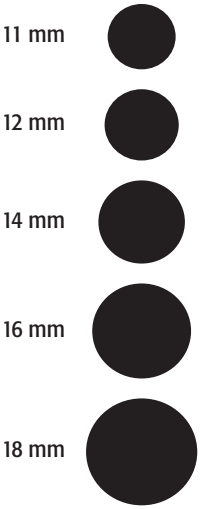
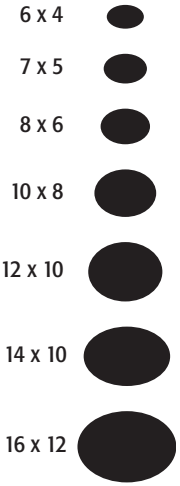
Beads, Pendants, and Charms *(continued)*







SEED AND CYLINDER BEAD SIZES

The sizes of seed beads and cylinder beads are denoted by numbers called aught sizes, which are often written to look like fractions.

The most versatile size for seed beads is 11/0, pronounced "eleven aught" or simply "number eleven." Other seed-bead sizes range between about 6/0 (larger, also called *pony beads*) and 15/0 (very small). For simplicity, just keep in mind that the larger the number, the smaller the bead.

Cylinder beads are available in a much more limited range of sizes than seed beads. The most common cylinder-bead size is 11/0, but you can also find them in size 8/0.

PENDANTS AND CHARMS

Pendants and charms are sold by most bead suppliers. Although most are made of metal, they can also be made of glass, gemstone, ceramic, plastic, or organic material.

Pendants are usually larger than charms and serve as focal pieces for necklaces. The little devices that hold pendants onto necklaces are called *bails.* Most metal pendants are sold with bails attached, but with others (especially those made from gemstone or organics) you need to add a bail.

Charms are typically used as accent pieces rather than focal points. You can use a single charm in a design, or a collection of many. Charms usually attach to jewelry with split rings or jump rings (see p. 30).

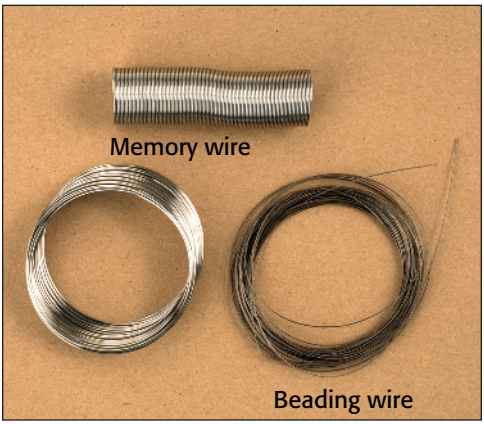
Stringing Materials

You can string beads on many different materials. Here's a brief look at the most common stringing materials used for beading.

BEADING WIRE AND MEMORY WIRE

Unlike regular metal wire, *beading wire* (also called *bead stringing wire*) is soft and flexible. It's made up of many tiny metal strands woven or wound together. Most beading wire is covered with a thin layer of nylon plastic. To learn more about the sizes of beading wire, see "Grades of Beading Wire" in Chapter 2.

Memory wire is hard, single-strand steel wire designed to hold a circular shape. You can use it to make beaded coil bracelets, necklaces, and rings that don't require clasps.



CORD AND RIBBON

Cord is non-metal material that often consists of smaller strands woven together. Silk, linen, nylon, cotton, and satin are popular types of multiple-strand cord. Leather, suede, and rubber are typical single-strand cords. *Stretch cord* can have single or multiple strands. Most cord is sized in millimeters or inches according to its diameter, but some manufacturers use their own sizing system using numbers or letters. *Ribbon* for beading is usually made of soft fabric, like organza or satin.

BEADING THREAD

Beading thread is a special synthetic thread designed for beading. It has a very small diameter and can fit through tiny bead holes. Like cord, it is often composed of multiple strands. Beading thread is usually stronger and smoother than thread used for sewing. For help selecting the proper thread size, see p. 202 in the Appendix.

Tools and Supplies

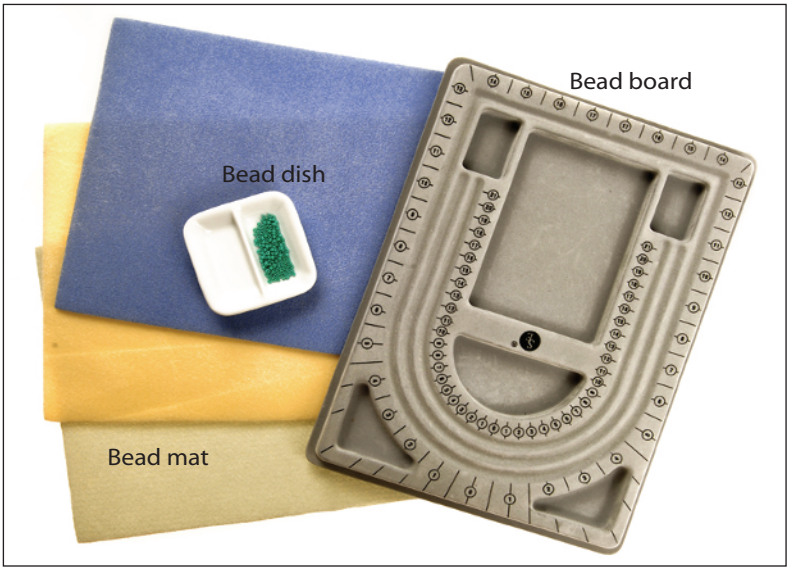
Although beads and stringing material are the basic necessities of any beading project, there are other tools and supplies that can make your beadwork easier and help you create more complicated designs. Here's a look at some items that you may find useful.

BEADING MATS, BEADING DISHES, AND BEAD BOARDS

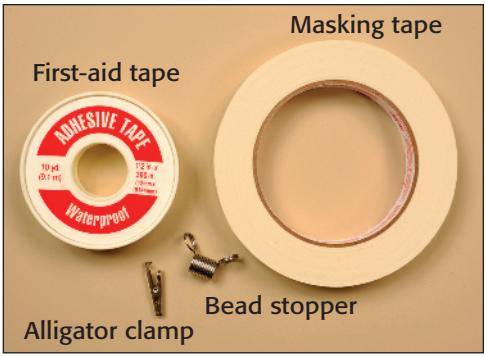
Because many beads are round, they can easily roll away from your work area. You can keep better track of your beads by working on a *beading mat.* A beading mat can be any flat surface that is textured to keep beads from rolling. It can be as simple as a terry cloth hand towel or as fancy as a specially engineered, rubberized mat from a bead shop. Textured foam drawer-liner material also makes a nice bead mat, and you can find it at most home improvement stores.

When you work with tiny seed beads, you may find it more helpful to keep them on a ceramic dish or in a shallow, smooth bowl. This makes it easier to pick up the beads using a beading needle.

A *bead board* is a tray with long grooves for holding and arranging beads. Most bead boards are made of plastic with a velvety coating that helps beads stay in place. Bead boards are available in a variety of shapes and sizes, and they usually have measurement marks to help you gauge the lengths of your designs.



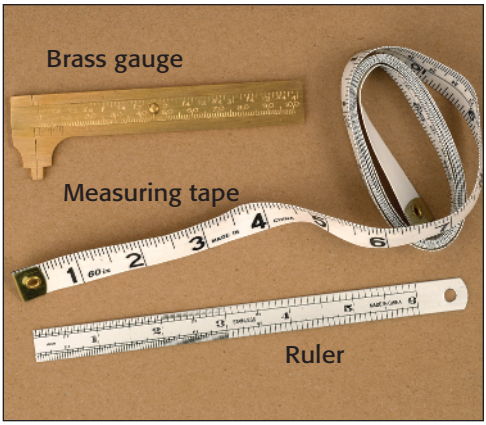
TAPE, CLAMPS, AND BEAD STOPPERS



You can use masking tape, alligator clamps, or Bead Stoppers to keep beads from falling off the string while you work. *Masking tape* can be folded over a strand. It is also used to secure macramé cords for knotting. *Alligator clamps*, which are small metal clamps traditionally used for electrical work, are useful for clamping cord. *Bead Stoppers* are clamps made specifically for beading, and are found at some bead shops and jewelry supply stores.

You can also use *first-aid tape* made of fabric to provide a base for gluing an end piece onto a band of flat peyote stitch made from seed beads (see Chapter 4.)

MEASURING TOOLS



It's a good idea to have a ruler and a measuring tape on hand for measuring the lengths of beaded strands, sizing beads and other components, and helping with jewelry sizing. You can also use a sliding *brass measuring gauge* to determine the dimensions of beads and components. Brass measuring gauges have marks that line up to show you the sizes of items in millimeters and inches. They are relatively inexpensive and provide very accurate measurements.

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SHARP SCISSORS OR NIPPERS

A good pair of small, sharp scissors can help you cleanly cut and trim soft stringing materials like cord, ribbon, and thread, and smaller sizes of beading wire. For larger beading wire, or to cut soft materials more quickly, you can use a pair of short-bladed cutters called *nippers*. Try to avoid using your beading scissors or nippers on anything other than bead-stringing material; hard or rough materials can damage or dull them.

TIP

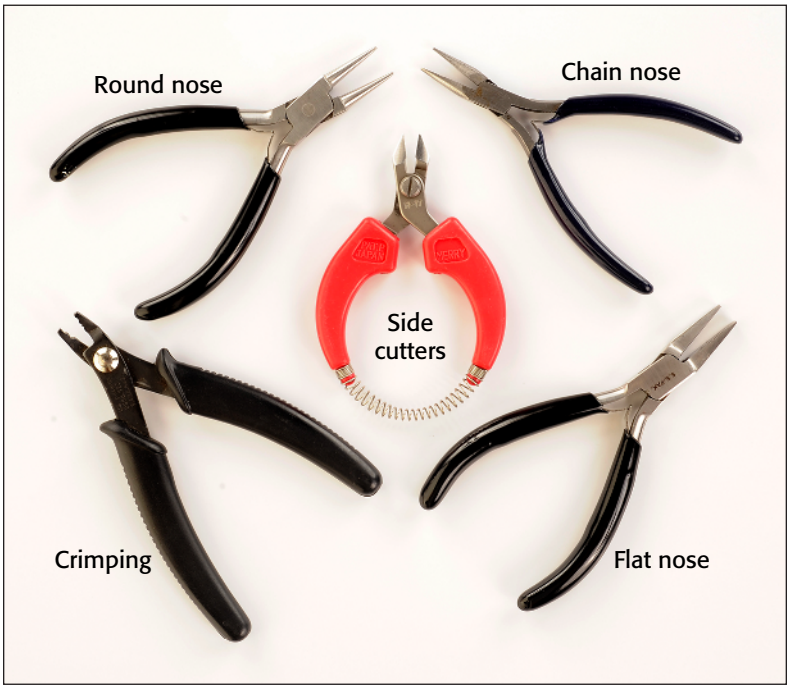
Although most bead stores carry beading scissors and nippers, you can also use small shears called *embroidery snips*, which are sold by many fabric stores. Some models come with an attached lanyard to keep them from getting lost, and others have rounded tips or protective tip covers.

PLIERS AND SIDE CUTTERS

The most common pliers used for beading are chain nose, flat nose, and crimping pliers. *Chain nose pliers* are short needle nose pliers with smooth jaws. *Flat nose pliers* have rectangular, smooth jaws. You can use both varieties for opening and closing jump rings and certain clamp-style end pieces. Chain nose pliers are also used to secure crimp beads and tubes. Alternatively, *crimping pliers* can be used to close crimp tubes (see p. 26).

Round nose pliers have cylindrical jaws that are thinner at the end and wider at the base. You use them to create loops in the ends of head pins and eye pins in order to make beaded charms and links, and to attach end cones. Look for a pair with shorter, rather than longer, jaws for better precision. You can find them at most bead stores.

Side cutters are small, sturdy shears that you use to trim head pins and eye pins. They are also available at bead stores.



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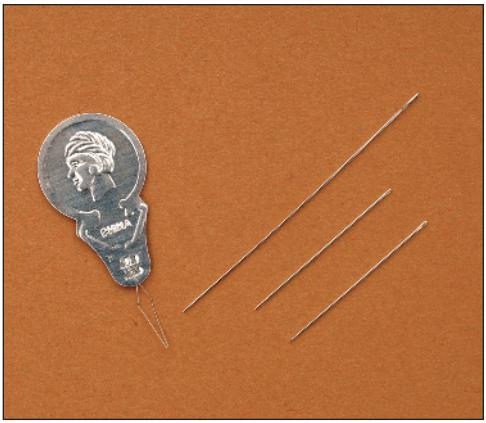
BEADING NEEDLES

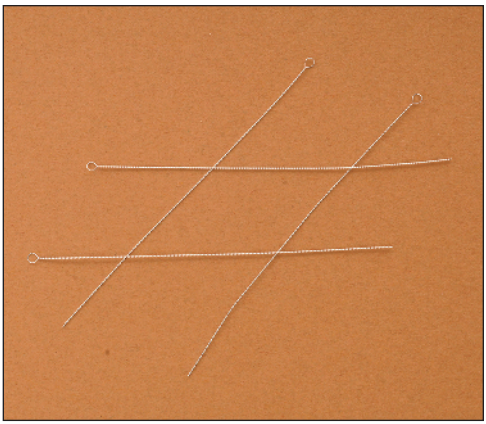
Beading needles look like thin, sharp sewing needles. They are popular for stringing seed beads onto beading thread. If you have trouble threading them, try using a special beading-needle threader designed specifically for beading needles and beading thread. They are available at some bead shops and in beading supply catalogs.



TWISTED WIRE NEEDLES

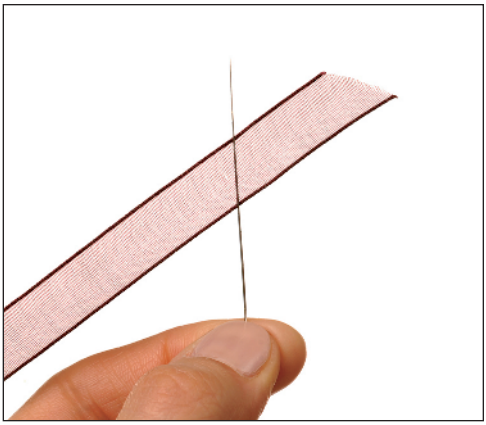
Twisted wire needles are made from thin, twisted strands of steel or brass wire. A wire loop at the end forms the eye. This is the kind of needle you find on needle-attached cards of silk cord. You can also purchase them separately.

The wire in twisted wire needles is relatively soft. You can use pliers to collapse the eyes so that they fit through smaller-holed beads and to secure the needle on the stringing material.



BIG EYE NEEDLES

Big eye needles are most commonly used with materials like cord and ribbon, which are too wide to fit through the eye of a regular needle. The eye of a big eye needle is a long slit that runs nearly the entire length of the needle. You need to be especially careful not to prick yourself when using these because they are sharp at *both* ends.



TIP

To keep your needles secure and organized, store them in small containers labeled by needle size and type. You can find magnetized needle bins at fabric stores that keep needles from falling out, or you can make your own by sticking adhesive-backed magnet strips to the inside surfaces of regular plastic storage containers.

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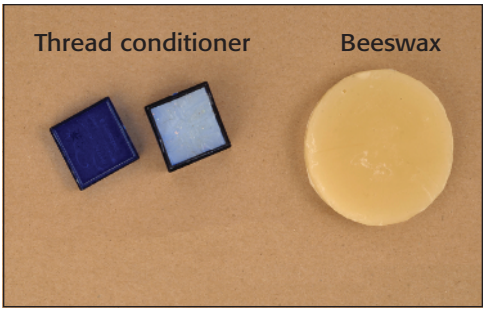
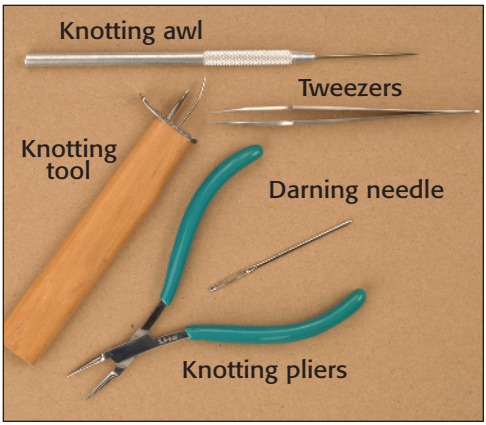
THREAD TREATMENTS



Before you string beads onto a strand of beading thread, it's a good idea to treat the thread with beeswax or thread conditioner. *Beeswax* is sold in blocks at most bead shops. When you rub it along a piece of thread, a layer of wax adheres to the thread to protect it from moisture and to slightly stiffen it, making it easier to work with. However, some beaders avoid beeswax because it can attract dirt and make thread feel sticky.

Thread conditioner is an alternative to beeswax. It is usually sold in small plastic boxes at bead shops and fabric stores. You apply it by gently pressing the thread into the container with your finger and pulling the thread through the conditioner until it is completely coated. Thread conditioner is thought to make thread stronger and to reduce tangling. It is not as sticky as beeswax, and it is less likely to attract dirt.

KNOTTING AWLS AND KNOTTING TOOLS

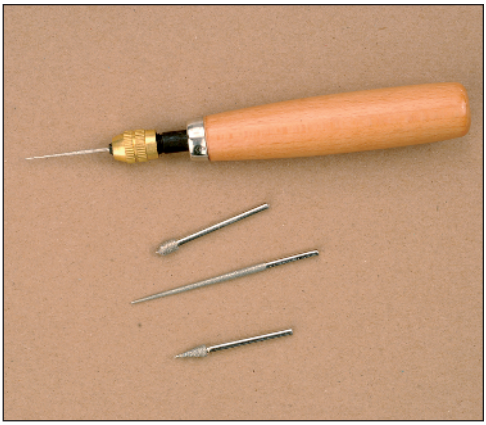


A *knotting awl* helps you position knots against beads. You can find one at most bead shops, or you can use a regular darning needle as a substitute. Narrow tweezers or *knotting pliers* are also useful for sliding tiny knots against beads. Another option is a *specialty knotting tool,* which mechanically maneuvers the stringing material as you make knots.

TIP

Some brands of beading thread are *pre-treated* with either thread conditioner or wax. If your thread is labeled "pre-conditioned" or "pre-waxed," do not treat it before use.

BEAD REAMERS



Bead reamers are hand tools with rough, pointed ends. You use them like sandpaper to *debur,* or smooth out, the holes in some beads before stringing them. Reaming removes jagged edges that might otherwise damage your stringing material. You can also use reamers to slightly enlarge holes on beads made from softer materials. Bead reamers work best on beads made of stone, organic material, plastic, or ceramic. For best results, keep the tip of your bead reamer moist with water while using it.

GLUE AND TOOTHPICKS

Instant bond glue

Glue is often used to help secure knots at the ends of stringing material or to attach components to base findings (see "Jewelry Findings" on p. 26). One of the most popular glues for jewelry making is *E6000*. This thick, clear glue can take time to dry, but it remains flexible and moisture proof when it sets. You can find it at bead shops, jewelry making supply stores, and hardware stores. It's a good idea to keep some toothpicks on hand for applying the glue to small areas, and some paper towels for wiping up glue messes.

Instant bond glue is also used in jewelry making. This is the glue that you typically find in little squeeze bottles at grocery and drug stores. As its name implies, instant bond glue sets very quickly. However, it also becomes brittle and may crack and break. For some applications, especially securing small knots, you can use clear nail polish as an alternative to E6000 or instant bond glue. Whichever glue you choose, always apply it in a well-ventilated area and avoid breathing in fumes.

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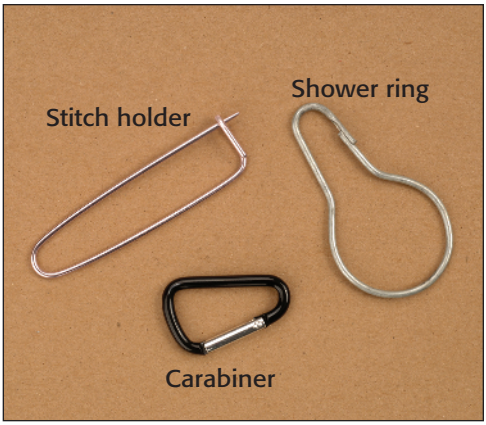
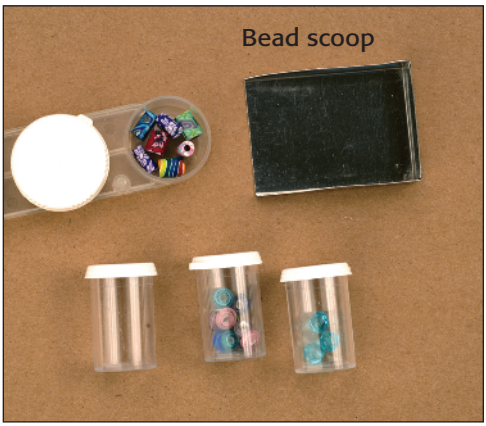
STRAND HOLDERS

Some beading techniques require that you hold or secure multiple strands temporarily while you work. One way to do this is to loop strands through, or tie them around, a thin, generic shower curtain ring. They are available from many jewelry making suppliers and are relatively inexpensive. As an alternative, try using a *stitch holder* for knitting or a small *carabiner* sold as a key chain.



STORAGE AND ORGANIZATION

You can store beads and other beading components in small reusable containers like baby food jars and prescription bottles, or you can purchase modular plastic or acrylic containers sold at bead stores. Use a spoon or *bead scoop* to collect beads and place them back into their containers when you're finished with them. It's a good idea to organize your containers by the type, color, or material of the items they contain.



TIP

The nice thing about strand holders is that they close securely, keeping strands of stringing material from accidentally sliding off. However, in a pinch, you can simply use a pencil or pen, being careful not to let the strands slip off either end.

MACRAMÉ AND BRAIDING SUPPLIES

Twine, waxed linen, waxed cotton, and braided nylon are especially popular cords for macramé work. Smooth satin cord called *rattail* is a more colorful option, and leather and suede can also be used.

A *knotting board* holds your cords in place as you work. You can buy one pre-made, make one yourself, or use an office clipboard as a substitute.

T-pins are sturdy, steel stickpins with tops shaped like the letter T. They are useful for securing, or *anchoring,* cords to a knotting board. (If you don't have a knotting board, use masking tape to anchor your cords instead.)

TIP

Hemp twine is an especially popular cord for macramé work. *Natural hemp* is a rough, rustic style of hemp twine used for more casual designs. It's available in a natural tan color, or dyed in a wide range of artificial colors. *Jeweler's hemp* is a fine, smooth hemp twine that is bleached to have a pale-beige or white color. It works well for more refined or intricate designs.

Jewelry Findings

Jewelry findings are components that serve practical purposes in designs. They attach jewelry parts, keep beads from falling off, and secure jewelry so that it can be worn on the body. Pre-made findings are sold along with beads and other supplies at bead shops and jewelry making supply stores. Most findings are made of metal, but they are also available in other materials. Here are the most common types.

CLASPS

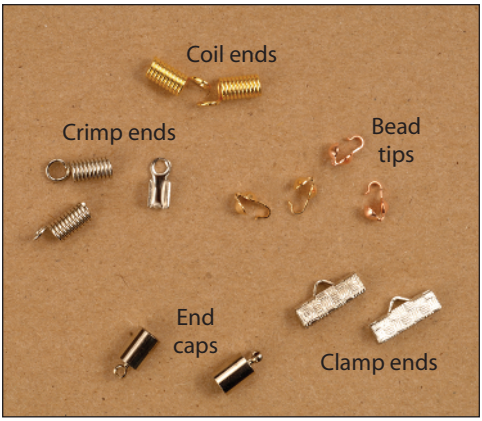
Clasps hold the ends of jewelry together. A clasp can be a simple hook or toggle, or it can be *mechanical,* with moving parts. *Lobster claws* and *spring rings* are examples of mechanical clasps. Most bead shops carry a large selection of clasps in various colors, finishes, and materials.

CRIMP BEADS AND CRIMP TUBES

Crimp beads and crimp tubes are used to secure the ends of bead-stringing wire. *Crimp beads* are rounded and look like tiny metal beads. *Crimp tubes* are tiny metal tubes. You attach crimps to beading wire by squeezing them with chain nose pliers or crimping pliers.

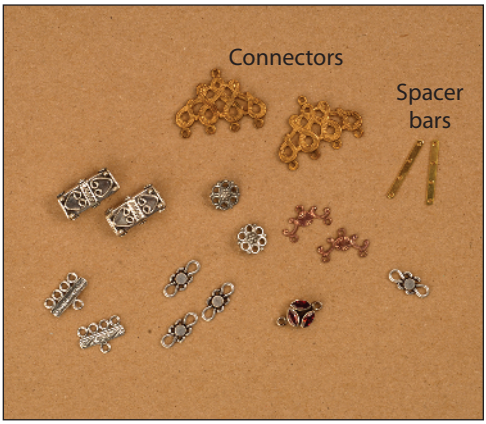
END PIECES

End pieces are metal components designed to secure the ends of various types of stringing material. They often include loops or rings for adding a clasp. Some attach to jewelry with glue, while others are folded over or clamped down with chain nose pliers. End caps, coil ends, bead tips, clamp ends, and crimp ends are common styles of end pieces.



CONNECTORS AND SPACER BARS

A *connector* is a component with two or more rings or holes that can be used to connect strands in a design. Connectors can be functional or purely decorative. *Spacer bars* (also called *separator bars*) have a series of holes or rings that you can string over multiple strands to hold them together side-by-side.



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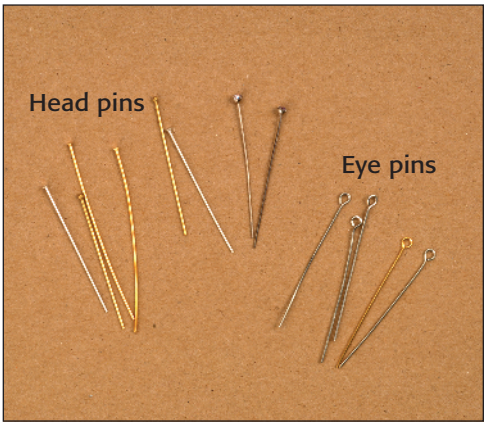
BAILS

Bails are the devices that hold pendants onto necklaces. Some pendants have bails already attached. For others, you need to purchase bails separately or make them yourself. Bails can be as simple as large jump rings or as elaborate and decorative as the pendants they hold.

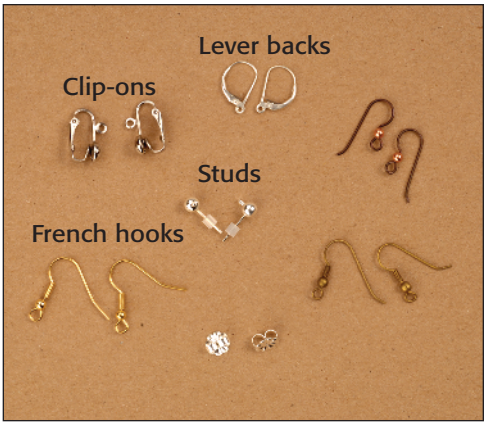
HEAD PINS AND EYE PINS

Head pins and eye pins are short lengths of wire used to create bead drops. *Head pins* typically have flat heads like nails, but some have metal balls, decorative shapes, or even set stones at the end. When you string a bead onto a head pin, the pin's head keeps the bead from falling off. *Eye pins* have a small loop at one end instead of a solid head. You can attach charms or other bead drops to the loop.



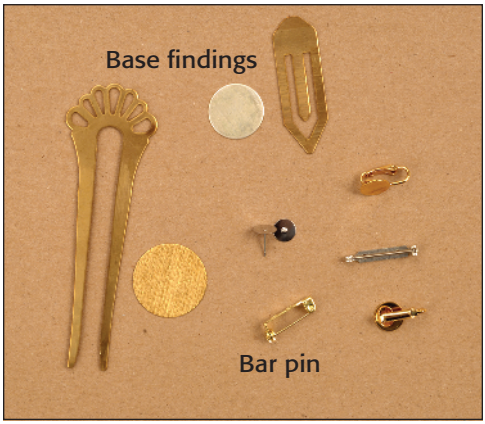
EARRING FINDINGS

Earring findings are components that allow earrings to be inserted through, or clamped onto, the earlobe. Just like clasps, they can be simple (like hooks) or mechanical (with moving parts). One of the most common and simple earring findings for pierced ears is the *French hook.* The most popular mechanical earring findings are called *lever backs.* You can also find *earring studs* with loops for attaching decorative components, as well as various styles of findings for non-pierced ears, including *clip-ons* and *screw backs.*



BAR PINS AND BASE FINDINGS

Bar pins are mechanical findings that you can glue onto other components to create pins and brooches. They are available in a range of sizes. Some come with attached bails so that you can make brooches that may also be worn as pendants. *Base findings* are bare pieces of metal or plain, pre-made pieces of jewelry that you can decorate by gluing, stitching, or wire-wrapping. They include sheet-metal discs, cuff bracelet bases, and pendant bases.



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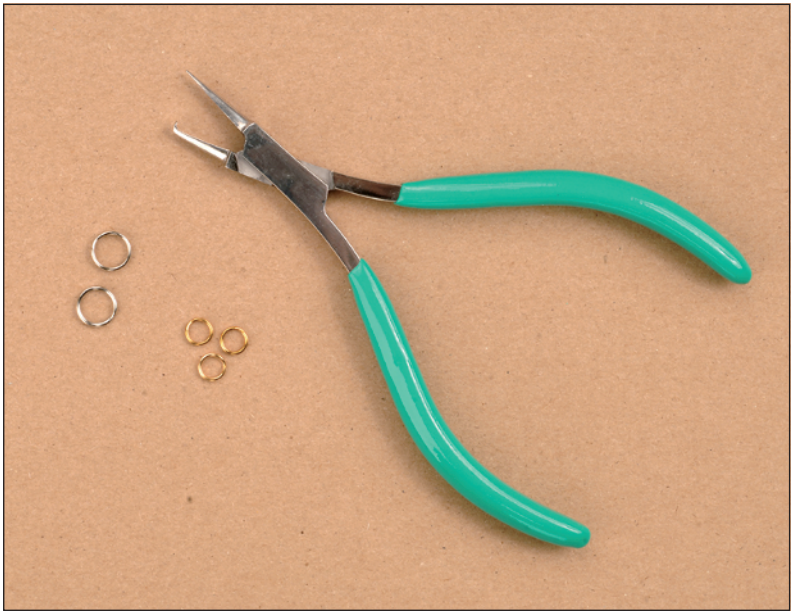
JUMP RINGS AND SPLIT RINGS

Jump rings are small wire rings used to connect jewelry parts. Most jump rings are *open,* which means that they are not soldered closed. You can open and close them using chain nose pliers. (You can also purchase *closed* jump rings, which are soldered and do not open.) Be sure to use the proper method for opening and closing jump rings, as described on the next page.

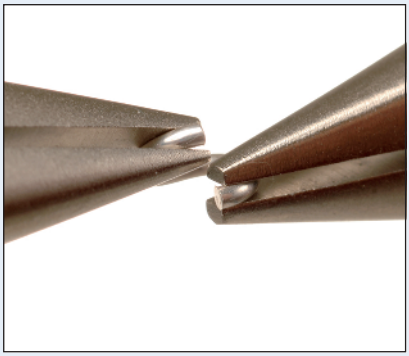
Split rings are coiled wire rings that work like round key rings. You attach them by sliding components between their coils. Split rings are more secure than open jump rings because they cannot accidentally be pulled open; however, they also have a bulkier appearance than jump rings. If you decide to use split rings regularly, consider purchasing a pair of *split ring pliers* to help you attach them more easily.

Jump rings and split rings are usually sized by the gauge of wire they're made from and their outside diameter, called *OD,* or their inside diameter, called *ID.* (For example, an 18-gauge, 6mm OD jump ring is one that is made from 18-gauge wire and has an outside diameter of 6mm.)



TIP

Opening and Closing Jump Rings



You use jump rings when you use beading wire and with many other bead stringing techniques. It is important to open and close them properly to avoid fatiguing the metal and to ensure that they remain secure.

To open a jump ring, hold it in front of you using two pairs of chain nose pliers, with the opening of the jump ring facing upward. Gently bend one side of the ring toward you and the other away from you. To close a ring, bend the ends back in the opposite direction, and wiggle them together until the ring is completely closed; there should be no opening in the seam.