



An Introduction to Fly Tying

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Objectives

Participating young people and adults will:

1. Explore the series of lessons on fly tying
2. Understand the content and approach to the lessons
3. Construct some tools they can use in the lessons
4. Explore ways of obtaining fly tying materials
5. Have fun while learning

Youth Development Objectives

Participating young people will:

1. Become more comfortable in the youth-adult learning environment
2. Enhance hand-eye coordination
3. Enhance problem solving and decision making abilities
4. Practice social interactions in the group

Roles for Teen and Junior Leaders

1. Assist in set-up and break-down of teaching area
2. Assist participants as needed
3. Evaluate equipment and assist in improvement
4. Discuss personal uses of materials and tools
5. Demonstrate tool making techniques

Potential Parental Involvement

1. See “Roles for Teen and Junior Leaders” above
2. Arrange for or provide teaching space

Best Time: As an introductory lesson (any time of year)

Best Location: Comfortable, well-lighted work area

Time Required: 60 to 90 minutes

Materials/Equipment

spring-type clothespins (straight grained)
 small rubber bands
 whittling knives
 150 grit sandpaper
 epoxy cement
 1/8 to 3/8 inch dowel cut in 2-4 inch sections
 sewing needles (large darners best)
 locking pliers
 wire cutters
 heavy copper or soft iron wire
 medium sized nail (6-10d)
 needle nosed pliers
 4-8 pound mono fly tying thread
 wooden matches
 head cement
 samples of fly tying materials
 fabric dye (e.g. RIT or Tintex)

Evaluation Suggestions

1. Observe interactions with peers, teen leaders and adults, and promote positive interactions
2. Evaluate tools and procedures, suggesting

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3. Arrange for or provide materials
4. Arrange for or provide transportation
5. Arrange for or provide refreshments
6. Demonstrate/assist with dyeing materials

- ways to improve using the “oreo” method
3. Observe levels of interest and involvement, attempting to involve every youth positively
 4. Observe improvement in skills with repeated efforts

References

See general reference list

Lesson Outline

Presentation

- I. What is fly tying and why do it?
 - A. Making light weight fishing lures
 1. Tying or winding material on a hook
 2. Basic techniques built by practice
 - B. Fun and economical
 1. Tying alone or with friends
 2. Tying special patterns for your area
 3. More involvement in fishing
 - C. Avocation or profession
 1. Hobby
 2. Source of income
 - a. Casual tying for friends
 - b. Professional tying
 - c. Handling materials and equipment
- II. Cost and difficulty
 - A. Costs
 1. Tools
 - a. Some tie with nothing but scissors
 - b. Some use many, expensive tools
 - c. Basic needs
 - 1) Tying vise
 - 2) Scissors
 - 3) Dubbing needle
 - 4) Hackle pliers
 2. Materials
 - a. High cost materials
 - 1) Hackle capes
 - 2) Specialized materials
 - b. Low cost materials
 - 1) Many found at home or in sewing or craft stores
 - 2) Inexpensive materials adequate for many patterns
 - c. Materials for this course provided
 - 1) Cost if any
 - 2) Any payment requirements
 - B. Difficulty
 1. Learning basic skills
 2. Sequences of skills
 3. Learning to read patterns
 4. Applying basic skills to complex patterns

Application

Ask a few teen leaders or adults to **DISCUSS** why they tie flies and what values they derive from tying flies. Keep the comments brief and stress having fun or relaxing as significant benefits.

NOTE that many hobby fly tiers earn a little money by tying for friends or friends of friends. Most professional fly tiers started with a tying hobby that grew. **STRESS** that professional tying is a business and often less fun than recreational tying.

DISCUSS some of the myths about fly tying costs, noting that much of the equipment and materials can be found in many homes or in sewing and craft stores. **NOTE** that several useful items will be made and that most materials will be provided for the teaching sessions.

DISPLAY and **DISCUSS** various items of equipment. **AVOID** emphasis on top dollar equipment and materials, but answer questions as they are asked.

DISPLAY an array of tying materials, including high quality capes and those that are acceptable for learning and most tying applications.

EMPHASIZE the availability of materials from sources other than tackle supply houses. **NOTE** that tying materials are not overly expensive when compared to the value of the finished flies.

NOTE that some types of flies do take some time and practice, but that everyone will learn the basic skills needed to tie any pattern they wish at a pace they can handle. **EMPHASIZE** that there is no magic involved, just learning skills and applying them.

5. Practice and critical evaluation

III. Making fly tying tools A. Hackle pliers

1. Commercial hackle pliers
2. Clothespin hackle pliers
 - a. Good spring clothespin
 - b. Small rubber band
 - c. Fine sand paper
 - d. Excellent performance

B. Dubbing needle

1. Commercial dubbing needles or bodkins
2. Dowel and needle bodkins
 - a. Short piece of dowel for handle
 - b. Heavy sewing needle (darners)
 - c. Epoxy cement
 - d. Inexpensive and functional

C. Whip finisher

1. Commercial whip finish tools
 - a. Several designs
 - b. Reduce waste of thread
 - c. Excellent finish on heads
2. Match stick and monofilament tool
 - a. Match stick
 - b. Light monofilament line
 - c. Tying thread
 - d. Head cement or lacquer
 - e. Functional and easy to use

D. Bobbin

1. Commercial bobbins
 - a. Many designs
 - b. Provide tension for no-knot tying
 - c. Reduce thread damage in tying
2. Wire bobbin
 - a. Heavy gauge copper wire
 - b. Twist around a nail to form eye
 - c. Form legs about spool width apart
 - d. Indent legs to hold a rubber band
 - e. Insert tag ends of wire in spool

IV. Locating fly tying materials

A. Commercial sources

1. Excellent availability
2. Quality control and customer service
3. Costs reflect market value
4. Purchase for anticipated needs

B. Collecting your own materials

1. Feathers

a. Domestic birds

- 1) Waterfowl wings and flank feathers
- 2) Gamebird body feathers, wings, tails, capes
- 3) Domestic chickens and roosters
 - a) Hackle capes
 - b) Saddles and schlappen
 - c) Wings and body feathers
- 4) Domestic turkeys

PASS AROUND several types of commercial hackle pliers, then **SHOW** a hackle plier made from a spring clothespin.

DISPLAY one or more types of dubbin needles or bodkins and **COMPARE** them to one made of dowel and a sewing needle.

DEMONSTRATE one or more types of whip finishers and a simple whip finishing tool made of monofilament and a match stick.

DISPLAY several types of bobbins, including a simple one made of heavy copper wire.

DIVIDE the group into smaller ones and let each youngster build a set of equipment with the assistance of teen leaders and adult volunteers.

NOTE that commercial sources usually have well-handled and properly prepared materials at reasonable to modest prices for beginning level materials.

ASK if anyone knows someone who raises chickens, gamecocks, waterfowl, turkeys, or other domestic birds. **NOTE** that these birds are excellent sources of tying materials for many types of flies, with body feathers, wing feathers, tail feathers, and specialized hackles (head and neck or rump on roosters) being useful.

- a) “Marabou” feathers
- b) Body feathers
- c) Wing and tail feathers
- 5) Miscellaneous birds
 - a) Peafowl
 - b) Ostrich, emu or rhea feathers
- b. Wild game birds
 - 1) Upland game birds
 - a) Grouse, pheasant, quail, partridge
 - (1) Body plumage
 - (2) Wings and wing coverts
 - (3) Tail and rump feathers
 - b) Turkey
 - (1) Body feathers
 - (2) Dark “marabou”
 - (3) Wing feathers
 - (4) Tail feathers
 - 2) Waterfowl
 - a) Wing feathers and coverts
 - b) Flank feathers - most species
 - 3) Migratory birds
 - a) Crow wings and tail
 - b) Mourning dove wings
- c. Unprotected species like starlings
- 2. Fur and hair
 - a. Most species useful in some way
 - 1) Assortment of textures and colors
 - 2) Fur for dubbing
 - 3) Hair for wings and tails
 - b. Methods of obtaining
 - 1) Buying pelts, tails or pieces
 - 2) Personal hunting or trapping
 - 3) Friends who hunt or trap
 - 4) Fur buyers - ruined pelts often free
 - 5) Road kills, where legal
 - 6) Fur trim on old garments
 - 7) Craft stores
 - c. Dying or coloring fur and hair
 - 1) Easiest with light colored material
 - 2) Wash thoroughly with detergent
 - 3) Rinse
 - 4) Immerse in fabric dye of choosing
 - 5) Simmer until the desired shade
 - 6) Drain
 - 7) Rinse in hot water
 - 8) Rinse in cold water
 - 9) Dry on newsprint
 - 10) Steam to shape if needed
- 3. Other materials
 - a. Floss, yarn and artificial fur
 - 1) Fabric or sewing stores
 - 2) Craft stores
 - 3) Scraps from embroidery or knitting
 - b. Chenille, braided tinsel
 - 1) Sewing centers

NOTE that most marabou used today comes from downy feathers taken from white turkeys rather than from marabou storks.

POINT OUT that nearly any species of bird has some tying value, but that protected species may not be used because of legal restrictions. Even birds like ostriches and emus have useful feathers.

NOTE that nearly all game birds and wildfowl have numerous uses for the fly tier, and that nearly anyone who hunts is willing to share some feathers with those who are interested in tying flies. Often a few flies can bring a bonus in tying material from a friend.

EMPHASIZE the value of the mottled or “speckled” secondary feathers for many patterns.

RE-EMPHASIZE the importance of using only legally obtained feathers from birds that may be taken legally.

NOTE that species as diverse as domestic rabbit, moles, woodchuck, foxes, coyote, raccoon, bears, opossum, muskrat, mink, otter and beaver all have useful guard hairs, tails, and fur.

Even parts of animals may be useful, like porcupine quills, bucktails, or the masks from rabbits or hares..

EMPHASIZE the need to know the laws in your area before picking up road killed animals for fly tying.

NOTE that most furs and hair can be dyed to the desired color with simple fabric dyes. **EMPHASIZE** the need to clean all oil and grease off the fur first. **SUGGEST** using vinegar to aid in setting the dye in the material and keeping the dye bath hot while waiting for the right shade to develop. **NOTE** that the hot water rinse removes most of the dye that is not set in the material.

SUGGEST thinking about tying materials when looking at sewing, cross stitch or embroidery materials. **EMPHASIZE** the need to have permission to use materials belonging to someone else **BEFORE** using it.

- 2) Craft stores
- 3) Party supply stores
- c. Tinsel, flash, flash tinsel
 - 1) Party supply stores
 - 2) Craft stores
 - 3) Holiday decorations

V. Following patterns and creating your own

- A. Importance of following patterns
 - 1. Proven effective - fish catchers
 - 2. Learning to read and understand patterns
 - 3. Planning for needs in later steps
 - 4. Developing basic skills
- B. Developing basic skills
 - 1. Attaching the thread properly
 - 2. Hold tightly, bind tightly
 - 3. Thread control
 - 4. Materials control
 - 5. Proportion and detail
 - 6. Finishing flies
 - 7. Understanding pattern elements
 - 8. Self-critique and learning
 - 9. Practice, practice, practice

- C. Making your own patterns
 - 1. Basic skills and pattern understanding
 - 2. Keen observation
 - 3. Handling materials to reach objectives
 - 4. Field testing for results
 - 5. Evaluation and refinement
 - 6. Examples of successes
 - a. CK Nymph (Chuck Kraft)
 - b. Sulfur spinner (Ron Howard)
 - c. Rick's Special Alewife (Ron Howard)
 - d. Schmidtman-Valla Smelt (Ed Schmidtman and Mike Valla)
 - e. Lefty's Deceiver (Lefty Kreh)
 - f. Muddler Minnow (Don Gapen)

NOTE that chenille, tinsel chenille and braided tinsel are often sold as piping material in sewing or craft stores. Frequently the pricing is well below what one may expect from supply houses.

DISCUSS some items that can be located as substitutes for tinsel, oval tinsel, flash tinsel, or flash fibers and locations where they can be found or salvaged. **RE-EMPHASIZE** the need to ask before using these materials.

EMPHASIZE the need to stick with known patterns and to use an organized approach to learning fly patterns and basic skills when beginning.

REVIEW some of the basic skills that will be taught in the lessons. **ASSURE** the kids that they will learn these things while having fun and with all the help they need to be successful.

NOTE that practice reinforces whatever is being done. Only perfect practice makes perfect. **COMMENT** that the difference between and beginner and a professional is only about 5000 to 10,000 flies and the skills and speed that came with tying them.

Ask participants to **SPECULATE** on some of the skills and processes needed to create a new fly pattern.

SHARE one or more of the examples given here or some of your own experience. Be sure to **DISCUSS** modifications or rejections on the way to the final pattern.

End with a reminder of the next meeting time and location and any material or equipment needs.

Summary Activity

If desired, have each of the participants go through a round-robin of preparing a set of tools for their use in later lessons.

Lesson Narrative

Fly tying is a wonderful hobby for many people and a lucrative business for others. It is the process of making very light weight-fishing lures by tying or winding materials on a hook. It involves some basic skills, which are developed through practice and critical evaluation of the results of each tying effort. Once the basic techniques are mastered, beginners can attempt patterns of greater difficulty or complexity, learning tricks of the trade as they progress. This series is designed for beginners with a series of lessons and patterns that lead to an intermediate level of fly tying skill. Once it is completed, the youngster is capable of tying nearly all types of patterns in common use today and is ready to continue their development as a fly tier on their own or with friends they have made through their tying or fishing

experiences.

Fly tying involves some costs in materials and equipment, like most other recreational or avocational pursuits. Equipment costs are minimal if long-term use is considered, and there are many ways to save on materials. Savings in flies can be substantial when high quality flies are being produced. Many patterns can be tied for less than a quarter per fly, when their comparable value from quality supply houses or local stores may run in excess of \$1.50 or more. The fun of fishing is expanded with fly tying to include the time and relaxation at the tying bench. Tying can be shared with friends or done alone. It allows the angler to customize patterns to his or her area and needs. It leads to better understanding of the life cycles and ecology of fishes and their forages. The result is deeper involvement with fishing and the issues related to fishing and aquatic ecology.

Even youthful fly tiers can expand their hobby and enjoyment into a casual or serious business by tying for friends, special niche markets, or local businesses. Some entrepreneurs find their way into handling materials for fly tying instead. They may raise chickens for the hackle trade, or buy, process and sell furs, bucktails or other materials. Some find sources of fly tying materials at low cost and re-sell it in smaller quantities at a profit. Fly tying becomes work when it is taken on as a profession, and many prefer to leave it as a hobby and a means of relaxing or just having fun.

Cost and Difficulty

Costs can be extremely variable in fly tying. A few skilled fly tiers use only their hands and a pair of scissors. Others have very expensive tools and a bewildering array of gadgets to do everything imaginable with feathers and fur. Most people fall between these extremes, using some type of vise, hackle pliers, scissors, a dubbing needle or bodkin, and one or more bobbins to hold thread or materials. Costs for each of these items are extremely varied. In general, cost and quality are related; but every fly tier would be wise to consider their needs and desires before investing. Poor equipment is a poor investment and makes learning or later tying a challenge. Quality equipment at modest prices will serve for a lifetime if it is cared for properly. One may spend well over \$300 for a tying vise or somewhere in the vicinity of \$20.

Reading materials supply catalogs can be discouraging for beginners. Hackle capes can cost nearly \$100 on the high end, but these are not required for learning or for tying quality flies. (Super capes are wonderful to work with if you can afford them, but they are beyond our needs here.) Some specialized materials are priced much higher than most people can justify as well. On the other hand, the vast majority of materials needed to learn fly tying (or to continue tying as a professional) can be obtained at little cost or at modest costs from a wide variety of sources. Sewing stores, craft stores, party supply stores, and modest cost materials from tackle suppliers are excellent sources of tying material. Many patterns work better with these materials than they do with much more expensive materials through the premium supply houses. It simply takes more work getting what you want, and you may need to modify it to meet your needs. Materials for this course will be provided for consistency and to keep costs to a minimum while you are learning. [State any cost and have it written for parents.]

Some people view fly tying as an extremely difficult skill. We can maintain that illusion, but it is not true. Fly tying involves learning some basic skills, then applying those basic skills to progressively more complex patterns. This series of lessons is designed to teach those skills in a progression, adding new skills and reinforcing earlier ones. It will teach the beginner to read patterns, plan for proper application of materials, and apply all their skills to flies as needed. The skills will be taught in a context of cooperative coaching. Model flies will be prepared as demonstrations. Evaluation of each pattern tied will take place personally and with others, with a view to improving later attempts or refining techniques as needed. Every participant must understand that fish are much less critical of our attempts than we are ourselves. Flies we would reject are often accepted readily by fish.

Making Fly Tying Tools

A tying vise is very important to most fly tiers. Although a pair of locking pliers or even a hemostat or needle holder can be used as a vise, specialized fly tying vises are used by most people. Many quality vises with a wide variety of costs and options are available. We will not attempt to make one.

Hackle Pliers - Many styles of hackle pliers are available as well. A very gentle and serviceable pair of hackle pliers can be made from a spring clothespin with fairly straight grain. The jaws of the clothespin are carved down on either side to about 1/8 to 3/16 inch wide. The top and bottom of the jaws are rounded to form a relatively fine tip that holds at its very edge. Once the jaws are shaped to the satisfaction of the maker, a small rubber band is stretched and crossed over the spring area to provide added holding power. A piece of sandpaper (about 150 grit) is placed between the jaws, the pliers are allowed to close, and the sandpaper is pulled out, alternating jaws until a smooth, even surface is formed. Usually this takes only a few passes. These hackle pliers grip well but do not cut fine hackle tips. They may not look professional, but they work very well if carefully made.

Dubbing Needle - A dubbing needle or bodkin is used for picking out dubbing to form a rough body, lifting hackle fibers or other materials that have been bound down inadvertently, applying head cement, or in tying a whip finish without tools. Many commercial varieties are available, but an excellent dubbing needle can be made by inserting a heavy sewing needle, like a darning needle, into the end of a short piece of dowel with a bit of epoxy for security. These tools are very inexpensive and quick to make, so the fly tier can have several. This allows one to be used for cements and others to remain clean and smooth for other uses.

Whip Finisher - Several types of whip finishers are available commercially. All of them save a bit of thread on each fly and make whip finishing easy and quick -- once you learn to use them. Of course a whip finish can be accomplished without tools, but a very simple tool for whip finishing flies can be made with a match stick, a short length of monofilament, a tying thread wrap, and some head cement or glue. Start by tapering a matchstick on one end. Using about 6 inches of 4 to 8 pound test monofilament, form a loop with one tag end of the monofilament on each side of the taper. The loop beyond the tip of the stick should be only about 1 to 2 inches in length, and the tag ends should be left fairly long. Wind over the monofilament from near the tip to about 1 inch up the matchstick, then reverse the tag ends and wind back toward the tip. Repeat this process as you near the tip, winding back toward the far end of the matchstick. Trim the ends of the monofilament, and wind over them to keep the surface of the windings smooth without projections. Whip finish the thread and apply a drop or two of head cement, epoxy or super glue to bind everything together.

This tool is easy to use. Just lay the loop along the head of the fly with the handle toward the tail of the fly. Wind over the loop from the back of the head to the front. Holding the thread in place with a finger, trim the tag end, insert it through the loop, and pull the loop through the windings. [**Caution:** Do not let the loop go around the hook or it cannot be removed without breaking the monofilament.] Pull the tag end of the thread tight, trim it neatly, and apply head cement to finish the fly.

Bobbins - Commercial bobbins are very useful with many designs available. Some use spring tension. Some use as series of turns in the thread. Some use tension supplied by sidepieces of the frame. All of them allow the tier to provide tension for no-knot tying while reducing thread damage. A serviceable bobbin can be made using about 8 to 10 inches of heavy copper wire. Start by bending the wire in the middle around a 6d to 8d nail. Use the nail and pliers to twist the wire together for an inch or two. Bend the open loop to about a right angle with the twisted stem. Spread the "legs" of the wire to slightly over the width of a thread spool, and form an angle that keeps the legs parallel to each other. Bend the tips of the legs inward at right angles so they would meet if long enough. Cut the ends of the wires to leave about 3/4 inch stubs to insert into the spool holes. Attach a spool, and put several wraps of a rubber band across the parallel parts of the legs to provide the desired amount of tension.

Locating Materials

There are hundreds of commercial sources for fly tying materials. Most of them provide excellent quality, ready availability, good customer service and reasonable costs. Using commercial sources allows you to purchase what you think you need at any given time, minimizing storage of extra materials and having known quantities of known quality materials on hand.

Most fly tiers, however, collect many of the materials they use from other sources. They are constantly on alert for materials that might be useful in tying their favorite patterns or for something new that might allow

them to tie something special. Once these materials are popularized, they often become commercially available. Some years back the only commercially available peacock feathers were the rump (herl or eye feathers) and sword feathers. Today tiers can purchase primary feathers, secondary feathers, body feathers of several types, and the traditional feathers. That change is the result of tiers who had access to the birds using the materials and creating a demand for them by others who did not have access to peafowl.

Feathers - Fly tiers use feathers for hackles, legs, tails, wings, nymph wing pads, body materials and posts for wings. Many types of feathers from many types of birds are useful. One must make sure that the feathers are legal to possess and legally obtained. Domestic birds are excellent sources of fly tying material. Waterfowl wing feathers, tail feathers and flank feathers are used in many patterns, either in natural colors or dyed to any color desired. Domestic ducks and geese can provide these feathers either by picking up molted feathers or by assisting in plucking fowl destined for the table. Domestic game birds, like gray partridge, quail, or pheasants have useful body feathers, wing feathers and tails that are used in many patterns. Some birds are skinned to obtain entire capes for easy location of any feather type desired. Domestic chickens, both cocks and hens, provide useful hackles from their head and neck feathers and from their saddles or rump feathers. Feathers at the bases of the wings are also used in some patterns. Wings and body feathers may be used in some patterns as substitutes for other types of feathers. Domestic turkeys provide wing and tail feathers that are either dyed or used in the natural form. Bronze birds have highly desired mottled secondary feathers and body feathers that are popular for some types of no-hackle flies. White varieties provide most of the commercial "marabou" from their fluffy body feathers. This can be dyed to nearly any color desired and re-fluffed with some steam. Other domestic birds also provide useful feathers. Peafowl have a wide variety of useful feathers. Ostrich, emu and rhea feathers form additional types of "herl" that can be used in bodies or as tails or wings on some patterns.

Wild game birds are also very useful to the fly tier. Upland game birds like grouse (all kinds), pheasant, quail, or partridges are useful for their body plumage, wings and tails. Even the marginal feathers on the wings and the wing coverts are useful in tying some patterns. Wild turkeys provide the same types of feathers found on the domestic birds, even to having a dark "marabou." Waterfowl yield wing and tail feathers, as well as flank feathers that provide wing and tail materials. While wood duck and mallard flank is most commonly used in patterns, nearly any duck provides useful materials for fly tying. Other migratory birds, like rails, gallinules, coot, crow, mourning dove (where legal), woodcock, and unprotected species like starlings provide materials for some types of flies.

Fur and Hair - Most types of fur and hair can be used in tying flies. Patterns call for an assortment of colors and textures that can be obtained from many different species. Some domestic animals have very useful fur or hair. Mohair and wool are used in some patterns. Under fur from deer, caribou or bison is useful as well, although few people use it. The fur is generally used in dubbing for body materials, while guard hair or tails are most often used as wings or tails. Some hair is wrapped as body material -- porcupine quills, horsehair and moose mane are good examples.

There are many ways to obtain fur and hair for tying. Some furs and hairs can be picked up from fences or as excess on a shearing floor. Others can be bought across the counter as pelts, pieces, tails or scraps. Personal hunting or trapping can provide fur and hair specimens from the wild, as can friends who hunt or trap. A few flies can aid in that process. Fur buyers often purchase pelts that are damaged from youngsters, even though they cannot sell them. They may sell or give these pelts to fly tiers to get them out of their fur sheds. Where it is legal, road kills can be salvaged for either hides or pieces of fur or tails. Fur trim on old garments can be a good source for some types of fur or hair. Craft stores also carry artificial hair or fur that can be used in tying flies. Finally, many a pet dog or cat has been combed for fur that is just the right color by fly tiers who discovered that color when the animal was shedding.

Dying Fur, Hair or Feathers - Fur, hair and feathers can be used in their natural color or dyed to any color desired. Very expensive dyes can be obtained from some fly shops, but common fabric dyes are effective for most purposes. Light colored materials dye best, although dark hair often produces very useful colors as well. Start the dyeing process with a thorough washing to remove all oils and grease from the fur, hair or feathers. Common laundry or dishwashing detergent does an excellent job. Rinse the material thoroughly, and immerse it in a fabric dye of your choosing. Add a bit of vinegar as a mordant to aid in

getting the dye into the material, and simmer the material and dye until it is the color desired. Drain it carefully and rinse it twice, first in cold water then in hot water. This removes excess dye that is clinging to the outside of the material instead of penetrating it. If the desired color is not obtained, return to the dye bath for additional time. If the color is satisfactory, squeeze the material to remove excess water and arrange it on several layers of newsprint (and away from dogs or other critters) to dry. If it dries to a matted condition, hold the material in a jet of live steam to fluff it back to normal.

Other Materials - Many other types of materials are useful to the fly tier. Floss, yarn of several types, artificial fur or hair, tinsel, braided tinsel, latex sheets, chenille, flash tinsel, flash fibers, and much more can become part of ones fly tying collection. In addition to the commercial tying outlets, many of these items can be purchased from fabric, sewing, craft, or department stores. AFree@ samples can be obtained as scraps from sewing, embroidery or knitting. Often a useless few inches of yarn or floss can tie several flies. Chenille, braided tinsel and similar products are sometimes sold through sewing centers or craft stores as piping. Mylar tinsel, flash tinsel and flash fibers are used in many holiday ornaments, party arrangements, or similar applications. Locating their sources or watching for end-of-season sales can yield excellent materials at bargain prices.

Fly tying materials are everywhere. All we need to do is to recognize them and put them to work for us.

Fly Patterns and Creating Your Own

There is a very strong temptation among beginning fly tiers to create their own patterns. We strongly recommend that beginners learn to tie using standard patterns designed to teach basic or more advanced tying skills. There are several advantages to this approach. First, proven patterns are more likely to be effective in catching fish. Second, using these patterns teaches the participants to learn how to read and follow pattern directions. This helps them learn to plan ahead for steps that come later but must be initiated early in the tying process, like binding in a ribbing tinsel before body materials are applied. Finally, and most importantly, the selected patterns are designed to teach the skills necessary to tie any pattern.

Basic Skills - Some of the fundamental skills required in tying flies are easily overlooked. The first one is learning how to put a hook in the vise securely. Immediately after that is the challenge of attaching the tying thread to the shank properly. The hold-tightly-and-bind-tightly technique is common to nearly all fly tying situations, as are control of various materials, thread control, and a sense of proportion. Proper fly finishing techniques are important to tying durable and well-proportioned flies. An understanding of pattern elements and basic materials is important to growing as a fly tier. All of this requires that the beginner be self-critical while learning. The first flies will take a long time and be somewhat crude, but progress will be rapid as the skills and sense of proportion develop. All of this takes practice with the intent to improve with each pattern tied.

Making Your Own Patterns - Once the basic skills and pattern design elements are understood, keen observers of the waters and behavior of fish can lead to development of patterns that work better than current types. Knowing how to handle materials to make them achieve desired results aids in pattern development, and field testing of various models can lead to refinement. Several examples are listed here (but you can add your own).

The CK Nymph - A Virginia professional, named Chuck Kraft, invented this general nymph pattern many years back. A major outdoor magazine wrote it up as the "Miracle nymph." This pattern looks like a wooly worm with a crew cut and a bushy wood duck flank tail. Most of the material used in tying it is "waste." That is, the hackles are too big for most other flies in its class, and the wood duck flank is the webby material that cannot be used for good dry fly wings. A simple combination of a black wool body over a lead wire core with a short, bushy wood duck flank tail and a palmered grizzly hackle clipped to about 1/3 inch, this fly is outstanding for trout, smallmouth bass and other species in rivers or streams with heavy current. It suggests lots of things but does not really imitate any specific insect or fish. It is big, buggy and heavy enough to get to the bottom. It also works all over the country.

Sulfur Spinner - This pattern was developed in response to a tremendous hatch on a Central New York

stream by the author. It started with a poly-winged spinner design, added polypropylene dubbing in a liquid sulfur color, split tails and a bright yellow egg sac. After several iterations the combination was worked out and became a staple of the anglers on that stream during the hatch.

Rick's Special - This pattern was the fourth of a series of patterns using mylar sheeting as a broad flash in an attempt to create an alewife pattern by the author. The others are lost in obscurity because they did not produce. This pattern with a combination of light dun and green hackles proved very effective on lake trout, browns and Atlantic salmon in the Finger Lakes region. It remains unknown except for some specialists in the area and the originator.

Schmidtman-Valla Smelt - This is a mylar bodied fly developed by Ed Schmidtman and Mike Valla as a slim, flashy version of a smelt to be used in fishing concentrated salmon and trout in the warm water outflow of a power plant. An underbody of curon foam and a body of large mylar piping is attached to tandem hooks with a pronounced eye on the large head, a ring of pale dun hackle at the cheek, and a dun hackle tail. The back is colored with a permanent marker (black worked best). Fished on a sinking line, the fly had a crippled minnow action, lots of flash, and excellent fish catching ability. It was complex to tie, but worth the effort.

Lefty's Deceiver - One of the classic saltwater patterns with plenty of utility in freshwater as well, this fly is the product of Lefty Kreh. A relatively simple pattern that has lots of action and a fairly wide profile, like a small menhaden, this hackle and bucktail fly has been a favorite since its introduction.

Muddler Minnow - Don Gapen is generally credited with the development of this classic pattern. It was designed with a broad deer hair head and a flared deer hair collar to suggest a sculpin, a favorite food of the God's River brook trout. This pattern has evolved into a general searching pattern, a grasshopper imitation, and a great streamer fly. Other sculpin imitations may be better, but this one is still effective.

You may want to add some customizing efforts of your own to bring the process home to the kids.

Exhibit and Sharing Suggestions

1. Exhibit your personally constructed tools or other home-built fly tying equipment at a suitable event.
2. Prepare a poster or an illustrated talk on making fly tying equipment or preparing fly tying materials.
3. Give a demonstration on making an item of fly tying equipment or preparing some type of fly tying material.
4. Prepare a consumer decision making exercise on some item of fly tying equipment or on an entire set of equipment. Use the exercise with your group or another interested one.

Community Service Suggestions

1. Set up a fly tier's equipment or materials exchange.
2. Make kits of materials that can be used in teaching other youth about fly tying or fly-fishing.
3. Make kits of equipment that can be used in teaching other youth about fly tying.
4. Plan an exhibit at a local Hunting and Fishing Day celebration and staff the exhibit demonstrating fly tying to those in attendance.

Links to Other Programs

The relationship of this lesson to others in the fly tying and tackle crafting section is obvious, as is its relationship with other elements of the Sportfishing program. Links to basic woodworking, sewing and crafts projects may develop through exposure to the materials used in some fashion in this project. Deeper study of the content can lead to exploration of fishery biology, the ecology of prey species, and the behavior of local fishes. Exploration of science can be stimulated through the chemistry of dyes, evaluation of patterns using statistics, and identification of the sources of fly tying materials.