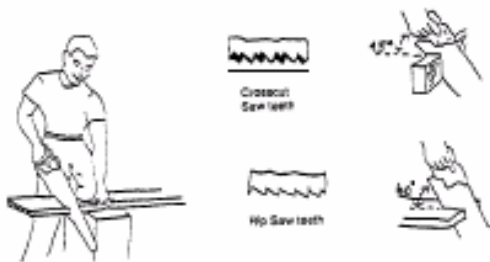


## CRAFTSMAN (2) -- TECHNOLOGY GROUP

The Craftsman activity pin will not be an easy one for some of the boys to complete. Encourage the boys to put forth their best effort. Give praise when praise is deserved, and give encouragement in other areas. Do not encourage competition while working on Craftsman, this can cause boys to get careless in their attempts to "win" and could cause injuries to occur.

### Handsaws



Handsaws have come a long way since the earliest Stone Age man made his by chipping notches in a piece of stone or flint. Today's saws are made of steel, with handles designed for a firm grip and with two very important types of teeth. These two very important saws in a wood worker's tool kit are a rip and a crosscut saw. While both saws look alike in size and shape, a close examination of the teeth will disclose several differences - the shape and spacing of the teeth, and the way the teeth are filed. Rip-saw teeth are designed to cut with the grain of the wood and so are straight-filed, each tooth cutting as a small chisel. Crosscut saw teeth are designed to cut across the grain and so are bevel-filed, each tooth cutting the wood fibers like a sharp knife. Both saws have a "set" in the teeth ... that is, alternate teeth are bent outward slightly, so the saw kerf will be slightly wider than the thickness of the blade to provide clearance and make cutting easier.

High quality saws are taper-ground for the same reason. The most popular size of rip and crosscut saws is 26 inches, with five or five and one-half teeth (point to the inch for rip saws and eight or ten teeth to the inch for crosscut saws.)

To rip a board, hold at 45 to 60-degree angle. Take long, easy strokes. Don't force saw To start a cut, use thumb as a guide for blade. Extending your forefinger on handle, helps to steer saw in straight line. For crosscutting, hold the saw at an angle of 45 degrees. Steady the board so it does not vibrate.

### Working with Plastics

Acrylic sheets are used for plastic projects. Almost any plastic supplier has scrap acrylics which you can purchase from them for a minimal price. (They may

offer to donate the pieces.) You can also find sheets of acrylic in many home improvement stores. You will need fairly thin acrylic (1/8" thickness is plenty) for these projects. You can use clear or colored sheets, depending on the project you choose.

It is important that you plan ahead. You will have to do some of the work yourself. For example, an adult should oversee the use of ovens or appliances. For simple thermoforming, a kitchen oven, electric hot plate, heat gun, hair dryer or strip heater can be used. There are many variables involved in heating and forming plastics, so experiment in advance with scrap pieces so you'll know what to expect at the meeting.

As a general rule, the plastic should be heated as quickly and uniformly as possible. The plastic should be very pliable or rubbery for good forming, when heated. When heating in an oven, set the temperature at 350 degrees.

#### General Procedures:

1. Before you heat any plastic, be sure to remove all masking paper and foreign matter from it.
2. For simple bends, first cut to shape the pieces to be formed.
3. Finish the edges the way you want them to appear in the final project.
4. Wear soft cotton flannel gloves when handling the heated plastic.
5. Form all pieces as quickly as possible, as the plastic cools quickly.

### Working with Leather

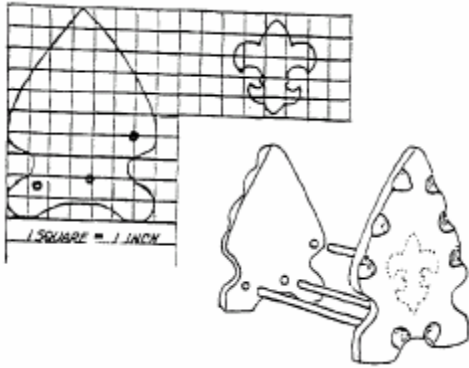
Leather crafting is a fun hobby that many boys may carry into adulthood with them. It is best to start with simple projects like key chains and coasters. Then let the boys work their way up to more difficult items such as wallets or belts.

#### Leather Tooling Tips

- Dampen leather for ease of tooling, but don't leave it dripping wet.
- Have the boys draw a design on paper before starting. Then they can trace the design onto their piece of leather with an awl.
- Let the boys practice with their tools on scrap leather first.
- Leather stains or acrylic paints can give your projects an added dimension.
- Put a scrap of wood under each boy's project.

## Projects

### Book Rack:



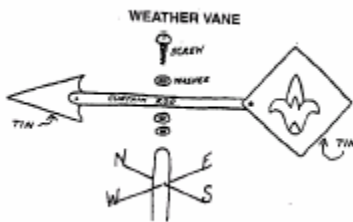
Keeping your Scouting books, and other books that you are reading, in this rack will help you find just the book you want quickly.

It also helps to keep your room in order. Making this book rack is not difficult and is a good woodworking project. The end boards of the rack are cut out in the shape of a huge Indian arrowhead. See template for pattern. These are cut from one-half inch hardwood.

Sandpaper the edges off smooth and "chip" the edges with a half-round file. The chip grooves are made on the outside of the end boards only. The inside surface is left smooth. Three, one-half inch dowels are used for the spreaders. They are 12 inches long, and the ends are glued into holes made in the end boards. These holes must stop short of going through. The proper location of these holes can be determined from the pattern. When boring the holes, be sure to make the ends right hand and left hand. Otherwise, you will be in trouble.

A thin piece of plywood about 1/8 inch thick is used for the Scout emblem. Make one for each end and glue them in place as indicated in the illustration. The rack can be finished any way you desire. It can be stained and lacquered, or finished natural. If you like bright colors, it can be painted with enamel. The emblem should be a contrasting color.

### Weather Vane



#### Materials:

20" Curtain Rod  
Coathanger Wire  
Tin or Aluminum  
Broomstick or dowel

Bolts, washers, screws

Glue

Enamel Paint

#### Construction:

1. Using patterns enlarged from the above illustrations, cut arrowhead, Webelos insignia and compass point initials from tin. Roll edges so they will not be sharp and dangerous.
2. Paint with enamel.
3. Bolt arrowhead and Webelos insignia ends to curtain rod.
4. Drill small holes in 4 sides of broomstick.
5. Solder initials to wire. Glue ends of wire in holes of broomstick.
6. Punch hole in middle of curtain rod.
7. Screw curtain rod to top of broomstick, using washers, so arrow will swing freely when the wind blows.
8. When installing vane, be sure that the stationery compass directional initials point correctly, i.e. N is due North, etc.

### Drafting Word Search:

B S D E F R L D C G C I F D B  
 L A C V P E E L I F E D G E D  
 J R A R L Y C X E C E A G S J  
 P T V U A H T T A I O T S K R  
 Y I R C A S E F T W K J T E X  
 Q S U L Y T S A R N A L P A L  
 D T K S D A G R A P H I C S M  
 F B E T R T I D C E L C T R M  
 H S U R B E R Q E A U A R A N  
 L M K A C C N I C R N A E B T  
 J I O C S A D D A D E B N E I  
 Q C C K O R A C E N Q Z E Y F  
 N L N N A L Y E I R G H M P C  
 G I I O E Q B L E P S L O O T  
 C P B P A P E R B L A D E C E

Accuracy

Artist

Blade

Brush

Chalk

Curve

Easel

Graphics

Matte

Plan

Sheet

Tools

Acetate

Bars

Block

Caliper

Clip

Desk

Edge

Inks

Paper

Render

Stand

Trace

Arcs

Beam

Board

Case

Copy

Draft

File

Linear

Pencil

rule

Stylus