

**TOTIN' CHIP**  
**AND**  
**BLADE N' BLAZE**  
**INSTRUCTOR'S NOTES**

**MONTGOMERY COUNTY, MARYLAND**  
**NATIONAL CAPITAL AREA COUNCIL**

# BOY SCOUTS OF AMERICA

The basic reference for both the instructor and the student is the Boy Scout Handbook--BSHB (Chapter 3, pages 63 through 75). During your instruction, refer to it often and remind the learners that it remains a ready reference for both these skills and others—and will be available after they have lost these notes. Stress that this is the message that Scouters should convey to the Scouts. All references are to the tenth edition.

Attached to these notes are--

- A check-off sheet that the instructor uses to record the progress of the learners.
- Insert for the BSHB. The Scout uses this to keep track of his own progress.

## SUMMARY OF TOTIN' CHIP REQUIREMENTS

### THE AXE YARD

1. Demonstrate how to size an axe yard.
2. Explain how many people can be in an axe yard at one time.

### HANDLING AN AXE AND HATCHET

3. Demonstrate how to store an axe or hatchet
4. Demonstrate how to pass an axe or hatchet
5. Demonstrate how to carry an axe or hatchet

### USING A HATCHET

6. Split a piece of wood using the contact method.
7. Make a tent peg by the contact method.
8. Explain why an axe should not be used as a hammer.\*

### USING A SAW AND AXE

9. Demonstrate how to saw a log into proper lengths for splitting.
10. Split one 4-inch diameter piece of wood using the shillelagh method, demonstrating the three main safety requirements of the method.\*

### USING A POCKET KNIFE

11. Demonstrate how to open and close a pocket knife.
12. Demonstrate how to pass a pocket knife.
13. Demonstrate how to use a pocket knife.

### SHARPENING AXES, HATCHETS, AND KNIVES

10. Demonstrate how to sharpen an axe or hatchet.
17. Demonstrate how to sharpen a pocket knife.

### OTHER CONSIDERATIONS

16. Demonstrate how to cut limbs from a downed tree.
17. Explain when standing trees should and should not be cut down.

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\*Unique to Olde Mill, Potomac, and Seneca Districts

## THE AXE YARD

1. Demonstrate clearance for an axe yard.

Adequate clearance in an axe yard ensures safety. The clearance length is the combined length of the axe handle and your arm. Anything closer than this distance could get in the way and deflect the axe or shillelagh [see item 10, below]. Check your clearance by holding your axe by the head. Slowly swing the handle at arm's length all around you and over your head. (P. 71 BSHB). Make sure that the axe yard is at least as large as the area identified by swinging the axe. Mark it off with a rope or surveyor's tape. The rope not only keeps people out of danger of being hit by the axe or shillelagh but also away from flying wood. **NOTE:** When using rope, tie on small pieces of surveyor's tape every few feet to make it easier see so that people won't walk into it.

The best approach is to set up a complete axe yard, even when camping only a few days. You need a chopping block, and saw buck. If you're lucky you will be able to build your axe yard around a short stump that can serve as a chopping block. Otherwise, a 2- or 3-foot long, 1½-foot or so diameter log will do nicely. The chopping block not only raises the chopping surface to a more convenient height but also provides a more solid surface and helps to protect the edge of the axe and hatchet.

2. Explain how many people can be in an axe yard at one time.

Allow just one person at a time in the axe yard. This rule applies when the contact method is being used. On the other hand, if you're using the axe in combination with the shillelagh, two people can be in the axe yard-- the axe holder and the shillelagh holder. Of course, there are times when the instructor is also in the axe yard, but only if the instructor is an experienced adult leader or an older, experienced Scout.

## HANDLING AN AXE AND HATCHET

3. Demonstrate how to store an axe, hatchet, and sheath.

An axe or hatchet is always transported with the blade covered by sheath or other cover. When using the axe and hatchet in the axe yard, you must put the sheath somewhere so that other members of the troop can find it. Obviously your pocket will not do. Many troops hang the sheath next to the gate (preferred) or tuck it under the chopping block (acceptable). Incidentally, if you lose the sheath, you can make one from a flattened tin can.

4. Demonstrate how to pass an axe and hatchet.

This is shown in Fig. 1 and on page 75 of the BSHB. The axe holder and receiver face each other. The axe holder has the axe vertical with the head downwards and the blade facing outward. The receiver asks "may I have the axe." When the holder says "yes," the receiver grasps the axe below the holder's hand and says "thank you." Upon hearing "thank you," the holder says "you're welcome" and releases the axe.

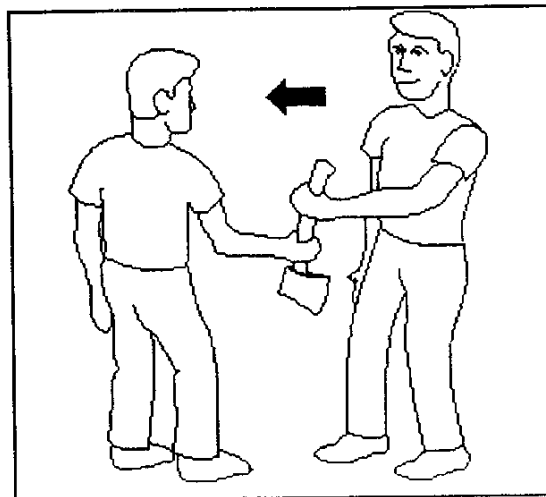


Figure 1. Passing and Axe or Hatchet

5. **Demonstrate how to carry an axe and hatchet.**

This is shown on P 74 (BSHB) for an axe and in Fig. 2 for a hatchet. Hold the hatchet with the handle horizontal (parallel with the ground) and the blade downward. Grasp the handle just below the head with the index finger along the head pointed in the direction of the blade. Have the sheath on when outside the axe yard.

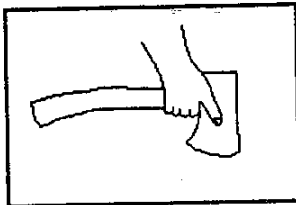


Figure 3. Carrying a Hatchet.

NOTE: The parts of a hatchet are shown in Fig. 3.

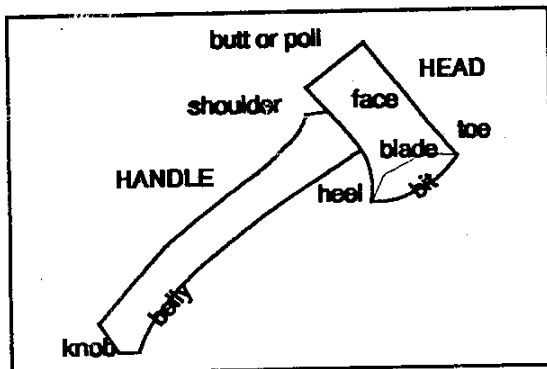


Figure 4. Parts of an Axe

## USING THE HATCHET

6. **Split one 2-Inch diameter by 12 inch long stick of wood using the contact method.**

This is shown on P 71 (BSHB) and in Fig. 4. With the stick in one hand and the hatchet in the other, set the stick horizontally on the chopping block. Place the blade of the hatchet on the far end of the stick with the blade parallel with the grain. Now, holding the stick and the hatchet handle parallel, raise them

together and swing sharply downward in an arc on the chopping block. Repeat until the hatchet penetrates the stick enough so that a twist of the hatchet splits the stick. One variation is to hold the hatchet and the stick together in one hand.

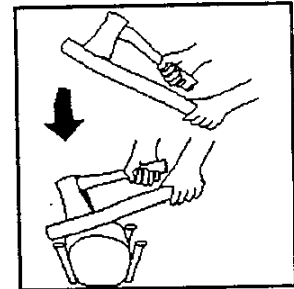


Figure 2. Contact Method

When cutting a stick, place axe edge in contact with stick on a slant to the grain, bring axe and stick up and down together on chopping block. (Fig. 5)

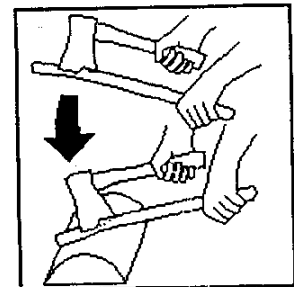


Figure 5. Cutting a Stick.

NOTE: Always use a chopping block and a sharp ax.

7. **Make a tent peg.**

Admittedly, one can purchase tent pegs that are vastly superior to virtually anything one can make by hand. In fact, many modern tents don't even need pegs...particularly in calm weather. So why make a tent peg. The reason is that making a tent peg is an easy way to determine if the Scout has developed the necessary skills. It's a lot like including parallel parking in the driving test. Important parts of the tent peg (Fig. 6) are the point (A), the slot (B-C), and the chamfer or bevel (D).

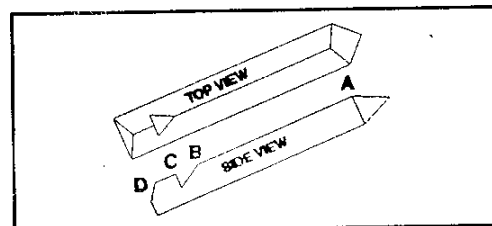


Figure 6. Tent Peg.

Start with a stick about 8 to 12 inches long and 1 to 1½ inches in diameter. Use a sharp hatchet. Begin by making a point on one end by the contact method, as follows: Hold the stick on the chopping block at about a 60 angle, with the blade of the hatchet about one inch from the end (point A in the figure) and the head of the hatchet vertical. Raise the stick and the hatchet together and swing them downward, striking the chopping block sharply. Repeat, rotating the stick until an even point is made. It's a lot like sharpening a pencil. For the notch, hold the stick horizontally and make the cut at C using the contact method. Next, remove the notch by using the contact method at B. Repeat between C and B until the notch is deep enough -- about one-third of the diameter of the stick. Finally, make the chamfer at D using the contact method.

**8. Explain why an axe or hatchet is never used as a hammer.**

Obviously, an unsheathed axe or hatchet cannot be safely swung. Even when sheathed, they should not be swung, because the hammering can cause the head to loosen on the handle. The backside (butt) is usually not tempered and will chip off.

## CUTTING & SPLITTING LOGS

**9. Demonstrate how to saw a log into proper lengths for splitting.**

The proper length is from 12 to 18 inches. There are several excellent pictures on page 69 of the BSHB. Just as with the use of the axe, safety is important with a saw. Note that the blade should be covered when the saw is not in use and during transport. When in the axe yard, hang the saw so the blade is against a tree or otherwise protected so that someone cannot bump into it. Use the blade cover provided by the manufacturer or cut a piece of garden or heater hose (or equivalent) the length of the blade and insert the blade into a slit in the side of the hose (pictured in the Handbook). Of

<sup>have</sup> course the best solution from a safety standpoint is to have a folding saw where the blade folds into the handle.

**10. Split one 4-inch diameter by 12-Inch long piece of wood using the shillelagh (headache) method. In the process, demonstrate the three main safety requirements of the method.**

[The shillelagh is a log approximately 24 inches long, and about 6 inches in diameter. One end has been reduced in diameter in order to make a handle. Make a shillelagh by sawing 1-inch deep around the circumference of the log, about 10 inches from one end. Cut away the outer cylinder down to the depth of the saw cut. *NOTE:* Don't make the shillelagh too heavy or the younger Scouts won't be able to swing it,

After the log is cut to proper length, it must be split. Many adults have split wood. Unfortunately, the methods that they have commonly learned are not only unsafe, but not as efficient as the shillelagh method. The procedure is as follows. Set a log endwise on the chopping block. The axe holder sets the blade of the axe on the end of the log with the handle near-horizontal (the knob end being slightly lower than the head). The axe holder spreads his feet about 18 inches apart and bends his knees. (First Requirement) The shillelagh holder stands at right angles to the axe holder (Second Requirement), and grasps the shillelagh by the handle. She holds the shillelagh above her head when the axe holder says "ready," hits the butt of the axe head with the shillelagh. If the wood is hard, it is sometimes helpful to tap the axe into the end of the log with the shillelagh before beginning. When the shillelagh strikes the axe, it should be parallel with the ground so that the force is directed straight downward along the head of the axe, forcing the axe straight into the wood (Third Requirement). This is all shown in Figs. 7 and 8.

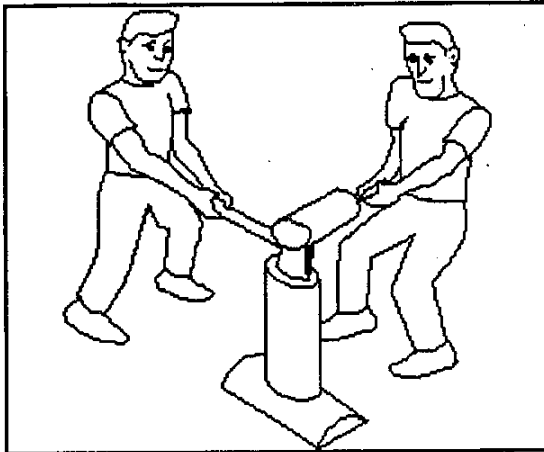


Figure 7. Striking the Axe with the Shillelagh.

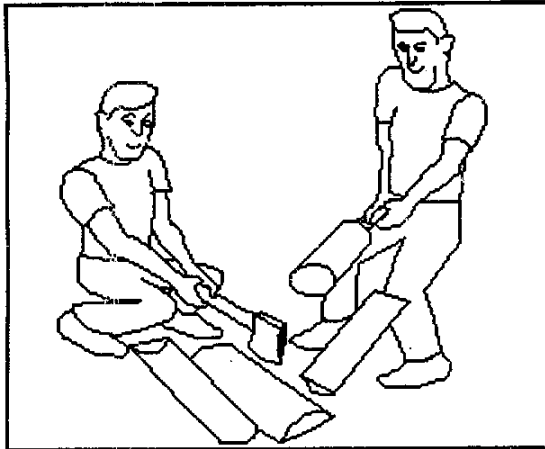


Figure 8. . . . and the Log Splits.

## USING A POCKET KNIFE

*NOTE:* A jackknife has blades at one end only, while a penknife has blades at both ends (Fig. 9).

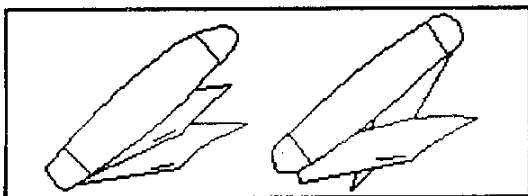


Figure 9

### 11. Demonstrate how to open and close a pocket knife.

This is shown on P 66 (BSHB). Remember, a lubricated knife is easier to open and close and is therefore less likely to slip and cause an accident.

To open pocket knife (Figs. 10-12), hold in left hand, put right thumbnail into nail slot.

Fold the blade out while pushing against hinge with little finger of left hand. Continue to hold on to handle and blade until blade snaps into open position.

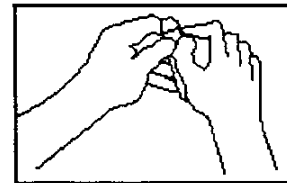


Figure 10.

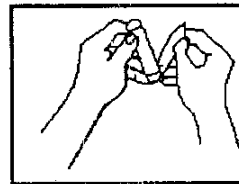


Figure 11

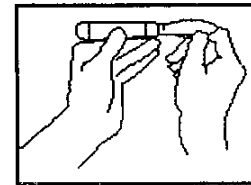


Figure 12

To close pocket knife (Figs. 13-15), hold handle with left hand, with fingers safely on the sides. Push against back of blade with fingers of right hand; swing handle up to meet blade. Let knife snap shut. The "kick" at the base of blade keeps blade edge from touching inside of handle.

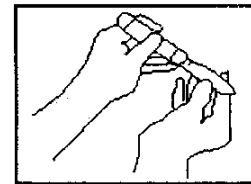


Figure 13

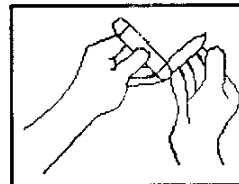


Figure 14

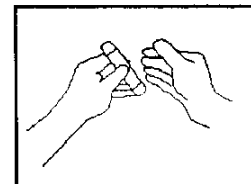


Figure 15

**12. Demonstrate how to pass a pocket knife.**

It's simple. Close the blade before passing the pocket knife. Alternatively, put the open knife down and let the other person pick it up. The latter is preferable if two Scouts are sharing a knife.

**13. Demonstrate how to use a pocket knife.**

There is a good picture in the BSHB, page 66. Always cut away from yourself, and watch out for others walking by.

For fine cutting, pivot handle with little finger, push blade with thumb (Fig. 16). For coarse cutting, grasp handle with whole hand. Cut at a slant (Fig. 17).

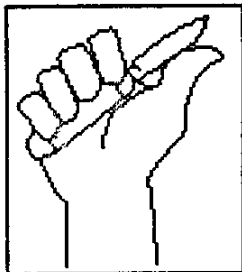


Figure 16

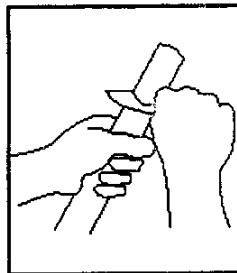


Figure 17

You can cut brush with a pocket knife if you bend stem until grain is strained, then cut close to the ground with a slanting cut (Fig 18). Trim a branch by cutting off twigs from the thick end toward top (Fig. 19).

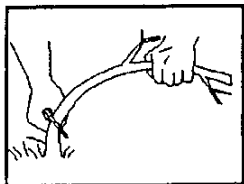


Figure 18

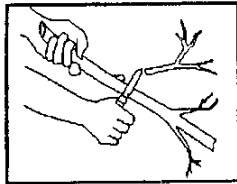


Figure 19

Keep your knife blade keen and clean; a dull blade is always dangerous. Keep it dry and

don't stick it in the ground; keep it out of fire (it will soften the steel). Clean dust and grit from the slot of a folding knife and oil the hinge and spring now and then. Keep your knife folded when idle.

Never pry with a pocket knife--or any knife for that matter. The blade can fold or break with the obvious unwelcome consequences.

## SHARPENING

**14. Demonstrate how to sharpen an ax.**

This is shown on page 73 of the BSHB. Note that the Scout is wearing gloves and has a piece of cardboard on the handle of the file for protection in case the file slips. Use a single-cut (fine) file. For use in the field you can even use a 5-inch ignition file. Always file on the forward stroke, rather than back and forth which dulls the file. Start the stroke on one end of the blade and finish on the other--from heel to toe or visa versa. After about six strokes, reverse the axe and repeat with the same number of strokes. When finished, remove the burr on the blade of the axe with a circular motion of a round sharpening stone.

If the edge is particularly dull, you can start with a course (double-cut) file

**15. Demonstrate how to sharpen a pocket knife.**

Sharpening is shown and described on page 67 (BSHB). Always keep the stone wet with water or oil. This helps keep metal filings from clogging the stone's surface.

A small rectangular sharpening stone about four inches long with a rough and fine side is best. Tilt the blade on the rough side of the stone. Draw the edge of the blade on the stone toward you with the back slightly raised. (A 22½ degree angle is recommended.) After a few strokes turn the blade over, and push edge away

from you a few strokes. As the blade begins to be sharp, turn the stone over and repeat the process on the fine side. If the knife is only slightly dull, skip the course side of the stone.

### OTHER CONSIDERATIONS

#### 16. Demonstrate how to cut limbs from a downed tree.

Note in the illustration of limbing a log (removing the limbs from a downed tree) on P 72 of the BSHB, that the tree should be between you and the branch that you're removing. Consider, however, using a saw rather than the axe. Always saw towards the bottom of the tree. This provides more clearance for the saw and reduces the chance of the blade

binding in the wood.

#### 17. Explain when standing trees should and should not be cut down.

A standing tree is cut down only with the permission of the Scout leader in charge (and only if he or she has the authority) or the owner of the tree. Standing trees are valuable--both for ecology and for their monetary value. Generally, standing trees are cut down only if they keep other trees from growing properly or if they are dead or diseased and are dangerous. Standing trees are frequently used by birds and other wildlife. The leader in charge should know the exact restrictions for cutting wood in the area you are in.

## BLADE N' BLAZE REQUIREMENTS

1. Qualify for Totin' Chip.
2. Sharpen a knife properly and, using proper procedures, make or decorate a useful object.
3. Sharpen an ax correctly and use a saw, ax, and knife to prepare a supply of fire wood (including a fuzz stick, kindling, and fuel), sufficient for cooking a meal for three people.
4. Describe four methods of starting a fire without matches or lighter and demonstrate one of these methods. [Friction; steel wool/battery; magnifying glass; flint and steel.]
5. Describe three fire lays and three fireplaces. Build one fireplace and lay one cooking fire.

<u>FIRE LAYS</u>	<u>FIREPLACES</u>
Tepee Lay	Three-Point
Lean-to Lay	Hunter
Criss-Cross Lay	Trench

6. Without help, build and light a cooking fire using only natural materials and no more than two matches (no paper or petroleum products). Prepare and cook a simple meal for three people, and put the fire out (cold-to-hand standards).

The essential reference to this section is the Boy Scout Handbook, pages 82 through 93. Additional references include the Firemanship, Safety, Woodcarving and Wilderness Survival Merit Badge Books.

*Clip and tape this table in the back  
of the Scout's Handbook  
as a permanent record  
of his progress in earning  
the Totin' Chip and the Blade n' Blaze*

TOTIN' CHIP REQUIREMENTS		DATE & INITIALS
1. Size of an Axe Yard		
2. Number of People in an Axe Yard at One Time		
3. Store an Axe		
4. Pass an Axe or Hatchet Safely		
5. Carry an Axe or Hatchet Safely		
6. Split Wood with the Contact Method		
7. Make a Tent Peg		
8. Axe Shouldn't Be Used as a Hammer		
9. Saw a Log into Proper Length for Splitting		
10. Split a Log Using the Shillelagh		
11. Handle a Pocket Knife: Open & Closed		
12. Pass a Pocket Knife		
13. Use a Pocket Knife		
14. Sharpen an Axe or Hatchet		
15. Sharpen a Knife		
16. Cutting Limbs from a Downed Tree		
17. Standing Tree Rule		
BLADE N' BLAZE REQUIREMENTS		
1. Qualify for Totin' Chip		
2. Sharpen a Knife and Make a Useful Object		
3. Sharpen and Use an Axe to Prepare Wood Supply		
4. Describe Lighting Fires 4 Ways; Do One		
5. Describe 3 Lays & 3 Fireplaces; Build One of Each		
6. Prepare a Meal with Fire		

