Communication

POP CAN LAMP

10 P+E

To start this activity, fill in an AR as shown below:

ACTIVITY RECORD (AR)

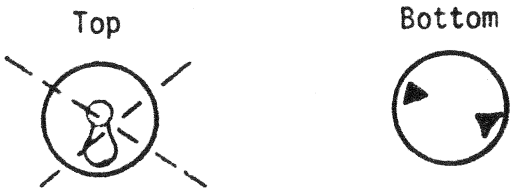
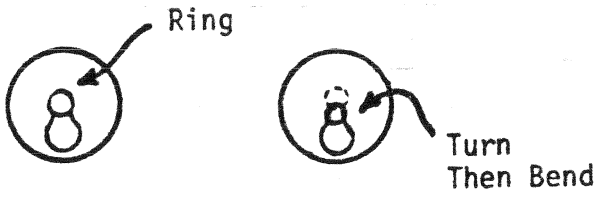
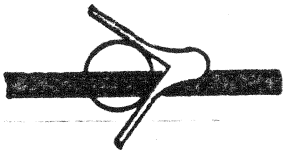
NAME YOUR NAME FOLDER # YOUR #

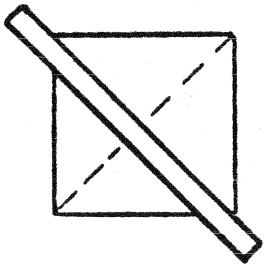
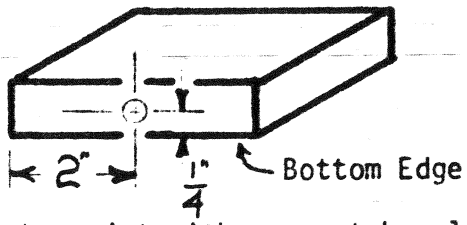
ACTIVITY TITLE POP CAN LAMP

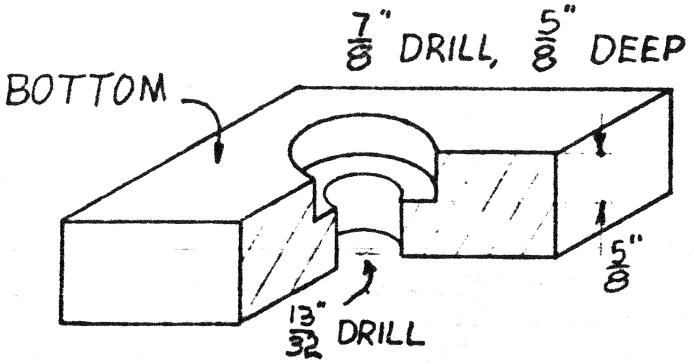
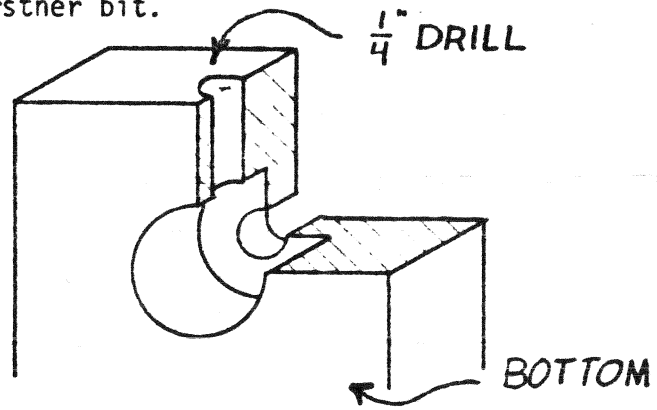
ACTIVITY NUMBER 10 P+E

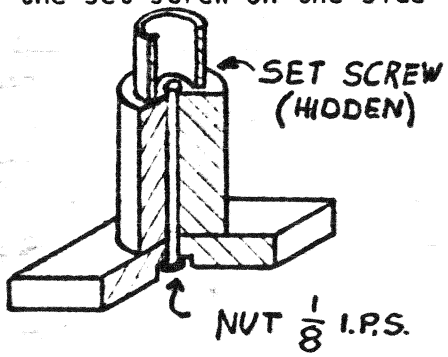
	15	30	45
1 ___ I	16	31 ___ M	46
2 ___ M	17 ___ I	32	47
3	18	33	48
4	19	34	49
5	20	35	50
6	21	36	51
7	22	37	52
8	23	38	53
9 ___ I	24 ___ M	39 ___ M	54
10	25 ___ I	40	55
11	26	41	56
12 ___ M	27	42	57
13	28 ___ M	43 ___ I	58
14	29	44	59

CAN LAMP

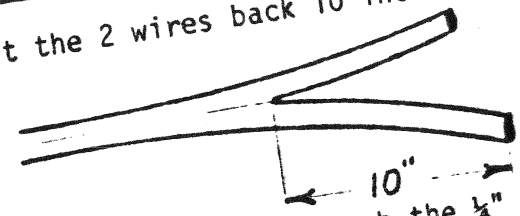
STEP #	INSTR. CHECK	PROCEDURE - INCLUDE INSTRUCTOR CHECK POINTS	TOOLS & EQUIPMENT
1.	I	Obtain Instructor's approval to begin this activity.	
2.	M	MATERIAL CHECK POINT: Obtain the following materials 1 - can of pop* (You supply) * NOTE: Do not open the can on top. Use a can opener on the bottom.  	
3.		If your can has a ring, turn it around so that when you lift the ring it will not open the can. Bend the ring up and down until it breaks off. The can should stay closed.  	
4.		Find the center of the top and bottom of the can. Use a center finding head and pencil. Draw at least 2 lines. The center will be the point the lines cross. 	Center finding head
5.		Lightly center punch top and bottom centers with scratch awl	Scratch Awl
6.		Obtain a 1/8" and a 13/32" drill bit	1/8" and 13/32" drill bit
7.		Clamp can in drill vise: use some tape to wrap around the can to protect it. Use just enough pressure to hold the can in place. DON'T smash the can with the vise. Install the 1/8" twist drill.	Drill Press

STEP #	INSTR. CHECK	PROCEDURE - INCLUDE INSTRUCTOR CHECK POINTS	TOOLS & EQUIPMENT
8.		Line up the can with the drill. Clamp the vise to the drill press table.	
9.	I.	POWER EQUIPMENT CHECK POINT: Ask an instructor to check you on the drill press and check your set-up.	
10.		Drill a hole with the 1/8" drill bit first- 500 rpm. Change the drill bit to the 13/32" bit. Drill the hole. The first hole is just to make it easier to start the larger drill.	
11.		Turn can over and drill the other end. Follow directions in steps 7, 8, and 10.	
12.	M	MATERIAL CHECK POINT: Obtain: 3/4" x 4" x 4 wood	
13.		Find center of the wood. Use a pencil and bench rule. Draw lines from corner to corner. The center will be where the lines cross. 	Bench rule
14.		Measure in 2" and up ¼" from the edge of the wood.  Mark the point with a scratch awl.	Scratch awl
15.		Obtain a ¼", a 13/32 drill bit and a 7/8" forstner drill bit.	¼", 13/32" drill bit. 7/8" forstner bit.
16.		Set up the drill press first with the 7/8" forstner drill bit. Clamp wood to table. BE SURE you have another piece of wood under your work.	Drill Press

17.	I	INSTRUCTOR CHECK POINT: Ask an instructor to check your set-up and center mark.	
18.		Drill a hole in the bottom of the board with the forstner bit. Set speed 1000 rpm.  	
19.		Leave the material clamped in place. Just remove the forstner bit and replace it with the 13/32" drill. Drill in same hole the forstner bit made. Drill all the way through the board. Set speed at 2000 rpm.	
20.		Set up drill press with the ¼" drill bit.	
21.		Clamp wood on its side and line up your centering mark with drill bit.	
22.		Drill hole down until the drill bit comes through where you drilled the hole with the forstner bit.  	
23.		File corners and edges round.	

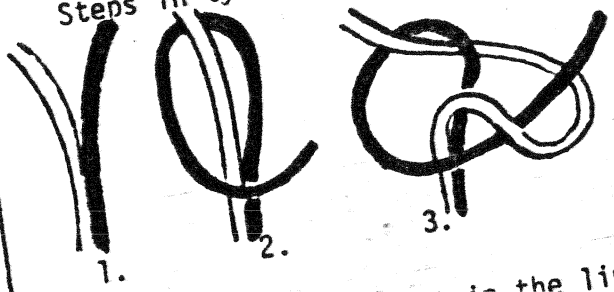
24.	M	MATERIAL CHECKPOINT: Obtain 80 + 120 abrasive paper: Sand smooth <u>all</u> file marks	80 + 120 abrasive paper
25.	I	INSTRUCTOR CHECKPOINT: Have instructor check your sanding and shaping.	
26.		Obtain oil finish and a rag.	Oil finish
27.		Apply the finish in the finishing area. Rub the finish into the wood with the rag. Keep area clean.	
28.	M	MATERIAL CHECKPOINT: OBTAIN THE FOLLOWING: 1-Light Socket 1-Threaded rod.:.5 1/4 long 1-Locknut 1/8" I.p.s.	
29.		Assemble the light socket to the threaded rod. Screw the rod into the bottom of the socket. Tighten the set screw on the side of the socket.  	
30.		Slide the threaded rod through the top hole. Push through to bottom hole. Place wood base on threaded rod. Put on the locknut. Tighten until can does not turn easily.	
31.	M	MATERIAL CHECKPOINT: Obtain the following: 1-Electric Line Cord Note: See the "Line Cord" activity if you want to injection mold your own plug assembly.	

32. Split the 2 wires back 10 inches

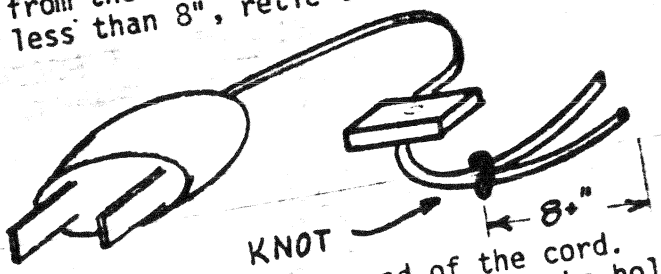


33. Push the line cord through the ¼" hole in the base side.

Steps in tying an underwriters knot.



Tie an underwriters knot in the line cord. There should be between 8"-9" of separated cord from the knot to cord end. If you have less than 8", retie the knot.



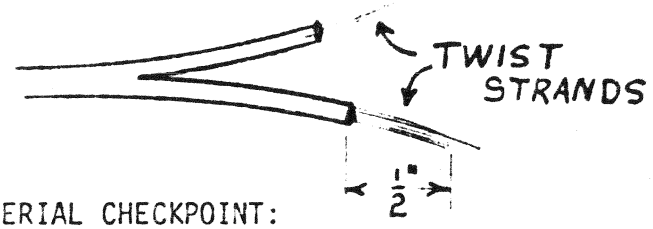
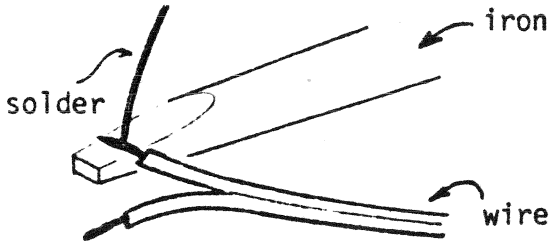
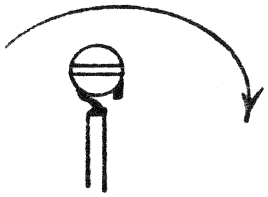
34. Gently pull on the plug end of the cord. The knot should pull tight against the hole side. The underwriters knot will now take any strain put on the cord. Because of the knot you will not be able to pull the wires off the terminals.

35. Take apart the light socket. Remove the top half of the socket, insulation, and switch assembly.

36. Push the line cord up the rod and out the socket top.

37. Cut the line cord so 1½" of cord is sticking out of the socket.

Wire stri

38.		Remove ½" of insulation from the cord ends. Twist the strands together.  	Wire stripper
39.	M	MATERIAL CHECKPOINT: Obtain the following 1-piece of solder	
40.		Use a soldering iron to tin each wire. Heat the twisted wire with the iron. Touch the solder to the wire. The solder will melt when the wires are hot enough.  	Soldering iron
41.		Make hooks out of the tinned wire ends. Use a needle nose pliers. 	Needle nose pliers
42.		Attach a wire to each of the screw terminals on the socket. Put the wire on the screw in the same direction the screw is tightened  	
43.	I	INSTRUCTOR CHECKPOINT: Ask an instructor to check the following -Underwriters knot -Can assembly -Socket wiring (Tinning, hook, direction)	

44.		Put the socket back together. Don't forget the insullation.	
45.		Complete Evaluation. Portion (both sides) of the AR. Print your name and other information needed at the top of the AR.	
46.		Take the AR, your completed project and your notebook to an instructor for evaluation.	