

## Sea Urchin Shell Ornaments

**Shells** (Some suppliers have minimum \$\$ per order limits or sell case quantities only) Smaller quantities may be available on Amazon.com

<http://naplesseashellcompany.com>

<http://www.seashellworld.com>

[http://deltonaseashells.com/sea\\_urchins](http://deltonaseashells.com/sea_urchins)

<http://www.usshell.com/seaurchins.aspx>

<http://www.shelloutlet.com/catalog/item/1657695/4155089.htm>

Craft Supplies USA <http://www.woodturnerscatalog.com>

ebay seller KAWAGNER101 (Wagner's Southern Store) frequently has purple urchin shells listed -- many other ebay sellers of miscellaneous types listed - (DJL has not purchased any of these)

### **Beveling**

Sanding sleeves and mandrels - Hardwick's on Roosevelt Way NE, U District

Craft Supplies USA <http://www.woodturnerscatalog.com>

### **Hanger wire**

Jewelers' sterling silver beading chain - 0.6 mm - Rio Grande

<http://www.riogrande.com> product #694557B

### **Dowels**

Use USA hardwood dowels - Dunn Lumber

### **Foam**

Dow Chemical Great Stuff - Window and Door Sealant (blue can)

---

## **Sea Urchin Shell Ornament from nominal 1" thick flat boards**

Fill shell with insulation foam from aerosol can (Clean nozzles with acetone) – let harden  
For Sputnik shells, bevel top and bottom openings with sandpaper on mandrel  
Cut boards into icicle blanks, width equal thickness, about 6-7" long  
Mark center of square icicle blank  
Mount square icicle blank in chuck  
Use brad point 3/16" or 1/4" bit to drill end of blank about 1/2" deep (bit size to match desired dowel diameter)  
Bring tailstock live center to hole and snug up  
Round off the blank to rough icicle shape  
For Sputnik shell, turn 1/2" diameter tenon on tailstock end to fit into bottom plug of shell  
For other shells, bevel tailstock end of blank to fit into bottom recess of shell  
Finish turning of the icicle, sand, part-off, leave remainder of icicle blank in chuck  
(For Sputnik shells, see below)  
Turn end of remainder (cap piece) with slight concave to fit top of green, purple or pink shells  
Create center dimple in cap piece to guide brad point 3/16" or 1/4" bit  
Blind drill about 1/2" into cap piece  
Use 1/16" drill in brad point hole to create small hole for wire hanger; drill in small depth increments, cleaning drill between each increment  
Bring tail stock live center to hole in cap piece  
Shape cap piece, sand, part-off  
Use rat tail file to punch through top shell membrane and hardened foam for dowel  
Insert dowel through shell and into icicle hole  
Cut dowel length to leave enough to join to cap piece (make sure dowel is snug in holes, but not too snug, sand to size if necessary)  
CA glue dowel into icicle  
With cap on dowel but not glued, buff both icicle and cap (apply other finish as desired)  
Place wire hanger loop into finished cap piece, solder ends, bend over soldered tip to retain loop in cap piece  
Test for a snug fit of cap and icicle to shell, cut dowel to length again as necessary  
CA glue cap piece to dowel, push down onto shell with slight twist, working quickly  
You're done!!!

## **Sputnik plugs and cap pieces**

For plugs, cut board into 1 1/2" squares, or as large as needed to cover bottom of shell hole  
For cap pieces, cut board into 1" squares, or as large as needed to cover top of shell hole  
Plugs – drill through hole with 1/2" brad point bit, reverse blank to avoid breakage upon drilling  
Cap piece – blind drill as above, with 1/4" and 1/16" bits  
Mount plug blank on jam chuck with 1/2" peg, bring tailstock up real snugly to lock blank on jam chuck  
Turn plug, with bevel on back side to fit shell beveled opening; slightly bevel front side around hole to "hide" fit with icicle tenon  
Test fit with icicle, re-turn as necessary for glue "fit" snugness, CA glue plug on icicle blank  
Mount cap piece blank on jam chuck with 3/16" or 1/4" peg, bring tailstock up real snugly to lock blank on jam chuck  
Turn cap piece to finished shape, with bevel on large hole side to fit top hole in shell  
Assemble with dowel, finish and insert wire hanger as above