

SPUTNIK SEA URCHIN PROJECT

Section 1.) Preparing the Sputnik Urchin

Required Accessories:

- Conical grinding stone #PKURCHGS
- 3 Jaw drilling chuck #TM32
- Mod Podge or other wood glue & brush

DIAGRAM A / Preparing the Urchin

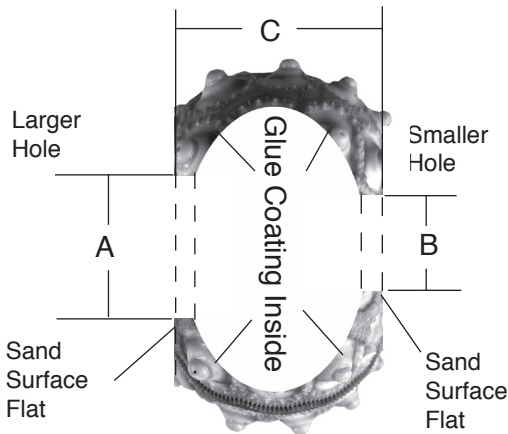
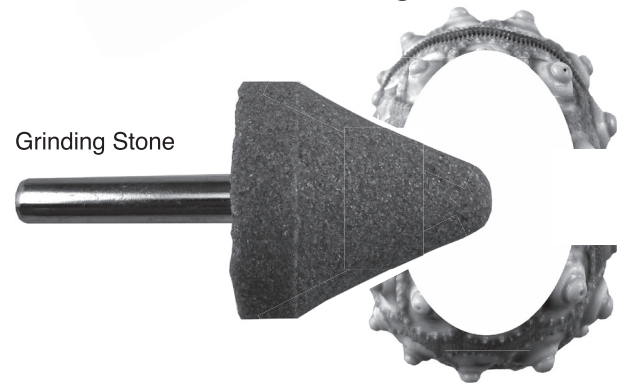


DIAGRAM B / Rounding the Urchin Holes



Preparing the Urchin

NOTE: Urchin holes will vary, measure each hole before turning your project.

- To reinforce the urchin wall to avoid cracking, use Mod Podge® or other glue on the inside surface, let dry.
- Affix the grinding stone into a 3 Jaw drill chuck or a portable hand power drill. Dia. B
- Slowly engage the wheel stone with the urchin hole and grind to reshape and round the holes A & B to be perfectly round or to a desired diameter.
- Use a disk sander or a coarse abrasive to flatten the surfaces around the holes. Do not over sand or it will weaken the shell. Dia. A
- The urchin is ready to use for your projects.

Section 2.) Bottle Stopper Project

Required Accessories:

- Blank Required 1-1/2 x 4" L
- Project starter set #PKURCHSS

Includes:

- 4 ea Sea Urchins #PKURCH4
- 4 ea Bottle Stoppers #BS1
- 1 ea Grinding Stone #PKURCHGS
- Bottle stopper chuck system #PKBSYST

Bottle Stopper #BS1

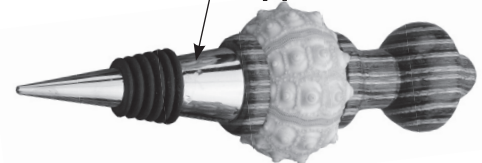
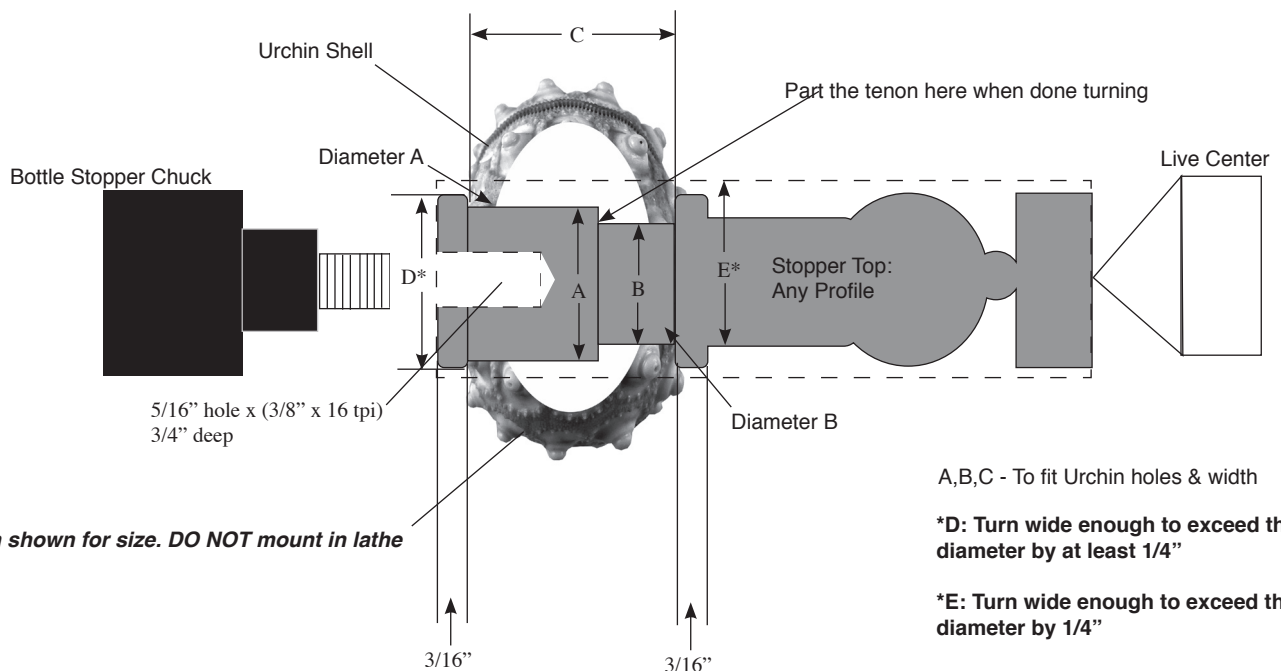


Diagram C / Turning the Stopper Blank

Stopper Blank: 1-1/2" x 4" Long



A,B,C - To fit Urchin holes & width

*D: Turn wide enough to exceed the "A" diameter by at least 1/4"

*E: Turn wide enough to exceed the "B" diameter by 1/4"

NOTE: Urchin shown for size. DO NOT mount in lathe

Preparing the Blank:

- Mark the center on both ends of the blank.
- Drill a 5/16" x 1" deep hole at one end of the blank.
- Tap the hole with 3/8" x 16" Tap (From #PKBSYST Set).
- Mount the stopper chuck onto the head stock of the lathe.
- Slide the tailstock in to support the other end.
- Prepare your top design/drawing idea.
- Measure the hole sizes of the urchin you prepared (Sizes A & B from Diagram "A"), apply size to your drawing. Measure the height of the urchin (Size C from Diagram "C") and allow plenty of space for the ends to butt after parting for gluing.
- Mount your blank onto the bottle stopper chuck using the instructions provided with #BS1
- Turn the blank down to the measurements you applied to your individual urchin from diagram "B". Turn diameters D & E to fit ends of urchin.
- Sand and polish the project. Avoid finishing the concealed section of wood.
- Use a thin parting tool to part the wood where indicated in diagram "C".

Assembly:

- Test that each tenon fits in the hole. Do not force into the fragile shell.
- Use drops of glue to secure the urchin between the wooden ends.
- Attach the tapered stopper section into the wood, screw in place.

