## **HOW TO MAKE A VIEWSCOPE**

## **MATERIALS:**

- ✓ 2-foot section of 4" PVC or ABS pipe with black interior
- ✓ PVC glue
- √ 4" PVC coupler
- ✓ Plexiglass cut in a circle (this will require you to start with a square that is at least 4"x 4")
- ✓ Clear silicone rubber sealant
- ✓ One 5 ½" pull handle
- ✓ 2 screws (if not supplied with handle)
- ✓ Foam pipe insulation or weatherstripping (for face protection)
- ✓ Drill and Screwdriver

## **INSTRUCTIONS:**

- 1. Cut the PVC pipe to a length of approximately 24" if its not already.
- 2. Glue the PVC pipe onto the coupler.
- 3. Size the plexiglass to fit into the coupler (make it slightly smaller than the outside diameter of the pipe).
- 4. Cut and file the plexiglass into a circle. This can be tricky. A saber saw or a jigsaw with a fine-toothed blade is recommended. Make sure that the plexiglass is well secured when cutting it. It may be necessary to use a grinding wheel and/or file to get it to the proper size and shape.
- 5. Lay a fine, continuous bead of clear silicone on the inside "shelf" of the coupler.
- 6. Place clean plexiglass onto the sealant and press in, making sure not to squeeze out all of the silicone.
- 7. Lay another continuous bead around the plexiglass edge to seal from both sides.
- 8. Wet your finger and push/drag lightly on the silicone going around the outside edge circle to seal the plexiglass against the PVC pipe.
- 9. Drill two small (1/8") holes in the side of the coupler so that air will not be trapped in the open end of the coupling when the viewscope is put into the water.
- 10. Mount the handle approximately 4" from the end of the scope that you will be looking into. Use two screws (stainless steel sheet metal screws are best). Pre-drill holes that are smaller than the screw size with a drill bit. Put a small amount of PVC glue in the pilot holes and on the screws. Be sure not to over tighten the screws.
- 11. Cut the pipe foam or weatherstripping and glue it to fit around the end that you look into.
- 12. Allow the viewscope 24 hours to dry before using.

