

Michigan Woodworkers Guild

Children's Hospital Toy & Box Program Guidelines/Suggestions

Based on hospital suggestions/needs as well as the experience, experiments, input from Guild toy/box builders the following guidelines/suggestions/information has been prepared:

Toys – General Guidelines

- No sharp edges, corners or projections (which could injure a child). A pass with a router round over bit (1/8 to 1/4 inch radius) and/or sanding sharp areas will eliminate this concern.
- Small children like toys with holes which make them easier to grip especially when confined to bed. The inside walls of the holes (such as windows in cars) need to be sanded and finished.
- Toys should have no loose parts that a child could remove and place in their mouth.
- Do not use metal fasteners or washers due to possible hazards from their coating (cadmium for example) and the possible sharp points/edges if a fastener comes loose.
- Where possible use toy stock 1-1/8 inch thick or greater where wheels attach to assure adequate axle hole depth/ secure axle retention. Two inch construction lumber (1 1/2" actual thickness) works well if you cut out toys avoiding knots and bad spots. Obviously, higher quality hardwoods are also acceptable.
- If you will be making multiple versions of the same toy pattern, making a template of the pattern from 1/4" or thicker stock (baltic birch plywood, hardboard and MDF work well) and securing it to a rough sawn slightly oversize blank (using double sticky tape or small nails in axle center locations) will allow a pattern bit on a router table to quickly trim the blank to final size. Use knobs/guards as appropriate to assure safety.
- To assure easy rolling wheels, wipe paste wax on the axle shaft near the head before inserting it through the wheel (keep wax off the area that will be glued into the toy). Add a nylon washer (available from the toy committee) between the wheel and the finished toy body. Place glue in the axle hole in the toy body with a toothpick or small model brush spreader and press the wheel/axle/washer assembly into the hole leaving about 1/32 inch end play. A Y shaped plastic spacer (made from an empty plastic milk carton) temporarily placed between the washer and the wheel during axle insertion is an easy way to assure appropriate end play.
- Feel free to make your own toy designs or if you would like some patterns used in the past by guild members are available on our web site. In general, a simple design that can be readily shaped and sanded on your available equipment helps minimize the time needed to make multiple toys.

Boxes – General Guidelines

- For members who wish to donate boxes, our box program at the hospital provides two types of boxes, plain boxes and “memory boxes”. Size of boxes are not rigidly specified but typically range from 5”x7”x2-1/2”deep to 7”x10”x 4”deep.
- Plain boxes are usually pine, poplar or soft maple with a clear seal coat finish. These boxes are decorated in the hospital art class and used for the patients personal possessions during their hospitalization. Lids can be of a drop-on or sliding style.
- Memory boxes are fully clear finished boxes of quality wood that are used to return a patients personal items to the family when they do not survive their treatment (thankfully we don’t need as many of these). Hardwoods such as maple, birch, cherry, oak and walnut are acceptable. Avoid using exotic hardwoods as these may result in allergic reaction sensitivities. Although not required, the hospital staff prefers boxes that have a 4”x6” picture frame incorporated into the lid. Many members like to add a felt lining to the inside bottom of the box.
- Metal hinges are allowed on **memory boxes only**.
- Box joinery is the choice of the builder. Dovetail, box joint and mitered corners are acceptable. Typically, memory boxes have fancier joinery such as dovetail or box joints.

Finishing – General Guidelines for Toys and Boxes

A government requirement under the Consumer Product Safety Information Act applies to our toys and boxes delivered after February 10, 2010. This action was driven by Chinese toys shipped to the U. S. that contained lead in the finishes. All the box and toy finishes used must be certified by the manufacturer (using an independent third party laboratory) as compliant with government lead and phthalate (plastic softener) limits. **The finishes you use on toys or boxes donated to Children’s Hospital must have CPSIA compliance certifications from the manufacturer(s) provided with the toys/boxes unless you use products for which the guild already has compliance certifications on file (a list of these products is available on our web site or from a toy committee member).** The guild then delivers all new certifications to the hospital with the toy/box deliveries. Contact the manufacturers to obtain their CPSIA certifications. After trying various methods of finishing toys, one method that works well is as follows:

- Toys should be coated with a finish to allow cleaning/disinfecting and to prevent splinters. Given a choice, children seem to prefer toys in bright primary colors. Clear finishes showing natural wood colors are also very acceptable. It is recommended to avoid painting toys all black.

- Sand toy parts smooth (before assembly) with progressively finer grits ending with 180 or 220 grit. Vacuum or wipe dust off then wipe with a microfiber towel or tack cloth.
- Spray or brush a light sealing coat of tinned varnish/lacquer/shellac or a coat of primer and allow to dry.
- Sand very lightly with 320 grit paper to remove whiskers raised by the initial coat of finish. Vacuum and wipe to remove the sanding dust.
- Spray or brush on final coats according to manufacturer directions. Usually two final coats will produce a good finish. Several guild toy builders have had good success with Rustoleum Painters Touch 2X brand spray paint, Watco or Rustoleum spray lacquer (gloss). These products spray well, dry quickly and provide a good finish.
- If you choose to add decals or dry transfers to your toy for added appeal, spraying a light coat of clear gloss lacquer over the decal/transfer will protect them so they will last longer. Make sure there is no interaction between the decal/transfer and the clear finish on a test piece before applying to the toys.
- Axle shaft heads can be finished easily by drilling ¼ inch holes in a block of scrap wood and inserting the axle shaft full depth in the hole leaving only the head exposed to spray or brush on the finish. This keeps finish off the shaft portion so the wheels will roll better.
- To assist in painting toy bodies that need to be finished on all sides a simple painting (and drying) stand can be fabricated with horizontal wires that can be inserted in axle holes to hold the toy body while painting. Paint the bottom only first then immediately flip the toy right side up on the wires to paint the rest of the toy (gripping the toy by the unpainted top of the toy). A toy committee member can explain this further and show example stand options.
- Memory boxes should also be finished with a clear finish that is acceptable with CPSIA Guidelines.

Your interest in the Guild toy/box project is appreciated. Your contributions, working on your own or with some fellow Guild members will help our Guild meet the need at Children's Hospital. All help is beneficial, whether you provide a single toy or several dozen. Your patience and care will assure toys & boxes that you and our Guild will be proud to share with the children.

All Guild members are encouraged to participate with our building of toys for Children's Hospital to help assure every inpatient and outpatient child will have a toy for Christmas. The hospital is very appreciative of our Guild's toy project. We have been able to provide over 400 toys for Christmas each year due to the generous support of our members.

The plain boxes we provide the hospital are used throughout the year and are delivered before Christmas (with the toys) and typically again mid-year, if we have more boxes available. The memory boxes are provided to the family of a child that does not survive treatment.

Our guild will supply 1", 1 ¼" and 1 ½" wheels, axle pegs and washers for the toys you build and donate to Children's Hospital. To obtain the wheels/axles/washers you need or if you need a different size wheel, please contact a toy committee member and we will try to accommodate your need, if possible.

MWG Toy/Box Committee

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