

Woodworking with Small Children

Text by William Johnston

A neighbor sees a small boy running down the street.
“Where are you going in such a hurry”, she asks?
“I’m going to my Grandpa’s to help him work in his woodshop”, he replies.
“Does your Grandpa pay you” asks the neighbor?
“Yes”, says the boy!
“What does he pay you?”, asks the woman
“He pays me attention”, answers the boy.
... adapted from an old T.V. commercial

Prolog

The time is the 1950’s when an old woman walks down her dirt driveway to the mailbox at the main road. She checks her mail and finds the expected copy of the *Saturday Evening Post*. She smiles as the cover intrigues her as it reminds her of a time as a small child over 80 years earlier.

The cover depicts a woodworking shop. An older man stands at a workbench against a wide glass window. Its winter as snow can be seen through the glass as the man makes use of the short span of winter daylight to build a blanket chest. Tools hang from pegs on the wall, from a rack in front of the window, and on small shelves. Patterns hang from the rafters. At the left is a black iron stove, glowing red around its big belly, used to burn scrap and keep the shop warm. The workshop is likely attached to the farmhouse, not out in a barn, so to enable the farmer can transform himself into a woodworker during the long idle winter.

What intrigues the woman most is located at the lower right of the picture. In the corner of the workshop sits a small child, on the floor, at a very small workbench working with a few sticks of wood, surrounded by a mallet, small plane, and a saw. She remembers a similar time in her grandfather’s shop when she was a child. “Grandpa, can I have a piece of wood”, she would say. Grandpa always had a few sticks of wood, not scrap, but small pieces, specially prepared and set aside, for her ‘work’.

If you Google “Woodworking with Children” you will acquire over three million links accumulated by this wonderful search device in just over a quarter of a second. There is a lot of useful information on the web about this subject. If you read even a small portion of this plethora of information you will notice similarities.

Most of the articles and books deal with woodworking with children generally starting at 5 or 6 and up. The material is often directed at teachers. Teachers are usually dealing with 5 to 15 children. Safety is stressed, as it should be, but especially problematic because children with other children hit each other with the tools just about as much as the wood. Multiple children together, as any parent can testify, are a challenge to manage.



Many books deal with projects. “What can I make?”, “I want to make something.” Covers show an older child chocking up on a hammer and pounding a nail to make a birdhouse.

Many authors of these books convey a great deal of knowledge about how children think and grow. This is extremely important and perhaps the greatest piece of information that you can distill from the books. You will also note, as a woodworker, even as a novice, that the authors often lack even the basic woodworking experience.

I wanted to approach “Woodworking with Small Children” in an area not covered well at all. I wanted to develop my personal skill in working with very young children, starting at just the age for walking (about 1 year) and going up to 5 or 6. I wanted to build safety (enough to satisfy Mom) into the experience. Re-read the short story at the beginning ... “He pays me attention.” Attention becomes the key to safety. One Grandparent’s focused attention on one child bypasses the dangers from other children, and affords you the opportunity to pass on your love of woodworking through relationship building between a small child and a Grandparent.

Small children do not want to build anything. As the child gets older he/she will ask to build something substantial. They may request this at about age 5-6. The younger ones are satisfied to “play with tools”. Attention span is very short at this age. Ten minutes (is it even that long) and he/she is off to another ‘attraction’. It may be some other attraction in your shop or to unrelated toys. They may come back shortly to do more ‘woodworking’ or bring another object to the bench to whack with a mallet. There will never be enough time (attention span) to complete even the most basic project. Don’t try! It will only cause you frustration which will transfer to the child. Provide a continuous flow tools, pieces of wood, opportunity, simple demonstration, and encouragement. Relax and enjoy the show. You won’t be disappointed.

Small children do not like loud noises. All of your power tools and your shop vac make noise that either small children are sensitive to or are afraid of. Don’t run power tools around small children. Don’t experiment. If it makes noise in your shop don’t use it. The only power tool that I have successfully use with small children is a cordless drill. The child is not afraid of the tool ... just the noise. Stick to hand tools.

Small children should not be given “children tools and sets”. Use real adult tools. For many tools there is an “economy of scale”. That means that that often a smaller tool will not work as well as the full size equivalent. A common tool in a child’s tool set is a small hammer. The head is too small. The weight is too light. The handle is round, the size of a large pencil ... too small to grip, even for a little hand. A child can not orientate the face to strike anything, let alone a nail head. Do not frustrate the child with such a tool. I introduce, as a first tool, a cobbler’s hammer. It has a very large face on the head that just about can’t miss. The head is heavy and will drive a wood dowel or a roofing nail. The larger face will not pinch your fingers (you will be the one holding the nail). The handle is oval in shape. This larger diameter and shape is easier for little hands to grip and orientate. The short handle is okay and actually an advantage for the child, though. Long handles get in the way when a small hand chokes up.



I introduce a bench style smoothing plane, a Stanley #3 to play with. My grandson saw me using a #3. While he wanted to use it, he spotted a much smaller rattail plane on the shelf. He rationally concluded that the much smaller plane was best suited for a much smaller person ... himself. However, the lighter plane requires much more downward pressure to get a reward ... a curl of wood shavings, than the heavier #3. Also, the small hands can not get much of a grip on the rattail. The #3 has a tote and a knob. This facilitates two hand use with enough room for Grandpa’s hand as well ... at least in the beginning. (note: don’t press his/her hand to hard ... it hurts).

A few words of note about helping. Show and demonstrate. Let the child “do” as much as possible. Don’t do a lot of correction, especially early on. Just show again and demonstrate ... often silently. He/she will surprisingly pick up on it when they are ready.

Make sure there is a reward imbedded within the tool play and that you point out the reward. Rewards are learned as well as earned. The shaving is the reward for planing. Point out the shaving! Make sure that the wood is thin enough (1/4 to 3/8 inch) on the edge. Prepare the wood ahead of time. Don’t rely on scraps.

The plane must be sharp and set shallow. Mom might think a plane is dangerous of cutting. The real danger is when the child drops it on his/her foot or picking up new vocabulary when dropped on your foot. The risk of cutting the skin is smaller because the cutting edge is down (pressed on the wood) in use. The plane should be extremely sharp without any burrs on the blade or the plane. Burrs will rip. A sharp edge will not. A sharp edge will not have to be forced to get a shaving ... reducing the risk of the plane becoming a projectile. The blade should be set extremely shallow ... to take a cut between .001 inches and .003 inches (less than the thickness of a sheet of paper). A cutter set this shallow will push easily. The cut is less than the thickness of the skin ... so no cut skin. I have never broken the skin with a hand plane ... mine, the child’s or mom’s. Try it on your own hand!

I learned “economy of scale” with a hurdy-gurdy drill. I was given a half-size such drill that was intended to fit more compactly in an adult tool kit (French Army actually). It looks perfect for a child. However, it is harder to crank than the full size version ... too hard for a child ... yet not easily noticed by an adult.

On the subject of small crank drills ... a small nail works better in a crank drill than a small bit. Bits must remove wood to make the hole. A nail actually punches through the wood by moving the fibers apart with no wood removal or shavings. Therefore, a nail is easier to turn. I use a hardened nail with the head ground off. Prepare a 1/4 to 3/8 inch

thick piece of wood to use. The reward is obvious when the nail breaks through to the other side.

Note: the smaller the bit the faster it needs to turn. It is not the revolutions but the speed of the cutting edge that determines the cut. A small bit needs to turn faster than a larger bit. Small children often have trouble getting enough speed. They love to turn the crank, though. Another reason to use a nail.

A sharp nail can puncture the skin ... remember "pay me attention!"

Let's talk about tools to play with in general.

You must plan for tools and benches well before the child is introduced to them.

I built a child size workbench some years back. Its top is just over chair seat height. Of course, no height is perfect. Children grow! It's a moving target! Actually, I built the bench for me ... to use sitting down. Now I use it with the kids. It's a smaller, fully functioning version of an adult European style workbench. Despite any one style, what is important is that the bench has a functioning vice and bench dog system. Holding the work is critical. It should hold small pieces of wood, averaging 3/8 by 3 inches x 8 inches, in every possible configuration. My bench uses a wood threaded bench screw which is easy for a child to turn. The bench has two bench dogs for clamping the stock. The bench itself is a great toy without the other toys.

I sit on a small, low stool with the child between me and the bench. Early on a step-up the length of the bench will need to be provided, which can be removed as the child grows taller. Care must be taken to make sure that the child does not fall off the step.

The first tool I introduce is a round head carver's mallet that I turned myself. We play whack-a-mole with the mallet and my bench dogs ... at or before 1 year. It's great fun for the "baby". As the children get older they still do it ... only they learn to push the dogs back up by themselves, pull the dogs out, and place them in different holes. A slightly small, lighter mallet is best ... one that you might use for fine carvings. Mallets teach picking up and handling tools. Orienting them to strike a dowel in a hole (or a bench dog) facilitates coordination. Kids love to hit things with a mallet. At later sessions I introduce square head mallets and the cobblers hammer.

All of the tools need to be named and demonstrated. The child will quickly learn the difference between a generic mallet (wood head) and a hammer (metal head). They are proud to be able to name all of the tools.

So far we have discussed hammers and mallets, planes, and drills along with the workbench and vice. A saw would be the next logical choice. Cutting a board brings a great reward, especially cutting it in half. I introduce, as a first saw, a Japanese flush cutting pull saw. It's easy to damage these saws so an inexpensive one is suitable. Buy one for the purpose. As an alternative any pull saw would do. I also employ a razor saw. This has fine teeth and also cuts on the pull stroke. Never consider the saw that comes with a child's tool set. An alternative to cutting a small board is to drill a 1/4 hole in a board, insert a dowel with the mallet and cut it off with a pull saw. You can help on the pull stroke. Small children can not easily master a push stroke.



I have a large antique wood brace that I use with a child to bore larger diameter holes, say a quarter inch or more. It's easier for a child to turn while I hold the knob on top for balance.

Children love splitting wood. Some time back, I had a blacksmith at a local festival forge me the makings of a froe knife from a railroad spike. I finished the blade with a grinder and file. The blade is 1/4 inch thick opposite the blade so it can be hit with a mallet. The blade looks like it tapers to a sharp edge, but it does not. A sharp edge would cut. You want the froe knife to split. This requires a somewhat rounded over edge that will split the wood without cutting it. For reference a split occurs ahead of the edge of the blade. A cut occurs at the edge of the blade. I made sure the froe knife was also not pointed as a froe would be. I prepare 1/4 inch thick pieces of easy to split wood. I hold the froe knife to the wood and let the child strike it with the mallet. This, repeated, usually results in several 1/4 x 1/4 pieces of wood about 2 inches long. We use a mallet to pound these into a slightly undersize hole that the child has drilled and cut off the excess with a pull saw.

The text above was prepared for a group discussion clinic demonstration at the Kansas City Woodworkers' Guild targeting current and potential Grandparents (parents are welcome) of small children (walking to 5 years) on Woodworking Hand Tool Play. Woodworking Tool Play is a wonderful way to bond with small children and introduce them to your woodworking hobby that can be built upon and put to use as they grow.

Hand tools introduced include mallets and hammers, pull saws, hand powered drills, planes, froes for splitting, small work benches and vices and, of course, "pieces of wood". All tools introduced are adult tools and fully functional. Safety is important and improved through avoiding distractions by "paying full attention to the child".

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