

# Carpentry in the Early Childhood Classroom



**TCS**

## Your Presenters

### **Katie Bindschadler, [kbindschadler@tucsoncommunityschool.org](mailto:kbindschadler@tucsoncommunityschool.org)**

I have a Bachelor of Science in elementary and special education from the University of Wyoming and Master degree from the university of Arizona in Teacher and teaching as well as an enforcement in early childhood education.

I have been a teacher for 31 years. I have taught in the public schools in Yuma and in Tucson and in several private schools, one being Tucson Community School. I fell in love with early childhood education and love the work I do in my community of learning at TCS.

### **Adriana Encinas, [aencinas@tucsoncommunityschool.org](mailto:aencinas@tucsoncommunityschool.org)**

I have an associates degree in social services from Pima community College. I am also working on getting my second degree in Early Childhood Education.

I have been working with children for 8 years and this is my 3rd year teaching at Tucson Community School (TCS). I enjoy working with tiny humans as well learning and grow with them

### **Stephanie Castillo-Leon, [scastillo@tucsoncommunityschool.org](mailto:scastillo@tucsoncommunityschool.org)**

I graduated with my Bachelor of Arts in elementary education from the University of Arizona in 2009. I specialize in early childhood education, focusing on infant and toddler group care, kindergarten readiness, and teacher development.

I have experience working as a preschool teacher, coaching early childhood educators, facilitating high quality professional development, and now I serve as the newest director at Tucson Community School.

Early childhood is my passion, educating and supporting parents and teachers about what our youngest citizens need to succeed in school and in life.

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## **Carpentry for Young Children**

*Written and revised by the teachers at Tucson Community School*

Carpentry is the perfect activity for preschoolers. Through carpentry, young children learn skills for problem solving, build eye-hand coordination and muscle development, they work on their focusing of attention, and it's also a great tool for working out aggressive impulses. But that's not all. Carpentry also activates sensory learning, from the smell and feel of the wood, the warmth of the nails as they're pulled from, and the sounds of chopping, sawing and drilling. Through carpentry children also learn about safety, working together and gain satisfaction from working

with real materials. Not to mention, there is great math skill building as children advance to measuring and estimating in their projects.

Carpentry is available for all groups at Tucson Community School. It does require close attention from supervising adults, and tools are not set out unless there is adult to assist. At TCS all carpenters wear plastic safety goggles, the number of children in the center is limited. But with small group supervision, safety precautions, and intentionality – the children at TCS as young as 2, learn how to use hammers, saws, c-clamps and/or vises, and a variety of woods.

It's important to think of developmental age and ability when starting a carpentry project in your classroom/school. Although it can be very exciting, there are a few baby steps and skills to build before jumping into large projects (like building a tree house). Carpentry for a 2-year old may start with hammering golf tees into Styrofoam or learning to make wood smooth with sand paper. 3-year-old children may start with large-headed, short roofing nails hammered into fiberboard and pulled out, and hammered in again as often as they like. After a while, move on hammering 1" long nails into soft woods, using c-clamps or vises to hold the wood steady. By the end of the year, our little ones can hammer nails into a wood stump or be ready to saw soft narrow "furring" strips. For our more advanced 4 and 5-year old children, they put more planning into their projects and tend to work on large group projects (like designing and building a play structure for their yard). By this age, children can use a hand drill, most screw drivers, or a plane for smoothing wood.

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## **Woodworking in My Classroom? You Bet!**

*By Linda K. Huber*

I saw it the moment I walked into the campus laboratory preschool as a graduate assistant - a large, square workbench. Hanging on pegboard nearby were real hammers, screwdrivers, and hand drills to be used by three-, four- and five-year-olds.

This was my first exposure to a woodworking center. Although I was uncomfortable with a woodworking center in the early childhood classroom, I soon realized that young children can handle real tools.

Why are early childhood teachers so reluctant to provide woodworking centers? Below are some of the reasons given, as well as ways to overcome these concerns.

### **Woodworking Is Too Noisy**

Noisy areas exist in every classroom. To find a location for a woodworking center, look for areas where noisy activities can exist and where ample space can be provided for children to move freely. An ideal location allows for two to four children to move and work comfortably. There should also be space nearby for storing the tools and extra wood. For those teachers who cannot deal with noise inside the classroom, consider putting the workbench outdoors.

### **Woodworking Is Too Dangerous**

Injuries are always a possibility in a woodworking center. However, with proper safety, the possibility of injuries can be reduced. As with other play centers, some basic limits are essential.

- Everything has a place. When tools, nails, and wood are taken out, they need to be returned.
- Tools have their own special purposes; tools are used only for hammering, sawing, and building.
- Safety goggles must be worn at all times.
- An adult should be in the center when the tools are in use.

### **Woodworking Is Just for Boys**

If a teacher discovers that girls are not exploring the center very often, suggest having a "girls only" day so that they will have an opportunity. When teaching how to use the tools, include both boys and girls in the demonstrations. Furthermore, display pictures and books with women as construction workers. It may also be necessary for the teacher to examine his or her own biases and determine if girls are receiving negative feedback about woodworking.

### **Woodworking Is Too Expensive**

Good, high-quality tools are costly, but they are a long-lasting investment. Choose tools wisely by starting with the basics (i.e., hammers, screwdrivers, and pliers). Add more tools as money allows. A list of suggested woodworking equipment is provided below. Also, do not hesitate to ask parent groups to help purchase more expensive items with fundraisers.

Once tools are purchased, there is little trouble getting wood. Many contractors and local building supply stores or lumber yards have extra wood they are willing to donate or sell at a reduced cost. White pine and poplar are lightweight and soft, and hold nails and glue well.

### **Why Woodworking?**

As children explore with tools and wood, they will use large and small muscles. Sawing, for example, requires large movement, while holding a screw in place requires small-muscle coordination. As children make decisions about design, shape and type of wood to use, they participate in problem-solving skills. If children are working together to saw a piece of wood to build a bridge, they practice social skills. These skills may carry over into real-world settings.

Woodworking also allows children another avenue for creativity. When children are provided with enough materials, technical assistance, and limits, they can experiment as they wish. As they become more skillful, they can use more advanced tools and develop their ideas accordingly. It is important, however, that children not be required to imitate models provided by others. Children may become frustrated when their resulting product does not resemble the model

provided; they may give up rather than explore other possibilities. Remember, the planning and building process is more important than the finished product.

As children successfully complete their projects, even if the project is sawing a piece of wood in two, they are building self-esteem. When they use their constructions in other play episodes their self-esteem is enhanced. Children's work does not have to be complete in order for them to feel a sense of accomplishment. As with other successes, seeing some progress can keep a child going.

### **How Do I Begin Woodworking?**

It may be best to introduce the woodworking center to small groups of children, rather than an entire class. Give children names for the tools and explain their use and care. Then give children time to explore these new materials. It is helpful for children to have practice with new materials while they have an adult to help guide them.

Provide some pictures of construction in progress for children to look at while they are in the woodworking center. These photos may give the children new ideas to try. If possible, take the children on a field trip to a lumber yard, hardware store, or construction site. Let children see how tools and construction materials are used in the real world. If the group cannot go to the construction site, perhaps a construction worker could come to the class to demonstrate the materials and explain how they are used.

### **How Do Children Develop Woodworking Skills?**

Children do not come to the woodworking center and suddenly create wonderful masterpieces. Instead, they explore the tools and discover what each tool can do and how they can manipulate it. Once they feel comfortable with a tool, the real creating begins.

### **Conclusion**

Woodworking may be a challenging play center to add to an early childhood classroom. However, children develop self-esteem, social skills, creativity, and physical abilities that may not be encouraged elsewhere. When I entered the campus laboratory preschool that first time, I walked in with fears, questions, and concerns. After watching the children explore the center and observing their developing skills, my fears were reduced. Now when I visit an early childhood program, I look for the woodworking center. If none exists, I look for ways to create one. Woodworking in my classroom? You bet!

*Linda K. Huber is a doctoral student at Ball State University majoring in early childhood education. She is a former kindergarten teacher and child care administrator.*

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## **Seven Developmental Stages of Children's Woodworking**

Stage One - Acquaintance with tools and wood. This stage is an initial exploration of tools and wood. Through manipulation of these, the child learns about weight, balance strength, and texture.

Stage Two - Simple skill attempts. During this stage, children actively explore hammering, sawing, and gluing. Projects will be attempted, but few objects will be built.

Stage Three - Simple construction. With building confidence, children work at planning, sequencing, and creating a new object. They may select a piece of wood, for example, saw it in two pieces, and then join them with nails to create a new shape.

Stage Four - Refinement. As children continue to improve their workmanship by creating several projects, they will begin to add finishing touches such as sanding rough edges and gluing before nailing.

Stage Five - Functional construction. The finished products at this stage may have a more realistic look because the children intentionally put pieces together to form a shape with a name and added reality.

Stage Six - Decorative combinations. Children at this stage use carpentry with the intention of creating something for use elsewhere. They plan, collect materials, and execute the plan to complete a project. The addition of previous planning makes this stage different from stage five.

Stage Seven - Emergence of craft. Children continue to try new ideas and refine existing techniques. Carpentry is used as both a functional and symbolic skill.

[http://www.earlychildhoodnews.com/earlychildhood/article\\_view.aspx?ArticleID=181](http://www.earlychildhoodnews.com/earlychildhood/article_view.aspx?ArticleID=181)

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## **Setting Up a Carpentry Center**

The first step in setting up a carpentry center is acquiring materials. Carpentry can get expensive without the right resources. Seek donations of materials from parents, businesses, and friends. Make sure donated tools are checked carefully to be sure they are in good condition.

Safety items should always be purchased to ensure high quality and standard of safety. Double check your safety goggles each year for cracks, missing parts, and wear and tear.

Set up saw horses or sturdy table outdoors or indoors in a corner that's easily accessible yet not in the path of traffic.

Storage is also very important, you want to have tools and materials where children can access them during supervised carpentry time and in a space that can be locked or stored when not in use. Have tools stored in a small cupboard or hanging on pegboard within children's reach so they can get them and put them away. Store wood accessibly with nails and goggles in low shelves in the same area.

## **Basic Equipment for Woodworking Centers**

**You will need:** Saw horses or long table with wide lip, full size hammers, screws, pliers, vice grips, metal clamps, planes, pencils, levels, scissors, sandpaper, nails, safety goggles, crowbar, glue, files, Hand saws (crosscut, keyhole or compass), screwdrivers (standard and Phillips), drills (hand drill, brace and bits), rulers and tape measures, soft wood (pine's good) cut into pieces small enough for young hands 4"x 4" x 1".

Extra materials may include: more sandpaper, markers, paint, metal lids and soft plastic bottle caps for dials, buttons and wheels, and Styrofoam or similar soft materials for "practice hammering."

## **Safety Precautions**

Remember children will be cautious naturally because they don't want to get hurt. Follow these tips for added safety.

- Space children at least 3 feet apart when working and out of the way of active play
- **ALWAYS** have adult supervision, but do not interfere too much. Remember it's the process not the product that's important.
- Safety goggles MUST be worn at all times to protect eyes.
- Wood MUST be clamped down before any hammering or sawing is done.
- All nails must be pounded completely, no sharp points sticking out. Help child pound down any sharp points.

Don't forget to have fun!

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## **How to Begin**

Educate the children. Discuss safety with a small group. Tell them your rules and ask them for rules you think they might add. A good list of norms to begin with are:

1. Always have an adult present

2. Wood must be clamped
3. Only hit nails with the hammer
4. Always wear safety goggles
5. Put tools away after use
6. Tools must stay in the carpentry area

Keep your group sizes small in the beginning. 1 or 2 for younger ages, and 3 children for 4 and 5-year-olds.

Have children place wood the way they want it to look and help them clamp it tightly to the work surface. Some children who have never hammered may need some help “starting” the nail but be sure to remember to allow the child to do as much as he/she can. Encourage the child to “watch the nail” and “keep working” at it.

When the child is finished, discuss the product and the process. Talking with children about carpentry can be similar to the way you talk about art, “I notice you have different shapes, a circle and a square,” “you really worked hard on that,” “how else could you try that?”

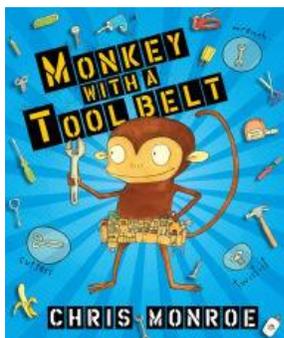
When introducing new tools or techniques, explain clearly and watch especially closely.

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## Children’s Books to Use with Carpentry

With every center in your classroom, you should always look for books to inspire children to create new projects. It’s also a good way to tie in language development for our young readers. Books don’t have to be about carpentry or woodworking specifically, you can fill your library with books about homes and buildings, architecture, tools, carpenters (profession), measuring, lines, etc.

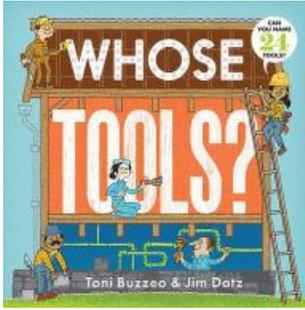
You can also check out some of these books to enhance your woodworking area.



### **Monkey with a Tool Belt**, by Chris Monroe

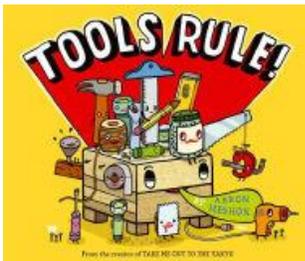
Chico Bon-Bon is one awesome monkey. He doesn’t just sit around trees eating bananas, he snaps on his amazing tool belt full of gadgets, gizmos and tools to build and fix everything and anything. But the real adventure occurs when an evil organ grinder wants to kidnap Chico for his circus. Young and older readers will love the comic book feel of the illustrations, as well as the variety of storytelling methods used in the text, including rhyming, lists, and boxes.

The extra-cool part about reading this one with your children is not only learning about all the tools Chico uses, but following the sub-stories being told through the illustrations. It’s a book you can read over and over again and always find something new to explore.



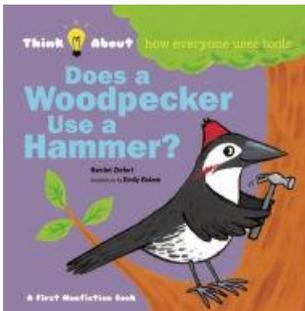
**Whose Tools?,** by Toni Buzzeo and Jim Datz

This might be a board book, but it certainly a fun read for all ages. It features over twenty tools being used by men and woman of different backgrounds and specialties. My kiddos love to guess the tools and who is using them! Also, the pictures are adorable and make the process of building a house both fun and educational.



**Tools Rule!,** by Aaron Meshon

Being a tool means being part of a team: After all, a hammer can't do its job without a nail. This book not only teaches kids the names and identities of tools, but also tells the story of them working together to build a home—a tool shed of their own. And every child will love the sound effects each of the tools makes! A great message and sweet illustrations make for an awesome read for your little handy-kid.



**Does a Woodpecker Use a Hammer?,** by Harriet Ziefert and Emily Bolam

This book has a clever and unique approach to how tools are used in different situations, including an explanation of the ways that animals use tools that we may not have ever realized. Kids will love the question and answer sequence in the text, as well as the amazing discoveries they'll make throughout the story. A fun and highly informative read that will educate and entertain even parents!

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## Additional Resources

### Written Works:

- Adams, P.K. & Taylor, M.K. (1982).Children's workshops: Ideas for carpentry centers. (ERIC document reproduction service number ED 242387).
- Skeen, P. & Garner, A.P. & Cartwright, S. (1984).Woodworking for young children. Washington, DC: NAEYC.

### Helpful Websites:

<https://education.govt.nz/assets/Documents/Early-Childhood/Play-ideas/Carpentry.pdf>

<https://www.tanyavalentin.com/carpentry-ece/>