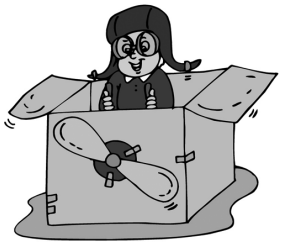


Teaching Creativity 1

Sparking creativity in children opens the door to learning in every developmental area. When children think creatively, they look beyond what is in front of them to see what could be. They explore from many different angles and engage all their senses. This creative exploration can lead to successful problem solving, a broader understanding of topics taught, and a sense of appreciation for the world they live in.

To "teach" creativity is to embed a child's day with options—to provide the physical environment to support creative action as well as the psychological environment to support the quest. For teachers and parents, this means not only providing appropriate materials but also creating an atmosphere that encourages the exploration of new ideas.

Rather than separate creativity from other concepts being taught to the child, creativity is best fostered when it becomes an underlying standard in all play and learning.

For children to excel in a variety of academic areas, they need an established basis for exploring new information, understanding it thoroughly, and using what they know to problem solve. This basis is creativity.

Thinking creatively allows children to open their minds to further learning. Without this basis of thinking creatively, children are prone to merely *acquire* information—rather than have the skill to *do* something with this information. When children are supported in their creativity, they are able to actively engage in the learning process. For example, it is more than learning there *are* numbers, but about learning what those numbers are capable of *doing*—how they interact, what they represent, and how they are used to organize or represent objects and information.

Creativity puts further learning and exploration in motion, involving much more than art projects. In *More Help! For Teachers of Young Children,* author Gwen Snyder (2006) encourages teachers to look beyond the art project as their avenue for supporting creativity in children. She states, "The outstanding musician, writer, teacher, engineer, architect, scientist,

athlete, inventor, business leader, and chef all have at least one thing in common. They are willing to look at the world with fresh eyes, to step beyond the way things have always been done and dare to imagine how they can be done differently. This is the very core of creativity" (p. 155).

As teachers and parents, we need to remember this advice. Creativity is not simply art expression. It is the expression of all ideas, emotions, and desires and can manifest itself through many diverse mediums from writing to engineering and beyond.

To support children in stretching their creative muscles, parents and teachers can begin by simply trusting that they can and will find their way on their own. Too often, adults feel the need to lead children—they want to protect them from disappointment, harm, and conflict, so they try their best to show them the "right" way. But this robs children of the opportunity to learn from their experiences, to follow their hearts, and to trust their own instincts.

Parents and teachers who trust their children to embrace the process and find their own answers not only open the children's minds creatively but also support their sense of self-esteem and empowerment. As adults show trust in children, children will increase their trust in their own instincts. Following creative instinct, and feeling supported and trusted during this process, will allow children's trust in their own ideas to grow and increase their level of creative thought.

In *The Nurturing Parent: How to Raise Creative, Loving, Responsible Children,* authors John Dacey and Alex Packer (2006) studied highly creative children and identified a particular parenting style that supported this growth of creativity. They called it the "nurturing parent." While they identified many aspects that contributed to the parent's ability to support their child's creativity, they state "perhaps more than anything, nurturing parents *trust*" (p. 17).

These nurturing parents differed from other parents "in that they tend to be more consistent in dealing with their children, and more willing to let them learn through experience. They believe that children get better at the things they practice . . . that they must make their own decisions if they are to learn good judgment" (Dacey & Packer, 1992, p. 17). These parents recognized that when adults make decisions for children, it teaches the children not to trust their own instincts, but when adults show trust in children, the children learn to trust their own decisions.

This does not mean that we back away altogether and let children wander aimlessly looking for answers. Rather, we become part of the background of their experience, providing information, props, and encouragement along the way to support their quests. A child trying to build a fort, for example, may see a branch he or she feels would work just right, but

the child needs an adult to get it down. Or the child may wonder aloud how big a blanket it will take to cover the top, and the parent could provide a tape measure. As the work progresses, the adult can provide support through verbal encouragement such as, "The stick you used across the top fits just right!"

A word of caution here: Providing encouragement is very different from praise. Research shows that excessive praise for children's actions leads them to seek more praise and approval—they begin to discount their own feelings and give weight only to the feelings of others. Dacey and Packer (1992) contend that "nothing destroys creativity faster than praise" (p. 39).

The encouragement children need is in trusting their feelings of accomplishment. By expressing praise for children's *efforts* and allowing them to voice their opinions on the *result* of that effort, you are empowering children to analyze their efforts and trust in their own sense of pride. Once children have expressed their own reactions, praise, and criticisms, then it is appropriate for the adults to express their own. At this point it simply *adds to* the children's perspective of the result. Through this type of encouragement, parents and teachers can show children the rewards that result from their sense of purpose—the excitement of pride and accomplishment—rather than focusing on praise, money, stickers, or other outside rewards. Teach children to see their self-pride as its own reward, and one worth striving for.

Creative thinking often leads to actions that exercise independence. As children begin to trust their creative thought processes, they will feel more empowered to step away from the crowd. Actions of independence should be valued and encouraged. Independence allows creative thought to blossom uninhibited and leads children to answers that are new and exciting—not just for them but for those around them!

The ability to find new and exciting answers is often described as "thinking outside the box." It is used to describe creative people or to encourage adults to think creatively. But what exactly does it take to think outside the box? Several factors affect creative thinking:

- Functional freedom
- Stimulus freedom
- Delayed gratification
- Balanced-brain thinking

Parents and teachers can support creative thinking by providing activities that support these four factors. Together, they give children the tools they need to explore their world with a creative eye and come

to their own conclusions regarding their place in the world and their ability to change it.

FUNCTIONAL FREEDOM

When we teach functional freedom, we are showing children the world of possibilities—a box may be something more than just a box. We are letting their imaginations dictate the use of an object rather than letting the object dictate its use.

How children express their creativity through imagination can be different for each child and for each situation. As parents or teachers, knowing your children's personalities—what's important to them, what excites them—can help you lend support to how they express creativity. For example, knowing your child's love of airplanes, you can provide small toy airplanes for him or her to use when working on math as a means for expressing math problems and solutions. The planes become representations of numbers. Another child may feel creative freedom in making up a song about numbers, and another in writing a book about them.

Looking over your environment and ensuring it is conducive to supporting the creativity of the children in it will help in offering moments of functional freedom thoughts to them. Provide props that excite and inspire the children—things they know and love as well as items that are new and spark their curiosity. In *The A to Z Guide to Raising Happy, Confident Kids*, author Jenn Berman (2007) tells us that "of all our different personality characteristics, creativity is most influenced by the child's environment" (p. 171).

A wonderful educator in Wisconsin, Inez Learn, told a group of teachers at her creativity workshop[1] that when purchasing toys for their day care, to ask themselves if the play is in the toy or in the child. If the toy can do its thing all by itself, then what's the kid for? To sit and watch? But if it takes a child to manipulate the toy, to give it a name, to declare it is going somewhere or feeling something, then it's really doing something. Too often we try to give children what looks like fun when all they really want is the box! They naturally think in functionally free ways. What kids need isn't for you to tell them what or how to play but to simply give them the opportunity to do it. Their own imaginations will power the play and lead them to places you probably would never dream of. Unless, that is, you've worked to maintain a bit of your own creativity. Then you might have a fighting chance to join in.

Pose the same question when looking over your child's environment, whether it is a bedroom or playroom at home, or your classroom or day

care room. Is the play in the environment or the child? Does it take *action* from the child to make something happen? Does it take decisions and imagination, or is the play all laid out for them? Think of children's playtime like a theatrical play—you don't want to be the director and give them their lines. You want to be a prop man. Make them the playwrights. Just be sure they have what they need to keep the play moving into the next act!

In thinking of children's environments, we must also include the outdoor spaces they inhabit. Unfortunately, for many children, outdoor space may be limited to playgrounds and manicured parks. In *Last Child in the Woods,* author Richard Louv (2005) declares that the new generation of children will face what he calls "nature-deficit disorder." He notes this is not a medical diagnosis, but a way to think about the problem. His theory, based on interviews with over 3,000 children and parents, is that this generation of children has no personal relationship with nature and that this is creating a deficit in a child's ability to learn certain concepts.

One of these concepts is creativity. Louv (2005) states, "Nature inspires creativity in a child by demanding visualization and the full use of the senses" (p. 7). Many researchers are confirming this theory. Sebastiano Santostefano (2005), director of the Massachusetts Psychology Institute, said, "If you [use] traditional puppets and games, there are limits. A policeman puppet is usually a policeman; a kid rarely makes it something else. But with landscape, it's much more engaging, and you're giving the child ways of expressing what's within" (pp. 51–52). Nature provides so much to support a child's sense of functional freedom. It offers items that provide a variety of sensory experiences, all subject to a child's interpretation and imagination. Sensory experiences are vital to creativity. Nature encourages the use of all senses, as opposed to television and most toys, which engage only sight and sound. Nature fills the need for the healthy development of children's senses and therefore supports the development of creativity.

Our country has evolved into a place where the child has been disconnected from nature. Whereas the learning used to be within the child—creating forts, building dams in creeks, and other play in nature—the learning is now orchestrated by adults. Parents build tree houses that follow covenant rules based on a plan from their home improvement store. Adults build play structures at parks and public pools with water play components they have designed. We've forgotten that what the children gained from these play situations was not the end result—it was the process. With the process taken away, it is no surprise that a drive through neighborhoods will show you many play structures and parks where children are nowhere to be seen.

Years ago, as a new teacher at a child care center, I was initially impressed with the massive play structure in the playground. However, in a short time, I saw that it had one major flaw—there were no moving parts. It was simply a big thing. It could not be manipulated by the children and therefore they found no fun in it. I noticed how the children spent more time around it, playing in the dirt at the end of the slide, picking the flowers that grew near it, and scooping the woodchips around it than they did actually on the structure. Taking my cue from them, I packed up my group and walked across the street to an empty lot that had a beautiful meadow. We crawled on our bellies in the grass like snakes, picked flowers and counted their petals, watched caterpillars crawl on leaves, caught butterflies, and used sticks to build a fort. After doing this every day for several days, I was brought into my director's office and almost fired.

I was told that it was inappropriate to take the children outside of our center, to "wander around a dirty empty lot," and to not follow our strict guidelines for time outside. It was obvious to me this director did not see the value of nature. As a farm girl from Iowa, I knew it very well. I soon decided to open a family day care business of my own where, I'm proud to say, we spent every day exploring meadows and other wonderful aspects of nature to our hearts' content.

That children need to manipulate their environment is more than my personal observation. Ben Nicholson, Britain's most prominent twentieth-century artist, brought this need to the attention of all educators when he posed his "loose-parts theory." He states, "In any environment, both the degree of inventiveness and creativity, and the possibility of discovery, are directly proportional to the number and kind of variables in it" (cited in Louv, 2005, p. 86). In other words, when kids get to manipulate objects, it sparks their creativity and imagination.

We still have many constraints in letting our children build a relationship with nature. But we can use this information to help us make better choices for supporting this relationship—taking our children to parks and other places where they are allowed to wander freely, to explore, to pick flowers, and to manipulate objects; providing them space in our own yards and playgrounds where it is okay to dig and build; building play structures that provide them manipulative experiences; and adding props that take this even further. More than just a support for creative minds, Louv (2005) shares with us his research findings that "environment-based education produces student gains in social studies, science, language arts, and math; improves standardized test scores and grade point averages; and develops skills in problem-solving, critical thinking and decision making" (p. 204).

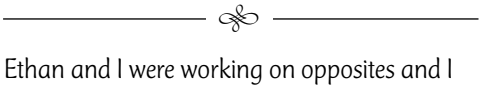
Providing "loose parts" for our children and allowing them to use their imaginations to combine these parts or see them as new objects often results in messiness. However, this messiness should be celebrated as a reflection of learning! In *Natural Playscapes: Creating Outdoor Play Environments for the Soul*, author Rusty Keeler (2008) discusses the importance of messiness in regard to creativity and how these activities work to create a basis for further learning. "Childhood is supposed to be messy and natural playscapes (outdoor play areas) offer a kind of messiness that inspires learning and creativity. The skills they learn on the playscape, such as having the confidence to try things they've never done before, will later translate to the school setting" (p. 282).

Functional freedom allows children to stretch their creative muscles, to consider what was not considered before. Dacey and Packer (1992) point out that "functionally free kids are easy to recognize. They are the ones who pipe up with the simple solution that went over everyone's head" (p. 54).

A great example of this is the time I had a problem with children jumping over the couch in my classroom. I had the couch set with the side against a wall, creating a barrier between two areas in the room. However, the children seemed compelled to jump over the back of the couch when going from the one area to another. Rules and consequences seemed to have no effect on curbing this behavior. So one morning at group time, I posed this question: "What will it take for you to stop jumping over the couch?"

Four-year-old Hannah gave me a "duh" roll of the eyes and shrugged as she answered, "If there was something on the other side, I wouldn't be able to jump over it."

That had definitely gone right over my head! I was so busy thinking of the functional use of the couch—to be sat on—I didn't consider its use as a jumping item, which made it impossible for me to think of a way for it *not* to work as a jumping item. Hannah saw it as something to jump over, which led to thinking of reasons why it wouldn't work as something to jump over, which led to her solution. By being functionally free, she was able to follow a thought process I wasn't able to and find the solution. We moved a bookcase to the back side of the couch, placed a plant and the fishbowl on top, and that was the end of the jumping.



Ethan and I were working on opposites and I asked him what was the opposite of *up*. He replied, "Going to bed!"

Supporting this type of thought process means being open to all the possibilities for our props, environments, and natural play areas for children. By doing so, we are supporting their imagination and sense of functional freedom. Their creativity blossoms and they discover more about themselves, their world, and each other.

STIMULUS FREEDOM

Stimulus freedom is another important factor in supporting children's imagination and creativity. It means not assuming there are rules to follow, or that if there are, knowing they can be bent. It means understanding the *reasoning* behind the rules so that children can understand the possibilities of changing rules to meet the needs of new situations and priorities. It also means not being afraid of making a mistake, of breaking a rule, or trying to do something in a way that is different from the process previously used.

Stimulus freedom allows children to place a high value on the *process* rather than the *results.* A current television commercial is a great illustration of this. An inventor of a vacuum cleaner explains how it took 2,000 prototypes before they got it right. He talks about how they would get excited each time one didn't work because it meant they had discovered something new; they had identified what not to do and this led them closer to what to do. Wouldn't it be great if we all got so excited about doing things that didn't work out? Recognizing that each step in a process is a potential for learning is exciting! Show your child that you value this more than the results, for if it were not for the process there would be no result.

Dr. Jenn Berman (2007) tells us that "young children naturally have the curiosity and confidence to try new things until they become self-conscious and afraid to make mistakes" (p. 171). When adults portray mistakes as a negative part of the process, children begin to question themselves, and rather than embracing a mistake as an opportunity to learn, they feel ashamed by them and hide them, learning nothing in the process.

Parents and teachers who celebrate these mistakes as parts of the process can help empower children to trust their instincts and move forward with confidence, unafraid of making a new mistake because they will see it as a step in the process rather than a roadblock. Robert Kennedy said, "Only those who dare to fail greatly can ever achieve greatly."

To help children embrace the process, encourage them to make mistakes! By purposefully doing something that seems against the rules and will possibly look like a mistake, you can help children discuss and explore *why* it didn't work, which enhances their knowledge of the activity or item—our ultimate goal. Help them to look beyond what they know and push past it.

For example, take a jar of water and pour it into a smaller jar. Keep pouring even when it begins to overflow. (Note: Creating a rule not to allow children to overfill jars would inhibit their stimulus freedom and opportunity for learning.) Obviously, the water will not fit into the smaller jar. But why? If water can fit in a jar, why wouldn't it fit in another jar?

What happened when you kept pouring? Where did the water go? Why? If you now pour the small jar of water back into the large jar, what happened? Where is all the water? Does it still exist? Can you get it back? You can see here how the activity can lead to a very in-depth discussion that involves lots of learning! All because of the mistake of spilling water.

An offshoot of making mistakes is the notion that there are right and wrong ways to do certain things. Howard Gardner (1993), director of Project Zero at the Harvard Graduate School of Education and the man who revolutionized our understanding of intelligence, said, "The key idea in the psychologist's conception of creativity has been *divergent thinking.* Intelligent people are thought of as convergers—people who, given some data or puzzle, can figure out the correct (or at any rate, conventional) response. In contrast, when given a stimulus or puzzle, creative people tend to come up with many different associations, at least some of which are idiosyncratic and possibly unique" (p. 20).

I have seen this in the children I teach. One in particular who comes to mind is a four-year-old named Ben. I had presented him with a set of sequence cards. There were four cards: one of a mother pouring juice into a cup for her daughter, one of the daughter picking up the glass, one of the daughter drinking the juice, and one of the empty cup sitting on the table. This was considered the "correct" sequence for the cards. When Ben placed them in order, he began with the one of the daughter picking up the glass, followed the "correct" sequence, but ended with the mother pouring the juice. I asked him to tell me the story to better understand his decision. He said, "There was a little girl who was thirsty and she started to drink some juice. She drank and drank and then it was gone, so she called her mommy and asked her to pour her more juice!"

While technically he got this task "wrong," it was obvious that his logic followed perfectly, and therefore I scored him as having done it right. This is an example of how standardized tests can often be unfair to creative children. Gardner (1993) points out that attempts to create standardized tests, akin to intelligence tests, have failed, mostly because they limit the creativity to a single industry or learning style (e.g., visual). Parents and teachers need to be advocates for their children's creativity and be careful that this creativity is not misinterpreted through standardized testing.

A study of a wide variety of classrooms found that approximately 90% of the questions asked by most teachers had only one right answer (Dacey & Packer, 1992). We need to teach our children that there are many right ways to answer.

Allowing for more than one right answer often goes against convention, and people who practice this are accused of doing it wrong. When we

see people acting in a way that's different from the norm, we often see it as silly or ridiculous—even crazy. (Think of the Wright brothers when they told people they were going to fly.) However, I've always defined acting silly as "exhibiting unharnessed creativity." I crave creative moments, and when I don't get them often enough I tend to explode with them! And yes, it may look silly to a man for his grown wife to insist they play the soundtrack from *Mary Poppins* while putting new siding on their house, even when the kids are not home. And yes, it probably looks ridiculous to a day care parent to walk in and see me standing on the couch with a pink boa around my neck and a cowboy hat on my head, throwing silk flowers into the air. And yes, even the kids look at me in shock when I spontaneously combust into a song about my bubble gum losing its flavor on the bedpost overnight while they are quietly doing puzzles. But each time, whether they want to admit it or not, they smile.

They smile, and they consider something they had never considered before. They open their minds to the possibility before them, and for that moment, creativity thrives. Then they begin to wonder what it would feel like to do that. Now admittedly, I don't think my husband said this to himself that day doing siding, but he's not known for his creativity anyhow (someone needs to be sane the majority of the time in our household, so he took the job). But the day care parents wonder, "Could I do something fun like that with my kids?" And the kids wonder, "Do you think I could sing *my* favorite song too when I do puzzles?" Unharnessed creativity begets creativity.

Many years ago, when I was very green at doing child care, I stumbled into a creativity workshop by Inez Learn (whom I mentioned earlier) just outside of Milwaukee, Wisconsin. When I walked out, I felt seven years old again and sat down to write a letter to my mother to thank her for teaching me all I ever really needed to know about raising kids that I had simply forgotten until that day. What Inez taught us was to stretch our minds, to wonder, to look at the world in a new way—to be creative. Almost every exercise she gave us, I quickly realized, was something that my own mother had done with us four girls when I was little. As I looked around the room, I saw women frantically taking notes, in awe of what they heard from her, seeing it all as a completely new idea. That's when I started my letter to Mom. None of it was new to me, but it had been forgotten. In the quest to grow up I had fallen into the biggest trap of all—I forgot what it was like to be a kid. Inez reminded me of the joy of a simple game, of the opportunity to create, of the power of imagination.

She gave us questions to stretch those creative muscles, to wake them up. Questions such as "Which is rougher: purple or green? Which is faster: a chain or a table? Which is heavier: an ocean or a mountain?" As adults we discount these types of questions as ridiculous and without answers.

Yet you ask children and they will *know* the answer. "Which is bigger: a pickle or a pain?" you ask. "A pain," says Megan. "I broke my arm last summer and it was bigger than anything in this world." But then, "A pickle," says Ben. "My grandma grows the hugest pickles you've ever seen and she gives me one each time I visit." They're both right. The answer changes for each person, but it's always right. It's about looking at something not as others see it, but as you see it. To not be influenced by the rules society puts on an object but to think beyond that, allowing your own point of view to be the guide—*that's* creativity. Even if it does sound silly to say that darkness is quicker than lightness. But it's true. Ask kids this question the next time they have to come inside from playing because it got dark outside. They'll tell you that the dark came very quickly but that it seems like morning will take a long time to come. Unharness their creativity and yours with these questions so that when someone accuses you of being silly you can answer, "Yes! Yes, I am!"

Another way to view this silliness is to see it as part of a greater whole. From these moments of creativity new ideas spring. Those new ideas then move into actions and ultimately become something of concrete value. Jean Piaget, the noted philosopher and developmental psychologist, described the stages of child development to be on a pendulum. Children grow so quickly they go from balanced to a state of disequilibrium and back. Begin to see the moments of creative energy as the period of disequilibrium, knowing that in the end it contributes to a balance in the child's development and learning.

The idea of supporting a child in bending the rules can often make adults worry that disciplinary problems may arise. They feel the need to implement rules, to safeguard their children. But rules take the decision-making process away from the child. So how can we protect our children while supporting their decision-making capabilities? It's about modeling what we are trying to teach our children, that the *process* is what matters. This means that rather than setting rules, parents and teachers who support a child's creativity will create limits but emphasize the *reasons* these limits are in place. This teaches children to think through situations, to evaluate how it will affect them and in the end, make their own decisions. It involves discussing the implications of certain behavior so children are in charge of finding their own solutions.

Identifying the limit to a particular behavior, and discussing the reasons the limit is where it is, opens the discussion to reexploration as the circumstances for the limit change, teaching the child that these circumstances are what is important in the decision-making process. For example, on a very cold day you may talk with your children about limiting their sledding to just three hours that afternoon because of the wind chill and

possibility of getting sick or too cold. This is opposed to a rule that says they can sled for only three hours. The difference lies in the discussion about the reasoning. For if the next weekend the weather is warmer, the children will now understand that because the threat of the cold is no longer so high, they could now decide to sled for four hours and not find opposition. However, if the previous week a rule was imposed, the children would more likely sled for only three hours and not question the decision or build their understanding of it. They also would not learn to trust their instincts when being outside and have no basis for making a future decision on the length of time to be outdoors. By providing the limit with an explanation of the reason, it teaches the children to understand the important aspects of the decision so when faced with the same circumstances again, they will be able to make a good decision based on the new facts.

A classroom example of this is a rule limiting the time children can play in specific areas of the room. This is often done to maintain classroom management and allow children time to fully explore the areas they are in without it becoming crowded. But consider it from this point of view: By putting the focus on time without addressing the real issue (overcrowding), the children simply follow the rule but do not build an understanding of it. However, teachers can include children in discussions about overcrowding and let them help determine an optimal number of children in an area in order for them to play freely. Then children will be able to make their own decisions to move about based on the changing circumstance of the number of children in the area rather than the time rule.

Allowing children to feel free of the constraints of a particular setting or activity encourages their imagination and sense of creativity. The freedom will allow them to better understand why rules exist and to then use that knowledge to implement the concept in other areas of learning. Supporting unharnessed creativity, and even a little silliness now and then, helps children to think outside the box, to put new ideas together that they previously saw as separated, and to come to a new level of understanding to support all their other learning.

Alexis had crawled onto the couch and started to jump. I said, "No jumping on the couch." She looked at me with an angelic smile and said, "We could hop!"

DELAYED GRATIFICATION

Delay of gratification is one of the more difficult traits for children of this new generation. We live in a world that moves faster and faster, that

provides information with the click of a mouse, where you can buy, sell, explore, ask questions, get answers, and more in only moments. Children today want it all, and they want it *now*.

This desire to be instantly gratified creates a loss of patience. Without patience, it is nearly impossible for a scientist to finish an experiment, for an artist to finish a painting, or for an explorer to make it to the top of a mountain. Understanding that there are many processes in which time is needed in order to accomplish a positive outcome is a trait quickly disappearing in our youth—and therefore in desperate need of attention by parents and teachers alike.

Growing up, many of us heard our mothers say, "Good things come to those who wait!" We were taught that waiting is a part of life, that it would be worthwhile in the end. The Dr. Seuss (1990) book that is often given to graduates, *Oh, the Places You'll Go!*, commits an entire section to "The Waiting Place"—reminding children that waiting is a part of life, but then moving forward and showing that after the waiting good things will come, "you'll find the bright places where Boom Bands are playing" (p. 26).

Teachers often find resources that include what they call "transition activities." These activities are designed to make transitions—the waiting period between activities—go more smoothly and interestingly for children. These activities promote the idea that waiting is a negative thing and that time spent waiting should instead be filled with something present and interesting. Rather than teaching our children patience, we teach them to fill every moment of their time with an activity!

Imagine an adult's day where waiting was replaced with activity. People in elevators singing songs, people at vending machines reciting their agenda for the day while waiting for their coffee, a baker doing push-ups while waiting for a cake to bake! In many ways, we do see this today. People are texting messages while in the elevator and talking on the phone while waiting for coffee. Many people read the paper or a book while waiting for appointments.

I'm not suggesting we teach our children to sit quietly in every situation and do nothing. But there needs to be a balance between being bored and removing waiting from our list of important activities. Waiting can sometimes be a very exciting thing. We need to embrace the moments where waiting occurs in anticipation of something great and encourage this sense of excitement in our children. These are the moments when our creativity can thrive.

When we are waiting for results, we have the opportunity to explore the options the results may bring. While waiting for a cake to bake, we can talk about how high we think it will rise, whether or not we think the

middle will be done, or the sides too brown, or if it will stick in the pan. It is a time to elicit a sense of wonder in children. Daydreaming is the perfect "transition activity."

Baking is an ideal opportunity to teach the value of delayed gratification. If you take the cake out because you don't want to wait, it will be runny! You *must* wait in order to get the yummy result. Abruptly ending an activity without waiting for the expected result, and seeing how by waiting we are rewarded, are excellent opportunities for our children to learn from.

Waiting is a part of life. It cannot be skipped or ignored. And in many cases, it *will* be worth the wait. To enhance our children's sense of creativity, they need the tools to stick it out, to follow their imaginations where they may go, and to take the time to see how it all turns out.

BALANCED-BRAIN THINKING

Balanced-brain activity is what brings together all the aspects of the previous three traits, using creative thinking to produce concrete output. It's what supports problem solving, a major component of all developmental learning, and underlines the importance of the three *C*s.

Whenever you encourage the journey for children, you are offering them an opportunity to learn problem solving. Problem solving is often separated on early learning standards lists as its own standard and developmental milestone. Sometimes it comes under the heading of creativity; other times as a cognitive activity. The reason it appears in a variety of areas in state standards is because it is the *result* of specific learning in a couple of different areas rather than a specific area of learning itself. To problem solve is to consider the possibilities, analyze the effectiveness of each possibility, and come to a successful conclusion by choice. That means a child must first have the creative ability to consider possible solutions to a problem, then have the curiosity to explore these possibilities closely and analyze them, then have the self-esteem (and support system of others, aka "courtesy") to choose an answer and follow it through. Because all the three *C*s underline the process of problem solving, there will be activities in each chapter that aid in supporting this process, rather than listing "problem solving" as stand-alone activities under only one standard. All the three *C*s support problem solving—creativity is only the beginning!

Dacey and Packer (1992) state, "Creativity requires more than just imagination. It also requires accuracy, analysis and objectivity" (p. 90). The assumption is often made that creative people are right-brain

thinkers, but the truth is that creative thinking comes from using both sides of the brain in unison. Divergent thinking is done in the right brain—we think imaginatively to find all the possible solutions. Then convergent thinking is done in the left brain—we now think critically in order to narrow down the possibilities. This is the basis for problem solving. It ties together creativity and curiosity—creativity in thinking of new ideas, curiosity in testing these ideas to see how they work. Both are necessary for any real action. The initial creative thought is a right-brain activity, but the curiosity to find what will actually work and what will not in order to solve the problem is a left-brain activity. In other words, to teach problem solving to children means to offer them opportunities for balanced-brain activities.

Supporting growth in the connections between the right and left brains builds creativity. However, this does not mean throwing the ridiculous out there for our children, bombarding them with stimulation to try to make these connections occur. Dacey and Packer (1992) warn that "stimulation must be *distinctive* and *meaningful* to promote cognitive growth" (p. 93). For example, a child in a family that is large and full of constant overlapping conversations, while seemingly a pool of verbal influence, because of its lack of one-to-one interaction may actually lead to poor verbal skills in the child. On the other hand, a small family with much less ongoing conversation taking place but a higher level of one-to-one discussions could support a higher verbal ability for a child. The quality of stimulation, rather than the quantity, makes the difference.

Creative activities, whether stand-alone or as stepping-stones to further learning, need to have a sense of quality, a reason for the child to engage and grow. Many children seek out this reason in their learning; a common question at school is, "Why do I need to know this?" Too often, educators do not have a solid reason other than it is in their curriculum, and therefore it must be important. By using creativity as a support for further learning, we are able to find the ways to make it important to the child. It opens doors for a new way to look at the information—a way that the child will have an interest in.

Teachers and parents can use what excites children, and allow them creative freedom to apply these topics to other areas of learning. Children who are not interested in math do not understand its importance in their lives. They will better appreciate it when they learn that in order for them to achieve success in the game of basketball they love, they will need to understand how the scoring works—what value a basket holds, how those values are added together, and how the comparison of the two totals determines the winner. In this way, the teacher and parent can make math relevant to these children.

Two areas that excite most children, and that are perfect for bringing balanced-brain learning into their day, are music and movement. Adding these activities into your daily routine may be a teacher or parent's secret to instilling not only balanced-brain activity but a surge of development in a variety of areas. *The Creative Curriculum for Preschool* states, "Music and movement experiences help develop both sides of the brain—an important finding in recent brain research—and contribute to children's social/emotional, physical, cognitive and language development" (Dodge, Colker, & Heroman, 2002, p. 423).

Music stimulates the right side of the brain, and movement stimulates the left side. By putting the two together, children not only have fun but get a balanced-brain workout. When you add information from other areas of learning, the activity explodes with possibilities for their development.

At Sam Houston State University, researchers studied the effects of early music training on intelligence. They found that the magnitude of improvement in abstract reasoning was proportional to the level of participation in the music curriculum. The children whose parents met "satisfactory" compliance standards for participation in the music activities jumped from the 50th percentile on standardized intelligence tests to above the 87th percentile (Bilhartz, 1999).

Engaging children in music activities can range from the simple—asking children to sing their ABC's while clapping—to the complicated—having children hop to a song and stop when they hear words that rhyme. Or they move to a particular piece of music as if they were a particular animal. Mix together your learning objectives with a piece of music and some body movements and you'll have a recipe for success.

Balanced-brain thinking is the basis for problem solving; it is an essential tool for children in their journey to further learning. Understanding that problem solving is more than one activity—it is actually three—gives parents and teachers the opportunity to support each of its components and to truly support a child's ability to problem solve. Supporting creative thought is only the beginning, but it is a necessary first step. Helping children to take this first step and carry it over to the next—exploring the possibilities (curiosity)—then following it through with a decision and action is a winning plan for any team.

These first four traits are thought processes that we can support through activities we offer. However, equally important is how we support these traits through our own attitudes and reactions to a child's creativity. The combination of providing activities to support creativity and an emotional atmosphere to support creative action sets the stage for success for every child.

We want our children to be original—to have the confidence to be different, to express their creativity. To have self-control—to be able to control their emotions and move forward. To have passion—a drive to get to the answer. To have tolerance of ambiguity—staying open-minded rather than give up when information is unknown. To not fear problem solving—to not worry when faced with a problem but simply see it as something to figure out.

All these traits come from self-confidence, and self-confidence comes from the experience of expressing oneself and feeling supported by those around you when you do. As we support our children's creative thinking, we want to also support their sense of self-confidence. This self-confidence will foster the responsibility and drive to tackle a problem, explore its options openly and uninhibitedly, and put together what is gathered in this process to come to a solution. We don't want our children just to have creative thoughts; we want to teach them they can *do* something with those ideas!

For educators and parents, this means not only providing the environment and stimulus for creative thinking but being prepared to allow children to follow through on their ideas, to share them with others, to act on them. For example, a boy comes to you and asks permission to build a fort in the backyard or school playground. You hand over items (both the obvious and unusual) such as a sheet, some brooms, a bucket, a stack of books, a ball of string, scissors, some scarves, paper and pencils, a couple of pots and bowls, and a box.

He gets to work outside, and before long he has erected a structure of sorts. He gleefully runs to you and asks you to come inside the fort and check it out. Rule 1: You do. Once inside, he begins to explain to you he has constructed a lookout station for deer. He shows you how he has cut a hole in the sheet to create a window and placed a box below it with paper and pencils for recording what he sees. He filled a bowl with berries he found and placed it outside the window to entice the deer. Then he asks, "Can I get some of my friends to make a team to help me watch the deer?" Rule 2: The answer is yes.

What can make giving these answers difficult is the fact that your backyard or playground looks out over the parking lot of the local fire station downtown. The chance for a deer sighting is next to none. As adults, we race to the end and think that if we can't accomplish the goal then the journey should be abandoned. Rule 3: For kids, it's all about the journey.

When the boy has his friends or classmates over to join him, he's stepping into a role of responsibility and leadership. He's taking his ideas a step further and taking his learning a step further as well. He may organize the group, hand out jobs, provide new props for them to use as tools,

and give instructions he can only imagine. Soon all your props have a useful function and he is asking for more. After days of working in the deer observatory, it is likely he may come to the conclusion that you do not live in an area that deer like, so they will not be able to see one, but that perhaps next time he visits his grandma's farm he should build one there. But by coming to this conclusion on his own he has learned so much. He has learned that by pursuing his dreams, he will find answers. He has learned that he has the capabilities to find answers on his own without your help. He has learned to consider every aspect of the problem, continue to look for solutions, and persevere. It's not about the deer; it's about the journey.

Thinking creatively is an activity unto itself. It can occupy a self-driven child's mind for hours or even days. However, adults can also use creativity to open a path to learning that may otherwise be blocked for many children. Young ones who run the other way when asked to study writing or reading will be the first to the table when it comes under the umbrella of a creative activity. By adding creativity to developmental learning, you are providing the stepping-stone children need to reach their goals. Without it, many children struggle. It is such an integrated part of *how* they learn that to skip it would be like expecting them to climb on a roof without a ladder.

Think of creativity as the tool children need to get the job done. You won't nail down math without this particular hammer. Doing creative activities for the sake of fostering creativity is like practicing to hammer—you get the swing down and you gain control. Then you're ready when that nail comes along. You present children with math, put that hammer in their hands, and in one fell swoop—*bang!*—they've got it.

The biggest trick for teachers and parents is to find the right hammer. Creativity involves getting excited about something and pursuing it in many different ways. In a discussion of the research literature pertaining to a child's learning process, Solomon (2003) shares how knowledge of a particular topic can increase our interest and encourage a search for more knowledge of this topic: "Increased interest results in more effective knowledge construction" (p. 74).

The paths you take will likely be different for each child. In today's educational world, this is often a problem. Large classrooms and staff shortages lead to many large group activities that appeal to only a few in the group. Little time is spent one-on-one, which is necessary to help children find the inspiration they need to get started. Where parents and teachers can help each other is in discussing the individual child, what his or her interests are, what gets the child excited, and what doesn't. By sharing this information, it is possible even with a full classroom to identify several factors that would appeal to the individuals and, as a whole, get them on their way.

For example, in a preschool group of eight children, the teachers and parents may identify that three really love dinosaurs, two live to be princesses, two wish they could fly planes, and one would love to be in a plane that went back in time to find dinosaurs. When it came time to talk about math, the teacher could create three learning stations from these three broad topics and find creative ways to explore the math through those topics. It would engage the children's interest—give them that reason—support their creativity, and teach math. That's what this book is designed to do: Take what excites the kids, use it to tap into their creative side, and lead them to further learning.

Believe it or not, you can learn to be creative. All it takes is the ability to take a chance. Break the rules or bend them. Try something new. We were all born with creativity in us, but unfortunately, not all of us continued to practice it or experienced support of it by the adults in our lives. That doesn't mean we've lost the ability to be creative, but it means we have the power to help our children retain it for life. Start exercising your creative muscles again—give it a try! Stand on a chair and sing "Jailhouse Rock" at the top of your lungs. Stick your face in a ball of Play-Doh to see what impression it makes. Fill your sensory table or a plastic bin with mud. Wear your clothes backward and pretend they are just fine. Go out the window instead of the door. Teach your kids that as long as they are safe there is no "wrong" way to do things, some just more useful or imaginative than others. You've got to try them before you'll know!

Being a role model for children is key in opening their imaginations and sense of creativity. Albert Einstein tells us that "setting an example is not the main means of influencing others; it is the only means" (cited in Carlson, 2008, p. 11).

Role models from pop culture or history also help children to recognize creativity. Educators can provide books and other information on famous role models such as Pablo Picasso, Pete Rose, Magic Johnson, Abraham Lincoln, Walt Disney, Henry Ford, Dustin Hoffman, and Will Smith. Famous people from a variety of fields exhibit creativity that can inspire both children and adults.

To get *your* creative juices flowing, try reading *Inspiration Sandwich* by Sark (1992). Berkeley, CA: Celestial Arts.

The following two chapters will give you examples on just how to get them stretching those creative muscles. First, we'll explore activities that foster creativity as stand-alone activities. Next, we'll consider some of the developmental areas that appear in many standards of learning for states across our nation. It is unfortunate that the majority of these

Children's Books That Spark Creativity

Amelia Bedelia by Peggy Parish, illustrated by Fritz Siebel (1993). New York: HarperCollins.

Chicka Chicka Boom Boom by Bill Martin Jr. and John Archambault, illustrated by Lois Ehlert (1989). New York: Simon & Schuster.

The Patty Cake Kids and the Lost Imagination Cap by Patricia Dischler, illustrated by Ashly Kircher (2007). Madison, WI: Goblin Fern.

Stone Soup by Marcia Brown (1947). New York: Charles Scribner's Sons.

Swimmy by Leo Lionni (1963). New York: Random House.

standards do not include activities to foster creativity beyond exploring the arts. However, there are some that do. For those that do not, teachers can use the activities in this chapter to integrate creativity into other learning areas. For those who already have standards for creative learning, these activities will help you to meet those standards. When creativity is added to the curriculum, the support structure for learning is in place and children no longer struggle to reach their goals—you've given them the ladder to get there.

NOTE

1. From notes I took at her 1993 workshop in Milwaukee titled "Freeing Creativity in Children." I attended the same workshop a few other times over the years and I used ideas from her workshops often; she was very inspiring.