How Games and Playing Lead to Serious Learning

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The winter months are here, with darkness hitting early, clouds often hiding the sun for days on end, and maybe even a bit of weariness surrounding our daily homeschooling. After the special holiday times, with all the family visits, special meals, gifts, and religious observances, we all often seek to -- get back to work -- with renewed *seriousness* -- but sometimes a renewed sense of *playfulness* may actually help us even more.

I remember many times of introducing games into our homeschooling days as our four kids were growing up -- and many times when our kids invented their own games that related to what we were learning. Here are some thoughts on the value of using games in our homeschooling. See which resonate with you, especially at this time of year. Maybe you'll make a New Year's Resolution to add more games and play into your homeschooling days.

1) Games could get my kids doing a lot more thinking and figuring than they'd normally be willing to do with "just work." Say, when playing the ingenious little game *Twenty-Four* (see a sample card on the cover design of this issue of our newsletter), my kids might have to go through a dozen or more multi-step calculations that would not work, before finding the

one that would. But no complaints on all this ' extra' work! The game involves figuring out at least one way to use all the four numbers on the face of the card to make the number 24, by adding, subtracting, multiplying, dividing, using each number one time. It's a math calculation game that really sharpens mental math abilities, number sense, patterns, and flexible problem solving. And better yet, all these good math skills were just part of the game -- and they wanted to work quickly too, to beat a sibling or me -- not something they always did when just plowing through a daily math lesson from a text.

2) Games help us prepare for other work. I remember playing a wide range of geography games while getting ready for the Geography Bee we've held annually for area homeschoolers. We'd also play simple geography games right at the Geo Bee itself, to get everyone relaxed and warmed up. A favorite was the "Draw the World in 10 Minutes Flat" game, where I'd give the kids each a large sheet of paper, some markers or pencils, and the directions that they needed to draw a quick and simple map of the world (and label as much as possible) in just 10 minutes. Boy, was this a "diagnostic test" of the core knowledge these kids had -- once an 8th grader had South America and Africa in reversed locations! But this wasn't a 'test' -- it was a game, with lots of laughs and energetic fast thinking. Another fun geo game we do each year is a mini-contest to see which Geo Bee participant is wearing clothing or accessories from the most different countries of the world. I've had kids arrive in many layers of shirts, vests, sweaters, jackets, hats, scarves, jewelry -- all from different locations around the world. And the game can be extended to see who can actually locate each of these countries on our large globe. I'd also always suggest the kids do the daily *Geo Bee* questions online at www.nationalgeographic.com to help them get ready -- this is a playful game format that doesn't feel like work, but that helps introduce many geography topics.

3) Games give opportunities for learning how to get along with others. Think of those social graces that are crucial in growing up -- like not crying or pouting when you lose a game! Learning to take turns, learning to be nice, learning to wait, learning to focus in on a task that everyone is doing, learning to adjust rules to accommodate younger players: you can learn all these from games, especially if you might have the wide range of ages often involved when homeschooling families play together or with homeschooling friends.

4) Games give great ways for Dads to be involved in homeschooling. Many moms I've spoken with have agreed with me that their husbands were much more enthusiastic game players, ready to really relish this time spent in fun with their kids. My husband Howard was so delighted when our boys were finally old enough to learn how to play chess, a favorite game of his -- and he went on to eventually organize a homeschool chess club that took part in various regional tournaments, and even set up a fun event where a ' grand master' friend of my his played about 20 homeschoolers simultaneously, moving from board to board around the room where we'd be having a New Year's Eve Square Dance later in the evening. These are all fond memories for my kids -- and creating memories that are positive about our homeschooling years is important to keep in mind. If looking back at the years at home only brings up images of sitting over boring workbook pages and ' slogging through' daily work, don' t expect your kids to feel overly enthusiastic about the endeavor.

5) Games can be painless ways to introduce new subject matter to our kids. One year my husband gave my kids an art history board game as a gift -- not his usual type of game to find. (I think it had been recommended to him by a family he evaluate.) Years later Hannah

shared that playing this game had really helped her be ready for her AP Art History course she took online her senior year -- the game had developed that needed bit of ' background info' that she could now relate to her new growing knowledge. She also remembered playing informal matching and sorting games with our extensive art postcard collection, created when I'd read the engaging book *Mommy, It's a Renoir!* many years ago. Again, this early play activity gave her a basis for developing her understanding in depth as an older teen.

6) Encouraging a playful and creative attitude can motivate your kids to create their own meaningful games. My kids would often invent games -- and here I'll include of course all their inventive pretend play with toy soldiers, blocks, dolls, scraps of cardboard and bits of wood, and more. My kids were rarely bored growing up, in large part because they could always invent something to play with out of all the ready simple "stuff" we had available, coupled with their rich imaginations. My girls invented a "game" many years ago when Molly was maybe eight and Hannah was 4, that they kept up for years on and off -- ironically perhaps for a homeschooling family, this game was called *Sister School* (see an early article on this up on our website under my daughter Maya (Molly)'s biography). It involved Molly serving as the official teacher, and Hannah as the official student, and it was largely through this regular "game" that Hannah learned to read and enjoy early math. Molly put hours into developing little games for Hannah to use in their "classroom" -- she truly learned to be an excellent teacher through these playful efforts. Recently when Molly spent focused time talking with Hannah (now a sophomore at Brandeis University) about what college courses and possible majors she should choose, I joked that this was really just a continuation of *Sister School*. They agreed.

7) A readiness to explore and play with ideas can lead to advanced learning. Our second son, Jacob, loved computers and programming from a very early age, responding eagerly to all that my husband could show him. Howard bought him some early programming materials when he was still elementary school age, and we found Jacob developing quite astonishing abilities very readily. And what was he doing? He was *playing*. He was not working "seriously" through a course of study, but was learning a few ideas and tactics and theories, and then working to apply them so that he could create his own "playthings" on his computer. We rarely bought computer games -- any that Jacob had, he created himself. He'd spend hours and hours each week, over years, right through the end of high school, inventing and trying out playful ideas. He of course gradually also began using his growing skills for purposeful tasks (like helping us design our initial websites for our online AP courses, or taking part in computer programming competitions), but it was that *spirit of play* that I think really spurred Jacob on to strong learning in the field. Although he'd never had a formal programming course, he was able to enter Carnegie Mellon University in Computer Science and ace the exam to see if he could opt out of the required intro to programming course. I could even use this love of creating his own games and computer simulations to get him to work on his ' weaker' areas like spelling and biology lab work -- he created a delightful and very useful game called *Flash Spelling*, and programmed a simulation of what would happen when you crossed various types of fruit flies (something he hated to do in ' real life').

8) Games can help even teens gain some deeper understandings of subject area material. In my online AP US History course, I've developed some game-like activities that many of the kids really enjoy. One is our simulated online *Dinner Parties*, related to different time periods we've studied -- we currently do ones related to the Revolutionary War, the Civil

War, and to Social Reformers and the rise of Big Business. The students each take on the character of an actual historical person, post a brief intro telling the others who they are, and then the discussion -- and arguments! -- begin. We always aim to have a wide range of participants, so that at the *Revolutionary War Dinner Party* we have both Patriots and Loyalists, both British and Americans, both rich and important leaders and common soldiers, both men and women. The students really enjoy developing their voices as their character, putting in the time to try writing in dialect as appropriate, or writing with the right sneering tone if necessary. And they have to really know their character's point of view and background -- so they have to do some reading and quick research. It's all in good fun, and the lively debates that ensue are excellent review, and help many students really understand issues in a more immediate way. Several students have come back later and shared that they were able to answer certain multiple-choice questions on the AP US History exam solely because of taking part in these *Dinner Parties*. For our class, of course, this is all done on a discussion board website -- for a homeschool co-op group this idea could easily be adapted for an in-class special event, where perhaps the students even tried to come dressed for their part.

9) Games can help kids of varied ages enjoy a learning activity together. I remember when we used to host *French Nights* at our home a few times a year, inviting any other homeschooling families who were also studying French. We'd try to eat French foods, we'd maybe watch a short French film like *The Red Balloon*, and sometimes a few kids would put on a little skit in French. And then we'd play some simple birthday-party type games together, in French. When I first found these game ideas, I worried that the older teens would balk and think these were definitely way too dumb for them to actually admit enjoying -- maybe just the littler ones would play. But I found that even the older ones got fully involved -- and they'd ask for the games the next time we'd have one of these events. All ages could take part, learning together and having a fun time trying out new ideas in this language.

10) Games are great for group learning times, such as at co-ops or Writing Clubs. Occasionally at the monthly Writing Club I lead we only have a small group of students able to come, and so we may finish up earlier than usual sharing everyone's writings. When this happens, one of the kids will often ask if we can now play our "round robin" story game. Many of you have probably played this one at some point -- everyone gets a sheet of paper, everyone decides together what opening line everyone will use (usually some variation of "It was a dark and stormy night"), I set my timer for two minutes, and they are off racing and writing. When the timer rings, they pass their story start on to the person next to them, then quickly read through the story they've been given, and in the next two minutes they add on to this story. The game is finished when everyone finally gets back their own story start, and gets to add on the ending. I've rarely seen kids have as much fun as when playing this writing game -- and there is definitely no possibility of writer's block occurring. The situation of the game just demands that kids think playfully, fast, and without undo worries over creating something "perfect". I've also heard of co-op classes organized for the purpose of playing math games. Jane Rimmer, who's taught at CHESS for many years, developed a class like this for upper elementary and middle school ages, as she found that many families either don't know about the many wonderful math games out there, or they don't make the time to play regularly, or have enough kids to make it actually fun. Her class is always a big hit with students -- and helps them enjoy math in a whole new way.

11) Games are often used as serious ways to investigate problems. The summer after 9th grade, our son Jacob took part in an intensive summer math program out at Rose Hulman Institute of Technology, a college in Indiana. In addition to taking part in a range of classes, all of the students were also in a small group project, where they investigated a particular math problem for the whole summer. And what was Jacob's? He worked with a group to look into the mathematics behind the game we'd been selling in our catalog for several years, SET □ a game where players have to find a legal set of three cards out of an array of 12 laid out on the table. The kids learned much about set theory, about probability, about compiling data and making predictions, and much more. Two years later Jacob was at the PA Governor's School for Science, and again was in a small group project -- this time the kids investigated the old African game mancala, developing a computer model of the game to investigate the mathematics behind it. So don't think games are only distractions from real learning -- games are often used by top academic programs as the best ways to learn about complex systems.

12) Games are often free and available readily online today. You don't have to invent games, and you don't always have to buy games -- just check to see what you can find online. If you do a quick search for "math games elementary", you'll find hundreds of fun possibilities. Same if you look for "science games elementary" or "history games elementary" or any other subject area and age level. Some sites will give you game boards to print out and use (a favorite for links to homemade math games is: http://childparenting.about.com/od/makeathomemathgames), others are interactive online games that a child can play individually or with a friend or parent. There are even great interactive grammar games online that can help advanced high school kids hone their understanding of tricky topics -- like comma splices or fused sentences (my favorite for this is: www.chompchomp.com). Also be sure to check out homeschool mom Ellen McHenry's amazing website, full of free games and activities: www.ellenjmchenry.com -- and see her article in this issue on how she's gone about developing all of these materials. Others will involve reading and thinking about online information presented in engaging visual ways, such as the many history activities from the Library of Congress. Don't want to wade through zillions of websites? Check out our links to learning resources on our website. And do share your favorite online game ideas on our message board at so that others can learn from what you've discovered.

I hope you will resolve for this New Year ahead to remember to encourage some play in your homeschooling, at all levels -- and you might just surprise yourselves by finding that everyone may start *learning* more and more, too!