

Special Edition

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Free of Charge

Special News About Special People

Gloria's & Erin's Group

My own interest in the life and work of Leonardo da Vinci didn't fully take hold until I was 15. Before that, while aware of his genius and his contributions to the world of art, I had not been exposed to the full range of expression his intellect had found. While I forget the source, it was an article I came across in 1974 that centered on a controversy over whether a then recently "discovered" drawing of a bicycle among Leonardo da Vinci's codices was a hoax. While my born skepticism drew me into the arguments being forwarded on both sides of the dispute, my discovery of Leonardo da Vinci as a problem-solver and inventor sparked my request for copies of his notebooks as my birthday present that year. I pored over them for years, especially drawn to his sketches of novel mechanisms. I have little doubt that at some level I was missing the opportunities for invention that SRV's Shop program had regularly given me and my public school's Industrial Arts classes seemed designed to limit.

It was not until writing that last passage that I recognized in my own pedestrian efforts in Shop pale shadows of Leonardo da Vinci's inventiveness, approach to problem-solving and habit of sketching out ideas. It was about a decade ago, though, that I came across a book review that allowed me to see parallels between Leonardo da Vinci's and John Dewey's approach to education. In the book *How To Think Like Leonardo: Seven Steps to Genius*, Michael J. Gelb outlined what he called the "Seven Principles" that he saw underscoring Leonardo da Vinci's approach to the world:

Curiosità

An insatiably curious approach to life and an unrelenting quest for continuous learning

Dimostrazione

A commitment to test knowledge through experience, persistence, and a willingness to learn from mistakes

Sensazione

The continual refinement of the senses, especially sight, as the means to enliven experience

Sfumato

Literally meaning "Going up in Smoke"; a willingness to embrace ambiguity, paradox, and uncertainty

Arte/Scienza

The development of the balance between science and art, logic and imagination; also known as "Whole-brain" thinking

Corporalita

The cultivation of grace, ambidexterity, fitness, and poise

Connessione

A recognition of and appreciation for the interconnectedness of all things and phenomena; also known as systems thinking

How often when we are reaching forward are we also reaching back...

Shop

Over the last few months your youngsters have shown many of Leonardo's traits themselves; curiosity, imagination teamed with logic, building and testing knowledge and new found persistence as they learn from mistakes in their weekly forays into woodworking. . As a hurried pace of life has more and more adults choosing expedience over experience for their children (Velcro over shoelaces, for example), Leonardo's commitment to direct experience and the learning that takes place as a result of mistakes is on regular display in the shop.

When a nail misses its mark or passes through a child's project into the worktable is a much riper time to help the child examine the cause, effect and importance of proper nail selection and placement than before she is allowed to start building. The lesson is personal, meaningful and relevant to her direct experience and she is intrinsically motivated to understand the underlying reason. Coping saw blades break, nails bend and wood splits. Allowing the momentary frustrations provides the impetus to learn and, just as importantly, provides children with the necessary opportunities to develop their emotional and intellectual resiliency. The ability to solve problems takes both.

Pete and I have the good fortune of being able to learn side by side with your children as they continually discover new ways to challenge our manual and creative skills as we facilitate and assist their efforts. As such, we're modeling the same processes of trying out new ideas that don't all work, of taking unembarrassed ownership of our mistakes, and of meeting unexpected setbacks with renewed efforts. We're no Leonardo da Vincis, but I can imagine him looking favorably upon our work to fan the flames of inventive problem solving in your children.

Abby proved more than up to the sizable task of building a bookcase. The project allowed her to apply previously learned skills as well as learn a great many more. Not only will it hold her rotating collection of books, it will remain a visible reminder of the reward for being willing to stretch herself. As of this writing, Abby has just finished making a modified butterfly style yo-yo out of cherry; another push into new realms of woodworking.

Anisa can claim a well constructed Japanese lantern among her woodworking accomplishments, recently completing work that she began back in October. Work with the coping saw was followed closely by plenty of time at the drill as she created holes for the lantern's framing dowels. Having considered joining classmate, Marissa, in a joint effort to make a lemonade stand for the summer, the pair have decided to hold off until next year when they're sure they can complete it before the end of the school year. Anisa is currently drawing up plans for a side tray for her bunk bed at home.

Anna-Olivia is now coming down the home stretch of work on her tall, narrow bookcase. While the failure to figure in the thickness of the project's top and bottom pieces when she generated measurements for the back, she recently decided to resolve the problem by cutting sides down a smidge rather than replacing the undersized piece.

Caroline's work on her "Mountain Climber" game has progressed steadily since she began the project in November. With all of the principal pieces cut and drilled, the few that remain to be fabricated are taking a little longer due to her recent interest in tinkering. To assure that the latter pursuit doesn't make work on the former come to a standstill, Caroline has adopted an alternating schedule between the two disciplines.

Chris has taken the smorgasbord approach to project work in Shop this year, trying a little of everything. Beginning with a project book inspired boat built with manual tools and decorated with a woodburner, Chris next learned to use the electric scroll saw to cut out a totem pole drawn from the same idea source. Basing his next design on an innovative candleholder he had seen at a neighbor's house, Chris used the manual miter saw and drill press to replicate the cubeshaped, multi-holed device. As of this writing, Chris has just circled back for a second helping of the woodburner, using the tool to fashion a Florida license plate.

Daniel's has followed up the extended efforts that resulted in his modular castle building set with a little work on the lathe and drill press to fashion a large cup and ball catch toy. Seemingly eager to fully outfit his playroom, Daniel has drawn up plans and

begun constructing a twin track marble raceway. Daniel was able to create the necessary grooves in his track pieces using the shop's new student-friendly, table-mounted router with a large core box bit.

Elena's plan to make a small bowl was temporarily put on hold as she joined like-minded classmates at the Tinker Table. Elena's work learning to excise and identify different components led her back to woodworking in the form of an "iPod Game System" which she fabricated out of an old remote control, a pair of LEDs and a hinged plywood "screen." This week in Shop Elena used a tack cloth to wipe down the pine layers that will comprise her bowl, donned a pair of rubber gloves and glued them together with the aid of some Quick Grip clamps.

Emma had a good time turning dowels of assorted diameters and the top sections of some donated wooden finials into three wooden people. While able to cut and assemble the constituent parts of the trio independently, creating arm and leg holes that would make the limbs protrude at angles between 5° and 15° took both of us working in tandem at the drill press. Emma is currently cutting out pieces of hardwood from which she plans to turn a small, laminated bowl.

Having wired the head of his robot and screwed on a rear access panel, Ethan is currently ripping the arms from the automaton's torso. Hmm...those are clearly not the words that a loving parent would wish to see printed about his or her offspring, let me try rephrasing that. Ethan is using a rip saw to cut arm pieces from the side of his robot's body.

Garrett took up what appeared would be permanent residence at the Tinker Table after completing his water wheel. After a period spent removing metal platters, neodymium magnets and a read/write head from a DOA hard drive, the following week Garrett lent his newfound knowledge of the Torx wrench to classmate, Caroline, to assist her similar pursuit, then sat shoulder to shoulder with classmate, Hugh, popping the key caps from a computer keyboard using flat blade screwdrivers. Garrett's return to woodworking now finds him midway through the construction of a marble Skee-ball game drawn from the pages of his favorite project book.

After Hugh hewed, turned and sanded his test tube lined cedar volcano and announced it ready for action, the young man turned to Tinkering and the allure of electronic "goodies" to be reaped from the consumer castoffs. Having removed a motor from a CD-ROM drive and found it working Hugh decided to build a robotic ant of sorts based on one he was already familiar with. Right – already familiar with a robotic ant. Hugh's plan is to make a figurine that

wiggles its way across a smooth surface with the help of an eccentrically weighted, vibration inducing motor.

Isaac worked with me at the band saw to cut his hardwood bowl pieces into disks before gluing them up in preparation for turning them on the lathe. Having elected to make a sacrificial mounting ring on the project's base to allow for a deeper vessel, in recent weeks Isaac has used a roughing gouge to true the outside and has begun shaping the bowl by rounding over the bottom and top. Once the outside is shaped to his liking, Isaac will use the drill press to remove some of the interior wood and create a visual target depth.

While it took some time for Isa to recalibrate her expectation for the completion date of her pine salad bowl, once she began operating with a realistic timeframe, her weekly frustrations abated and she began focusing more on her execution of the job at hand than on how quickly she could get it done. Isa has turned and sanded the outside of the bowl to a wonderfully smooth finish and, as of this writing, has just begun the final work on the interior of the project. That Isa has seen the visual and tactile benefit of the time she has invested – priceless.

Julia trod some similar ground in bringing her hinged top cherry box to completion. Once she had made her peace with the fact that there were no woodworking corners that could be cut to overcome the mistakes her early haste had produced, she settled in to redress the errors. I was especially pleased to see her willing to invest enough time to sand the box's top to the point at which the wood's latent beauty was strikingly evident. Sanding the rest of the box? We'll overcome one limit at a time.

One doesn't see a lake on legs very oft – well, *ever* really, but Kate's was gracing the last worktable last week as she waited to see if the new style cyanoacrylate expanding glue she used to assemble the plywood, Plexiglas and pine structure would live up to its advertising. When the bar clamps came off, things looked promising but a sideways blow to one of the legs shortly after the unique project was carried back to the classroom suggested otherwise. Back to the drawing board (or at least the glue shelf)!

With the aid of the drill press, a hand drill with a nailspinner attachment, a nailset and a hammer, Kyle has completed the assembly of the paddle wheel for aerating his small fish pond. That was the easy part. Kyle is currently taking measurements in preparation for building a box to house the AC motor and gear assembly that is to drive the apparatus. Then there's the small matter of figuring out how to transmit the power from said assembly to the paddle wheel. Perhaps Leonardo could lend some guidance...

From birdhouse to book stand to kite string winder to pencil tree, Lia has used commercial plans to fuel her passion for manual woodworking. If I interpret the whole of her strong independent efforts accurately: the study of the birds that have taken up residence in her birdhouse prompted the purchase of a heavy tome on avian studies but the lack of close inspection to see if the birds matched any pictures in the volume required photographs obtained with a digital camera hung from a kite that confirmed their identity and prompted the creation of a birding journal whose entries are made using a favorite pencil kept close at hand in the pencil tree. Yes!

Marissa did a terrific job completing her box. While early inaccuracies had things looking touch and go for a while there, Marissa was able to square up her pieces with the manual miter saw and the band saw and elected to finish her inaugural woodworking endeavor off with a swiveling top and some decorative woodburning. While some children love the idea that they can make just about anything in Shop, Marissa is currently working through the flip side of that reality – how can one possibly choose?

Sarah will soon be bringing her marble "Mountain Climber" game home to play with as this week she entered the assembly phase of the project in earnest. Having patiently waited as I used the sliding compound miter saw to create the angled dado that receives the toy's angled upright playing area, Sarah laid out the nail patterns on the game's sides and began nailing them in place. With her work essentially limited to the hand saws and drill press up to this point, Sarah looks happy to be swinging a hammer again.

Skye followed up his return to the electric scroll saw and the cutting of interlocking jigsaw puzzles with a pencil holder of his own design. Not satisfied with the tree or peacock motif models offered in the shop's project books, Skye's was made to resemble a human head with the pencils making it appear to be sporting something of a punk hairdo. Skye has since gone on to craft a small scrap wood figurine which he referred to as a "beatol" named "Slurpy" and to begin work on a motorized, wheeled "beatol" he has dubbed "Slumpy." Yes, Regis, I'd like to use a lifeline...

Sports

I can't claim to be pushing children hard towards ambidexterity, but Leonardo might well appreciate the work towards physical fitness and poise in competitive play that takes place in the Sports program. He might also be pleased to note the number of games being played that were invented at Rose Valley as well as the modifications made to old playground standards designed to encourage wider and more enjoyable participation.

As I hope you've noted in the Friday emails, your children continue to engage in a wide variety of physical activities during our Thursday afternoon Sports classes and many regularly take part in big muscle play during breaks and recesses as well.

Games and activities in the Sports program since the last newsletter have included (in chronological order):

“**V**” denotes game was selected by student vote.

Newcomb – Think *Volleyball* with catching and throwing.

Sardines – *Hide and Seek* but seekers hide *with* found hider. **V**

Zoo on the Loose – *Tag* game. Animals tag humans who in turn become more animals tagging a dwindling human population.

Snatch the Bacon – Paired opponents on opposite ends of gym floor try to pick up “bacon” from middle of floor and return to their starting side untouched by opponent when their assigned number is called. This game incorporates “Math Rounds” in which the number of the pair to try for the bacon is the answer to a mental math calculation. **V**

Sumo Wrestling – No contact above the shoulders, no mandatory mawashis, just good clean fun.

Cornerball – *Soccer* style game. 7 players use feet only to defend their three foot wide corners in a mini arena created by tables turned on their sides. Players rotate out when a ball passes through their corner or they kick a ball out of the arena or hit another player above the level of the tables. **V**

Scooter Sharks and Minnows – *Tag* game. A single “shark” calls all “minnows” to try to run past him/her to safety at opposite end of playing area. Tagged “minnows” become “sharks” in next round. Rounds continue until all “minnows” are caught. An indoor gym scooter based variation invented on the spot by this group. **V**

Capture the Flag – Defend your flag, free teammates being held prisoner and/or enact the name of the game. Lots of open field running and opportunities for developing timing and strategy.

Kick the Jug – *Hide and Seek* in which the “it” stays close to a centrally located plastic jug. The “it” tries to catch hiders by seeing them and calling out their names as hiders try to run in and kick the jug to free previously caught hiders.

Tag (Blob, Hug, Tunnel) – In the first, tagged players hold hands to form an ever growing “it.” In the second, players avoid being tagged by holding another player. In the third, tagged players stand with feet apart and are “unfrozen” by another player crawling under them.

Mat Ball – An indoor Kickball variation in which runners need to follow base sequence 1st, 2nd, 3rd, 1st, 2nd, 3rd, and then Home in order to score. The game's name comes from the fact that gym mats are used for the bases.

East/West Capture the Flag – Defend your flag, free teammates being held prisoner and/or enact the name of the game. Lots of open field running and opportunities for developing timing and strategy. Whole campus version. **V**

Run the Bases – A *Baseball* style game played on the baseball diamond or in the gym. Tennis or foam ball is thrown rather than batted into play. Outs are made by catching ball in air or throwing and hitting backstop with ball when runners are between bases. No force-outs, unlimited base runners, and runners choose when to run. In variations, runners can choose to put tennis ball, soccer ball, Foxtail ball or Frisbee into play.

East/West Capture the Flag – **V**

Touchball – A noncontact hybrid of soccer and rugby. Players can kick the ball down the field and into the opponents goal or pick it up and run with it until touched by an opponent at which time they have three seconds to pass or punt the ball.

Until next time,

Mike