

# Special Edition

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Free of Charge

Special News About Special People

## Meg's Group (OG)

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 schools' 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.

Adam continues to use his time in the shop to further his inventive visions. After completing his hand-powered generator, Adam designed and fabricated a "Thingy" which, to my mind, looked something like just the kind of vibration isolation device one would use to transport nitroglycerin. Then again, it may be one of those inventions looking for an application – in which case I would steer Adam away from high explosives. Adam is currently working hard redesigning his original draft for an upside-down yo-yo. I'm not making this up.

Brinley's has not strayed far from the woodburner this year, following up her earliest projects with a pair of wooden tops sporting burned decorations. Taking a break from the tool's second-hand smoke, Brinley next learned to handle a chisel and mallet in the process of making a nice relief carving of a dolphin. Then it was right back to the woodburner to make a "Best Friends" split circle design with classmate, Maya, followed by a woodburned "SRV" sign to collect the signatures of her classmates. Brinley has again cycled back off of the tool, this time to work at the lathe on a small walnut vessel for holding liquid.

Chris' time away from his favored disassembly work at the Tinker Table resulted in a wonderful wooden shield sporting his family crest and a bit of relief carving. After flirting with the idea of following classmate Jane into the building of small lofts, Chris instead touched off a wave of wooden dowels being turned into water bottles that rippled through his class and all the way down to the 1<sup>st</sup> grade. As of this writing, Chris has taken the school's study of Leonardo da Vinci and flown with it, drawing up plans for a pair of spring-loaded collapsible wings. Does the name "Icarus" ring a bell with anyone?

Since finishing his whimsical fly trap (that momentarily snagged a carpenter bee that had blundered its way into the shop), Eric followed the trend of woodburned commemorative "SRV" signs for two weeks, then allowed as he'd have to wait until next year to get the remaining signatures from the schoolmates coming up from Gloria's and Erin's Group. Eric has since exercised his gift of gab with likeminded classmates while honing his disassembly skills at the Tinker Table, recently learning how to dislodge a retaining clip in order to remove the flywheel element from a pancake motor.

Gabe did a great job finishing up his electric, guitar bodied canjo in February. Shakespeare never knew what hit him! It was my *interest a-loan* that had me scouring eBay for a cheap contact pickup for the project, but it's Gabe's *pay-tience* that saw the instrument through to completion. Gabe has since gone on to make a Spartan shield, a dowel water bottle and to begin work on a Mayan pump drill based on the model he and classmate Adam made last year.

Jane's loft is assembled!!! Just shy of two years in the making, all of Jane's drawing, measuring, marking, sawing, drilling, screwing and gluing have paid off handsomely. The project resembles something along the lines of a very tall couch, tall enough, in fact, for Jane to be planning to add a small guard rail that didn't appear in her original plans. Jane and I had also talked about the possibility of outfitting it with foam rubber padding at some point, but that may become a matter for Jane to work out at home because the delivery costs are going to wipe out her lab fees. Bravo, Jane!

How do you make a wooden submarine submerge? Hollow it out and add 3/4" lag screw segments as ballast. Such has been Julian's approach with the help of the band saw, router table, drill press and hack saw. Julian is currently installing hidden dowels that will allow him to remove the vessel's top to adjust the load. I like to think that somewhere Leonardo is smiling. As time has permitted, Julian has worked with classmate, Roland, to free the magnetic elements from the back of two stereo speakers.

Magdalia has been hard at work on the lathe since completing her tapir relief carving, turning (literally) a length of walnut into a rolling pin she found represented in a catalog of handcrafted goods. Having roughed her stock round with a roughing gouge, Magdalia has been using a new style of gouge known as a Spindlemaster to both shape the rolling pin and produce a smooth finish. Magdalia has also learned to use outside calipers to help her work to her proposed dimensions for the useful project.

Having finished her pencil holder that suffered from multiple personalities, Maya quickly learned the rudiments of relief carving and executed a nice depiction of the school's horse mascot, Cheeter, in  $\frac{3}{4}$ " pine. When I noticed her fishing for a new project, I asked Maya if she would help me troubleshoot a power extension box that the candlemaking crew had labeled as nonfunctional. I showed Maya how to use a continuity tester to check the individual wires and sockets of the device and, finding the outlets good but one wire bad, we cut away a foot of wire at a time until we had removed the break then reattached the plug. Maya has since made a "Best Friends" split circle design with classmate, Brinley, woodburned an "SRV" sign on which to collect signatures and caught the wave of dowel water bottle making with classmate, Stephanie.

Peter's work on his go-cart has begun moving away from the "rolling death trap" stage as, with the project's major pieces cut to size with the aid of hand saws, circular saws and table saws, he has turned his attention to the possibilities for steering and stopping the vehicle. The designs for these elements of the rig are cutting edge – or at least looking to explore new ideas that don't center on cutting corners. You'll be the first to know if and when the go-cart transitions out of the "rolling probable injury" phase.

Roland learned the advisability of donning rubber gloves when plumbing the innards of an inert inkjet printer as he honed his screwdriver skills while waiting for the woodworking muse to visit him again. The call to make a picture frame arrived just about the time that all of the ink had worn off of his skin and he set to work with me at the band saw resawing a piece of walnut to the thickness his initial sketch and dimensions called for. Having put in enough time with a power sander to see what the wood's potential was should he wish to coax it out, Roland next worked with me at the router table to cut the rabbets that would receive the project's Plexiglas and mat board. Electing to assemble the large project using butt joints rather than the traditional mitered corners, Roland completed the work then teamed up with classmate, Julian, to remove the magnets from the back of two woofers.

Stephanie finished work on her lovely hardwood bowl and then joined classmates, Maya and Brinley, in the work of woodburning signs, of learning the basics of chisel and mallet work and taking the plunge into making miniature water bottles. In the first discipline Stephanie made a sign for her classmates to sign (clearly the English language suffers from a paucity of words), in the second she intaglio carved a heart then set to work on a "STEPH" relief carving. Having chosen oak plywood for this undertaking, Stephanie quickly learned the challenges of depth control in

dealing with  $\frac{1}{16}$ " of veneer. Sometimes beauty really is on ly skin deep.

I had to sit Sylvia down and remind her that running around the shop and bragging a bout how great her finished lathe-turned candlestick was created an unsafe and unhealthy work environment for her and her classmates. Can you imagine?! Nah, me either. Sylvia then elected to return to the handmade goods catalog that had inspired the lovely project and liked the looks of a handheld mirror. Work on the project gave Sylvia some more experience with the drill press and an introduction to the plunge router and band saw. Lest you think her possessed by vanity, Sylvia believed her father could make good use of the mirror in his experiments with light.

Torin is currently assembling the stately chair he envisioned back in November. No stranger to long projects, Torin has again brought great independence to his work which had meant more time actively building than waiting for guidance. The only downside to this arrangement came when I suggested he square up the leg holes in his seat with a chisel and later looked over to find him trying to do the job with a small  $\frac{1}{4}$ " carving chisel instead of the 1" bench chisel I had intended. A testament to his patience, Torin was getting the job done with the undersized tool.

I had no idea that mob violence was regularly erupting in the streets of Wallingford. If I hadn't been tipped off by William's construction of a massive riot shield I might well have innocently ventured into the midst of what must surely be seething throngs of malcontents, thugs and anarchists! I think it's probably best that the evening news teams aren't airing any footage of the uprisings – it would be so easy for Media or Swarthmore to get caught up in the mob mentality. Kudos to William for having the presence of mind to use a router to install a Lexan window in the protective device!

The integration of both a nesting box and a repurposed double hung window into one side of Zoe's chicken coop sent her back to the drawing board more than once in recent weeks. Having successfully adjusted her expectations for a hasty assembly of the pieces she had fabricated prior to the introduction of these elements to a more realistic completion date, Zoe has reworked her plans and measurements and is moving ahead with her work. This week Zoe worked to modify the nesting box plan to include a sloped roof to shed rain and a sloped floor to facilitate egg collection. You just know her children are going to hear all about this, "Well, when I was a kid and wanted some breakfast..."

## *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 Tuesday afternoon Sports classes and many 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):

***North/South 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 with flags initially hidden and the brick walk as the line dividing team territories

***Indoor Puck Soccer*** – Indoor Soccer using a newly invented oversized, foam-edged puck as the object of play.

***Hiking and Rock Climbing*** – North to Bear Cave and beyond!

***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.

***High Jump Practice*** – An opportunity to work on hurdle, straddle, scissor and flop techniques.

***Strikeout*** – Doctor/Spy, Capture the Flag and the scoring elements of Touchball rolled into one. Invented during a game invention minicourse.

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

***Newcomb*** – Think Volleyball with catching and throwing.

***Cornerball*** – see above.

***Flag Goal*** – Another Doctor/Spy, Capture the Flag and Touchball hybrid. A game innovation dreamed up by Stephanie during a game invention minicourse.

***East/West Capture the Flag*** – Just as the name would suggest.

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

***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.

***Capture the Flag*** – Standard version played on field.

***High Jump Practice*** – see above.

***Cranes and Crows*** – Team tag game. Teams line up across from one another then try to chase and tag opponents. Which team chases and which retreats is decided by a coin flip. Tagged players join other team.

***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.

*Until next time,*

*Mike*