

# Summer Classes 2026

All classes \$240 per half day

## WELCOME TO SUMMER AT LEONARDO'S BASEMENT

We are excited to present our schedule of 100+ summer workshops for ages 6-17. Every year instructors dream up ideas for classes after watching and listening to you during the previous year. They will encourage you to design and build engineering, art and technology projects that spring from your imagination.

Leonardo's Basement is unlike any educational organization in the world. It is the largest (and oldest, since 1998) making space for builders of all ages. It is dedicated to helping students develop projects by dreaming and taking risks. To learn decision making by making decisions. To learn problem solving by solving problems. To develop technical skills using hand and power tools, computers, and other technology. And to value process over product while learning important personal skills. And, to have fun being curious, creative, and industrious.

You will have considerable freedom. Along with freedom comes responsibility. We expect you to be self-directed, to respect others, and to work hard. We expect that you will follow three simple rules:

**Be safe, be nice, and have fun.**

We look forward to seeing you!



Steve Jevning  
Co-Executive Director/Founder



Tracy Nielsen  
Co-Executive Director

## NOTES

- Individual and collaborative project building in engineering, art, design, and technology for ages 6-17.
- 11 weeks of full and half-day workshops Monday-Friday begin June 15.
- Extended Day in AM (8:00-9:30 am) and PM (3:00-5:00 pm).
- Lunch: students registered for both an AM and PM workshop should bring a lunch. We do not provide snacks.
- All half-day workshops, Monday – Friday, cost \$240. Scholarships are available.
- Cancellation Policy: All cancellations must be made by email. If you cancel a class:
  - 1) At least three weeks before the class begins, we will refund the entire class fee, less a \$50 processing fee;
  - 2) At least two weeks before the class begins, we will issue a credit for the entire class fee to your Leonardo's Basement account for a future class or workshop,
  - 3) Less than two weeks before the first day of class you will not receive a refund or credit.
- Workshop located in southeast Minneapolis, near University Ave Hwy 280, at 2 Malcolm Ave SE, 55414. (The entrance to the building is on SE 4<sup>th</sup> St.)
- Drop off and pick up: Join the queue of cars in front of the building. Staff will meet you and your child at your car and direct them to the front door where another staff person will help them find their class. The same process is used at the end of the session, pull up, ssopme one will meet you to learn your child's name and they will be sent outside.

Other questions? Look at [FAQ here](#) or [contact us](#) at info@leonardosbasement.org or 612-824-4394.

**Register at [leonardosbasement.org](http://leonardosbasement.org)**

# Summer Classes 2026

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## Week 1 - June 15-19

### AM

#### Metalworking

Learn your way around the metal shop. Cut, bend, grind, stamp and rivet or weld steel to create art, furniture, or whatever else you can imagine. Ages 14-17

#### Adventure Playground

The term "junk playground" (dubbed Adventure Playgrounds in The UK in the 1940's), was coined by Danish architect Carl Theodor Sørensen in 1931 when he imagined a place where children "could create and shape, dream and imagine" like playing at a construction site. There are over 1,000 such play/build areas around the world, mostly in Europe.

The outdoor space at Leonardo's Basement is a place for building ephemeral and permanent projects individually or in a group. Create fantasy worlds in the giant Death Star, build a catapult, or just mess about. Abundant hand tools and a wild assortment of building materials are available to realize your vision or create a new game. Work a little, play a little . . . outside! Ages 6-16

#### Toy with Ideas

Use batteries and motors and rubber bands and balloons and string and glitter to make tops, JiggleBots, catapults, optical toys, and things with wheels. You can invent and make your own board game or card game. Experiment with hand-cranked contraptions and make new ones. Ages 6 - 12



#### Building Buildings

Like making structures and buildings? Like designing houses or castles? You will design and build whatever kind of edifice that you desire. Start with graph paper or a simple prototype. Then source material and construct your final dream house, skyscraper, treehouse, faerie house, or replica of a famous building. Ages 9-12

#### Build Your Imagination

Choose from a smörgåsbord of materials (think: wood, game pieces, pulleys, fabric and bins, boxes and trays of other tasty options). Prepare them and/or take them apart with utensils, I mean . . . tools, like saws, drills, tape, hot glue, and wire. What you cook is up to you! Ages 8-12

#### Wooden Forge

Craft a wondrous single or double-edged training sword. From wood! Start with a straight, sturdy 1x4, then make big cuts with a table saw before using hand tools like chisels, surforms, rasps, and files on your way to a hard, sharp, edge. You'll need a handle design, too. Hopefully, you will have time to make a sheath. Ages 12 - 17

### PM

#### Weld What You Want

Attention new or experienced welders: put on your safety gear and start welding. You will explore the techniques of welding steel and then let your imagination run wild. The sky is the limit as you weld your designs, devices, and sculptures. Ages 14+

#### Figments of Your Imagination

This week the workshop is yours. Your scientific lab, woodshop, studio, craft room, giant junk drawer. Yes, we are here to help you; but the big project decisions are all yours! Look everywhere for the exact materials, tools, and equipment that you will need to create your project(s). Ages 6-12

#### Sensory Celebration

Invent fidgets of your very own! Get ready for Pet Rocks, Zen gardens, slime, squishies, clickers, fuzzys, and spinners! Use foam, hardware, glue, fabric, glitter, charms, wood, hinges, and more! Ages 8-14

#### Take Apart

Telephones, toys, clocks, blenders, coffee makers, DVD players, toys, VCR's, radios, R/C cars, laptops, cell phones, toys, typewriters, printers, old cameras, video cameras and more. Choose your device(s) and deliberately deconstruct it (them). Ages 6-10

#### Group Build: Minneapolis Cryptid

Scotland has Loch Ness, The Pacific Northwest has Bigfoot, China has the Xixi Zhi Yu. Like the others, the Minneapolis cryptid is illusive, so you'll build a really big representation of it and a descriptive plaque to educate passers-by on how to spot the creature in the wild! Does it frequent lakes or Lake Street? Does it have feathers or scales or fur? Work together to create a creature (and its story) for outside Leonardo's Basement. Ages 10-17

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## Week 2 - June 22-26

### AM

#### Magnetic Mazes

Use that mysterious, invisible force that holds your artwork to the fridge to create a playable one-of-a-kind maze game. Explore the world of magnetism and put these pushing and pulling forces to the test! Use ferromagnetic materials alongside magnets to influence your project. Design. Create a theme for your maze and make a magnet propelled character to navigate it on a sturdy platform. Develop obstacles like bridges, tunnels, spiral ramps, and trapdoors. Perhaps a haunted house, a skatepark, Wonka's factory, or the Land of Oz? Anticipate other magnet-related activities and challenges throughout the week as well! Ages 6-10

#### Adventure Playground

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#### Ingenuity, Imagination and Invention

The "I's have it! Utilize your imagination and ingenuity to invent and build amazing things! Perhaps a teleportation machine, guinea pig park or magical device for time travel. Whatever your contraption does it is sure to look cool. Ages 6-12



#### Let's Get Muppet!

Design, construct, and animate puppets using a variety of materials, including foam, fabric, wire, and recycled items. Experiment with form, color, and movement to craft your own unique character. Then bring it to life through storytelling and motion. Ages 10-17

#### Daily Design Challenge

Each day you will solve a new creative challenge by designing and building a solution. Work solo, or on a small team, to solve a puzzle, craft a game, or build a project. Use your imagination and creativity, problem solving and wits, supported by the materials and tools in the workshop to complete your task. No previous experience required. Ages 12-17

### PM

#### LEGO Pneumatics

You have used LEGO motors and wheels to make moving robots, now add a new dimension to your creations: pneumatics. Design and build complex machines using LEGO pneumatics, harnessing the power of compressed air. You will work with motors, valves, cylinders, and storage tanks to build working compressors, multi-cylinder air powered motors and heavy lift machines. You can add pneumatic suspension to a robot vehicle or build a model of a hydraulic crane, all using the power of compressed air. Ages 12-17

#### Papier-Mâché & Clay

Craft with clay, paper, cardboard, paint and oh, SO MUCH GLOOP. Create whimsical creatures and bring them to life, while exploring the fun and messy world of sculpting! Ages 9-15



#### Make Something of Nothing

This week the workshop is yours. Your scientific lab, woodshop, studio, craft room, giant junk drawer. Yes, we are here to help you; but the big project decisions are all yours! Look everywhere for the exact materials, tools, and equipment that you will need to create your project(s). Ages 6-12

#### Water, Water Everywhere!!

Ever think about all of the different things that water does? In this class you'll learn what you can do with water. Use hoses, PVC pipe, funnels, foam, wood and pumps. Make explosions, experiments (and cool off) with water . . . then make things to sail, float, sink, and paddle. Ages 6-10

#### The Energy Waves "Hello!"

Vibration, earthquake, sound, light, flashlights, crystals, reflection, magnification, string and rope waves, stringed instruments, bottles with liquid, mallets, kaleidoscopes, optical illusions, drumheads, earthquake table. Discover clever and playful ways to explore the physics of waves. Ages 9-12

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## Week 3 – July 6-10

### AM

#### Furniture Making

Learn and practice your woodworking skills. Build a coffee, side or end table, a stepladder or bench, or a bookshelf. After you decide upon size, style and design, you will learn more advanced woodworking and construction techniques including measuring and cutting parts, joinery, power-tool use, and wood finishing. Ages 12-17

#### Adventure Playground

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#### Wizards of Wood

Saws, drills, files, hammers, vises, clamps and all of the wood that you can shake a stick at! Plus, scrap wood, plywood, 1x4's, 2x2's, 2x4's and more. Cut and shape wood to build one or more projects. Learn about fasteners and finishing too! Ages 6-10



#### It's A Myth-Match!

Design and craft magical and mythical creatures using the fronts and back, tops and bottoms, of stuffies and toys, to create amazing beasts! Add feathers, fabric and other materials to enhance your creatures' features. What will you name your imaginative life form? Ages 8-12

#### LEGO City – Going UP!

Work together to build a bustling LEGO City downtown. Build skyscrapers and solve ways to keep them from toppling to the ground. Create a transportation system for your minifigures to travel throughout the city—all while above ground! Build elevators to help the minifigures of LEGO City ascend to the top. Connect your buildings together with a skyway system. Make a zipline or tube system to help them get around. Note: all projects will be disassembled at the end of the week. No LEGO will be going home. Ages 9-15

### PM

#### Weld What You Want

Attention new or experienced welders: put on your safety gear and start welding. You will explore the techniques of welding steel and then let your imagination run wild. The sky is the limit as you weld your designs, devices, and sculptures. Ages 14+

#### What Makes it Tick?

Ever wonder what makes a clock tick, an engine whine, or a monitor hum? In this class you'll take apart all kinds of stuff and figure it out! Machines, mechanisms, printers, laser scanners, bicycles, chainsaws; whatever you can find! Use some of your favorite harvested pieces and some new parts to build a project if you wish. Ages 6-10

#### All You Can Build Buffet

Choose from a smörgåsbord of materials (think: wood, game pieces, pulleys, fabric and bins, boxes and trays of other tasty options). Prepare them and/or take them apart with utensils, I mean . . . tools, like saws, drills, tape, hot glue, and wire. What you cook is up to you! Ages 6-12



#### Star Wars Ships & Sabers

Join with the galaxy's biggest Star Wars fans to make stuff from your favorite scenes. Start with a ship; AT-AT or TIE fighter? Add a Rey's staff or a light saber? Perhaps a headband with Yoda ears or Leia's hair? Absolutely! Mandalorian or Baby Yoda? Bring your epic ideas. Act out scenes on the Death Star, which is conveniently docked at Leonardo's Basement! Ages 8-12

#### Tails and Tales

Make a creature out of wood, foam, fabric and fur to be the main character in a story that you will develop. Write down your tale in a 'zine or book or on a story board. Build props and side characters to complete your fabulous or outrageous story. Ages 8-14

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## Week 4 - July 13-17

### AM

#### Adventure Playground

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#### Imagine, Invent, Innovate

Ever think of something that should exist, but doesn't? Have an invention you've been thinking about? Not quite sure exactly how it will work or how you should make it? This workshop will support your work on designs, solving problems, and building your ideas. Share your challenges and the project with others to get their suggestions. You'll leave with a prototype and the memory of models that didn't quite work. Enjoy the journey! Ages 6-12

#### Useless Machines

*"There is something unspeakably sinister about a machine that does nothing—absolutely nothing—except switch itself off."* – Arthur C. Clarke

Flip a switch . . . and watch your machine argue back! Build playful, pointless, and surprising machines using cardboard, motors, switches, and everyday materials. Create classic "useless machines" that turn themselves off, invent spinning cams and wiggly arms, or design contraptions that move in unexpected ways. Your machine can be sneaky, dramatic, grumpy, or just plain weird. Experiment with motion, mechanics, and cause-and-effect while following your own ideas. Ages 11-17

#### Zen Gardens & Pet Rocks

Create personalized Zen gardens, pet rocks, stress balls, sensory putty, fidgets and more! Use a wide variety of materials and tools to design and make things that put worries to rest. Make them for yourself, someone else or for both of you! Ages 10-17

#### Building Board Games!

Dive into our supplies and come up with the game you've always wanted. Is there a movie or book you want to turn into a game? Or elements of your favorite games that you think would be fun to combine into one game? You'll work to create boards, pieces, timers, spinners, dice, and especially the rules. Then, playtest your games with others to make them as fun as possible. Ages 8-12

### PM

#### Creativity Convention

This workshop offers you a different take-it-or-leave-it theme each day, incorporating engineering, design, art, and building. Work with tons of cool materials like wood, fabric, cardboard, metal, plastic, electronics and use the tools you need to work with them! Ages 6-12

#### Reverse Engineering

Old (and new) machines are really fun to take apart. They are full of twirly, shiny cool, bits and pieces that you can use to make NEW cool, shiny, twirly, mechanical things. Sorry, no hammers allowed!!! Ages 6-10

#### Peanut Butter and Jelly Cat

Create animals and anthropomorphic characters using fabric, fur, wood, foam, wire, springs, cardboard, and paint. Give your Labubu a new shoe! Use faux fur to make your fox fury! Add eyes and a smile to make friendly pies! Use your adorable creations to make bag charms, gifts, or as the first members of your new toy line! Sew, saw, staple and snip to bring your idea to life. Ages 9-15

#### Projectile Palooza!

Use springs, rubber bands, air power and more to get objects - small & large - to fly through the air! Learn how to make your launchers work accurately and then scale them up or down to make different objects fly! Use your new launchers to create a game to play with your friends. Teddy bears, balls, water balloons, cupcakes, or . . . are all possible projectiles this week. Ages 9-12

#### Circuit Playground Express w/Arduino

Learn to program a Circuit Playground Express Arduino board to create awesome projects. The board has lights, buttons, touch sensors, a speaker, temperature sensor, light sensor, and more. You can experiment with alligator clips and permanently connect components with solder. Use materials from the shop, online example projects and playful experimentation to create things like laser tag, a fruit keyboard, glowy wearable costume props or even beautiful light paintings! Ages 13-17

NOTE: This is a process-heavy workshop and will require comfort with delayed gratification. Experience with block-based coding like Scratch, Blockly, or MakeCode is required.

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## Week 5 - July 20-24

### AM

#### **Creativity Convention**

This workshop offers you a different take-it-or-leave-it theme each day, incorporating engineering, design, art, and building. Work with tons of cool materials like wood, fabric, cardboard, metal, plastic, electronics and use the tools you need to work with them! Ages 6 - 12

#### **Adventure Playground**

The term "junk playground" (dubbed Adventure Playgrounds in The UK in the 1940's), was coined by Danish architect Carl Theodor Sørensen in 1931 when he imagined a place where children "could create and shape, dream and imagine" like playing at a construction site. There are over 1,000 such play/build areas around the world, mostly in Europe.

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#### **LEGO Dream Set**

We know you: You Love LEGO enough to know what's missing from their library of sets! This is your chance to design a set of your own. Perhaps your set will be a set from your favorite book? Your bedroom? A breakfast burrito? Trouble shoot and build your project. Then, when you take it apart, you can rewind the process and create instructions to share! Ages 9-15

#### **Game Build, Play, Redesign, Repeat!**

Spend the week creating a new version (or combinations) of your favorite games from the arcade, the fair , or your back yard BBQ! Gather inspiration from games like: Pinball, Cornhole, Ring Toss, Foosball, Basketball Free Throw, Skee-Ball or Table Tennis. Use cardboard, wood, good junk and lots of tools to create your amazing game! Ages -8-12

#### **Dragon's Hoard Jewelry Making**

Adorn your head, arms, ears, water bottle, keychain, and bag with jewelry or charms. Break into our oversized hoard of glass, plastic and metal baubles, jewels, gems and beads. Perhaps disassemble vintage jewelry for parts. Then pair with jump rings, clasps, fittings, elastic, and wire! Sculpt custom beads and pendants with polymer clay. Polish off the week by crafting a box or display stand using wood burners and maybe even more jewels (really!). Ages 12-17

### PM

#### **Build What YOU Want**

This week the workshop is yours. Your scientific lab, woodshop, studio, craft room, giant junk drawer. Yes, we are here to help you; but the big project decisions are all yours! Look everywhere for the exact materials, tools, and equipment that you will need to create your project(s). Ages 8-14

#### **Reimagined Toys**

Take apart toys and turn them into something else, new toys or sculpture or games something else. We provide familiar and not-so-familiar toys for you to reverse engineer and redesign into incredible new creations. Place an action figure head on My Little Pony, then add wheels? Turn a stuffed butterfly into an airplane? How well does Kermit fly as a Frisbee? Bring your sharp sense of humor and innovative ideas. We have a ton of toys, but you can also bring your own too (just know they won't be the same when you leave!) Ages 6-12

#### **Tools 2.0**

You know how to use basic hand tools like saws, hammers, hot glue guns, screwdrivers, and cordless drills. Now, learn how and when to use specialty tools and those with electrical cords. Miter boxes, chisels, levels, ratchets and sockets, Allen wrenches, soldering iron, wire stripper, sewing machine, orbital sander, and a scroll saw. Make a bunch of projects using many different tools. Ages 10-14

#### **Ginormous Junk Drawer**

Let your imagination run wild as you build projects in a work bay that looks like a giant junk drawer! We have so. much. stuff. Seriously! There are picture frames, cardboard, hot glue, paint, trophies, stickers, ribbon, beads, jewelry wire, sparkle, fabric, sticks, and foam. PLUS, vats and vats of assorted and colorful game pieces, toys, balls, trinkets on hand. Ages 6-9

#### **CAD Basics**

Discover and explore the exciting world of 3D design. Create projects using 3D printers and laser cutters. Learn how to bring your ideas to life with easy-to-use Computer-Aided-Design (CAD) tools, and print clever inventions to improve your life, or trinkets to decorate it! Ages 12-17

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## Week 6 – July 27-31

### AM

#### Adventure Playground

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#### Wizards of Wood

Saws, drills, files, hammers, vises, clamps and all of the wood that you can shake a stick at! Plus, scrap wood, plywood, 1x4's, 2x2's, 2x4's and more. Cut and shape wood to build one or more projects. Learn about fasteners and finishing too! Ages 6-10

#### Bigger Than Life Board Games

Put yourself in the middle of your favorite board games! Plan out a strategy on a chess board, conquer the world in Risk, or sink your opponents' Battleship; all on boards upon which you can walk! Make GIANT versions of Connect 4, Monopoly, or any other game! Add enormous dice, cards, and other pieces to complete the set. Ages 8-14

#### KPop Demon Prop Shop

Huntrix characters are sooo cool. And the Saja Boys are also amazing. Carve Rumi's sword or Mira's polearm or Zoey's daggers out of wood if you wish. Or figure out how to use LEDs to demonstrate a sword's magical energy. Perhaps use foam and carve Derpy or Sussie. Or one of the demons! Craft Huntrix costumes or Jinu's hat. You might want to use KPDH inspiration to design your own props or costumery. Ages 10-17

#### Miniature Projects

Start by drawing a plan and then move on to collecting materials like: foam, balsa, tagboard, (with their corresponding tools and adhesives). Next, design, build, and paint your lilliputian project! Maybe a skate park, or teeny ice cream truck, or a wee castle, or a wild terrain with a "river" running through the middle. Use your creation as a book nook, game board, or base for adding more minute details! Ages 12-17

### PM

#### All You Can Build Buffet

Choose from a smörgåsbord of materials (think: wood, game pieces, pulleys, fabric and bins, boxes and trays of other tasty options). Prepare them and/or take them apart with utensils, I mean . . . tools, like saws, drills, tape, hot glue, and wire. What you cook is up to you! Ages 6-12

#### Raiders of the Lost Junkyard

Random old machines are really fun to take apart. They are full of twirly, shiny cool, bits and pieces which you can use to make NEW cool, shiny, twirly, robotic sorts of things. No hammers allowed!!! Ages 6-9

#### Great British Fake-off!

Nothing will be as it seems in this workshop full of imposter projects. Those waffles look good enough to eat (but they'd chip your tooth!) That bolder is huge, but how are you lifting it with one hand?! Using foam and fabric, paint and clay you'll work to create "look-a-like" projects. From cake to car tires, cookies to bricks, you'll make things that will delight and surprise. Ages 10-17



#### LEGO Land and Sea

Build a LEGO castle that might include a curtain wall, gatehouse, moat, battlements, arrow slits and internal structures like a keep and a dungeon. And knights!

OR, build a fantabulous lair for mythical creatures, horses, dinosaurs, pets, or other wildlife.

OR, construct LEGO ships (with pirates) for telling your story: ships with cannons, rafts and buccaneers; islands with volcanoes, treasure, and crocodiles; beaches with palm trees, shipwrecks, and sharks. Ages 9-15

#### Python Coding for Microcontrollers

Unlock the world of physical computing! In this workshop you will learn the basics of Python\* programming to bring the Raspberry Pi Pico board (RP2350) to life. You will learn how to interface with sensors, buttons, drive motors, and LEDs. By the end of the week, you will take home your own programmed Pico2Go robot and the skills to customize it. Ages 14-17

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## Week 7 – August 3-7

### AM

#### Adventure Playground

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#### Planting Cat Trees

We don't (yet) have building options for pets, so it's up to you to build for your pets! If you would like to build a bed, shirt, habitat accessory or chew toy for your favorite animal, this is the class for you. Dog blanket? Yup. Cat climber? Sure. Rat maze? Of course! Invent a better rabbit toy or hermit crab hut in the company of other animal-loving inventors. Ages 9-12

#### Mini Hobbit Huts and Tiny Treehouses

Build a dwelling for your favorite tiny friends, like Elves, Nisse, Faeries or even action figures. Cardboard and wood will be the base of your tree or house and then you'll add furniture, trampolines, paintings, swings, appliances or ziplines to make your guests feel at home! Ages 7-12



#### Toolcraft

Do you ever just want to hit nails with a hammer? Or drill holes with a drill? This is the perfect class for you if you've never tried using tools before! Make wacky nail sculptures with wood, nails and a hammer. Drill holes to make pictures on wood. Then use your new skills to construct something practical, whimsical, or both! You will also use other tools like handsaws, hot glue guns, vises and wire cutters. Ages 6+

#### LEGO Masters Challenge

We know that you are up for a daily LEGO building challenge! Themes for the structure or problem or theme will be drawn from a hat each day. How will you plan and build your solution? How will you manage your construction to generate a really cool project in the allotted 2-hour building time? Ready? Set? LE-GOOO! Ages 12-17

### PM

#### Robot Olympics with LEGO Mindstorms

Design and build autonomous robotic creations using LEGO Mindstorms to test in various Olympic style events throughout the week. Some events will test speed such as: Short and long track racing and running the dreaded obstacle course. Some events will require adding an arm such as the shot put. Other events like tug of war and sumo wrestling will test your robot's strength. Build a single robot to compete in multiple events (decathlon) or modify your robot to customize it for each event. Ages 12-17

#### Build What You Want

This week the workshop is yours. Your scientific lab, woodshop, studio, craft room, giant junk drawer. Yes, we are here to help you; but the big project decisions are all yours! Look everywhere for the exact materials, tools, and equipment that you will need to create your project(s). Ages 6-12

#### Toy Inventor's Workshop

Use rubber bands, cardboard, bouncy balls, springs, trophies, and lots of other great "junk" (including old toys) to invent new toys & games! Catapults, optical toys, things with wheels, board games, doll castles; you are the inventor! Ages 6-12

#### Machines are Soooo Simple

So much of our world is run by machines that run on electricity, computer programs and other technology. Who cares? The real fun is in the old school technologies that have made work so much easier for humans. This class will explore how simple machines (levers, wheels and axles, pulleys, inclined planes, gears, wedges) are not only helpful for work, but also fun to build and make things to play with. Using mostly recycled and reused materials, you will be able to build cars, make elevators, learn to use basic tools and compete design challenges that will keep you wanting more, long after the week ends. Ages 8-12

#### Sew It Is

This is a hand and machine sewing buffet. Bring a backpack, jacket or pair of jeans to upcycle. Or use the new caps and aprons that we have. Add patches, stitches or beads. Maybe a phone or pillowcase. Perhaps a unique Squishmallow or sushi toy for your cat. So many possibilities! This workshop is for beginning and experienced sewists. Grab a thimble, needle and thread, and/or make a pattern, thread a bobbin, and plug in a sewing machine! Ages 10 - 17

# Summer Classes 2026

All classes \$240 per half day

## Week 8 - August 10-14

### AM

#### **Carpentry for your Toys (by you!)**

Make beds, cars, or even a house, for your action figure, stuffed animal or doll. Start with a plan to get everything the right size and build a rough prototype before you select final materials and construct your final project. Decorate of course!  
Ages 8+

#### **Adventure Playground**

The term "junk playground" (dubbed Adventure Playgrounds in The UK in the 1940's), was coined by Danish architect Carl Theodor Sørensen in 1931 when he imagined a place where children "could create and shape, dream and imagine" like playing at a construction site. There are over 1,000 such play/build areas around the world, mostly in Europe.  
The outdoor space at Leonardo's Basement is a place for building ephemeral and permanent projects individually or in a group. Create fantasy worlds in the giant Death Star, build a catapult, or just mess about. Abundant hand tools and a wild assortment of building materials are available to realize your vision or create a new game. Work a little, play a little . . . outside! Ages 6-16

#### **Invention Convention**

Creative inventors will love the freedom to master their own style of creativity. Learn to balance your wide-open imagination with the focus of tool use and a finished product. Step through the process of fantasy. Draw up a plan and build very real, and very cool, projects. Ages 6-12

#### **Thrift Flip!**

Sift through things like clocks, lamps, paintings, end tables, knick-knacks and chairs. Repurpose, rehab, restore (and even combine) for a fun and practical piece! Roll up your sleeves for little carpentry, a little paint, some bejeweling, and a lot of decision making.  
Ages 10-17

#### **Stop (& Go) Motion Animation**

Bring motionless drawings, clay, paper, toys, LEGO, sawdust . . . or anything else you find in the shop, to life, with movie magic! Tell your short story through the magic of stop-motion techniques. Ages 12+

#### **Wooden Castles**

Design towers and dungeons with dragons and trap doors on your model. Create ramps and catapults with springs and lights and hinges. Or build a spectacular castle like the one that Cinderella lives in. Or Hogwarts. Perhaps add ghosts like in the Tower of London. Learn woodworking skills along the way and take your creation home at the end of the week. Ages 6-12

### PM

#### **Wood Carving - Sloyd Style**

Learn carving techniques using a sloyd (from Swedish slöjd, rhymes with "droid") knife. Take that sharp tool, pair it with your sharp wit and make a figure of your own design. You might also use a gouge or drill for details before sanding and finishing your piece.  
Ages 12-16

#### **Invent What You Want**

This week, the workshop is yours. Your scientific lab, woodshop, studio, craft room, giant junk drawer. Yes, we are here to help you; but the big project decisions are all yours! Look everywhere for the exact materials, tools and equipment that you will need to create your project(s). Ages 6-10

#### **Faerie Castles, Goblin Huts, and Troll Bridges**

Create the perfect habitat for the creatures that live in your garden or porch. Perhaps a castle with a slip-n-slide; A carousel with a popcorn cart; Or a magical shoe with a duck pond? You decide what they need and use metal, wood, rock and plastic (with the corresponding tools) to build the world of their dreams. Ages 6-12

#### **LEGO Animation**

Our wide range of LEGO characters are waiting for you to help them tell their story! Choose any tale and put LEGO into action! You will work in small groups to create the scenes, take pictures, produce and edit a video of your work! Ages: 9-15

#### **Earth, Wind and Flyer!**

This week will be all about designing and building things that move! Make wheeled creations that zoom down mountains and roll over hills. Craft birds, gliders or superheroes that coast over skyscrapers. And build ships, mermaids, or rafts to sail down the river, through the rapids, and to the sea. Ages 8-13



# Summer Classes 2026

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## Week 9 - August 17-21

### AM

#### Adventure Playground

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#### Make Something of Nothing

This week the workshop is yours. Your scientific lab, woodshop, studio, craft room, giant junk drawer. Yes, we are here to help you; but the big project decisions are all yours! Look everywhere for the exact materials, tools, and equipment that you will need to create your project(s). Ages 6-12



#### Checkmate! Making Games

Want a personalized chess set, Kubb, checkers, cribbage or backgammon board for the next time you play? Or to invent your own game? We have a mountain of materials that can be used to create boards, pieces, markers, cards, dice, dice cups and terrain: wood, hardware, toy parts, jewelry, metal, plastic, silverware, and wire, plus woodburners, foam cutters and paint. You'll do a lot of building, but save some time to play! Ages 10-16

#### Gube Roldberg

Working as a group, you'll build a big, clever machine. Your team will decide what it does, and how energy will move through the contraption to make it work! That means that zip lines, pulleys and ramps will probably be a big part of your causation contraption. Thinking big usually means making big mistakes. Make a bunch. Make it cool. Ages 12+

#### Prop Shop

Create pieces from your favorite movies, books and video games for a costume or a display case! Wand, tail, jetpack, sword, spy watch, crystal ball? It's up to you! Choose from mounds of materials and tools that cut, stitch, sand, stick and score to bring your prop to life. Ages 9-14

### PM

#### Invention Convention

Creative inventors will love the freedom to master their own style of creativity. Learn to balance your wide-open imagination with the focus of tool use and a finished product. Step through the process of fantasy. Draw up a plan and build very real, and very cool, projects. Ages 6-12

#### Wooden Cars, Giant Ramp

Think super-huge Hot Wheels. Design, build, and tweak a foot-long vehicle. Make a replica of your favorite race car, Fred's Flintstone mobile or a Lightning McQueen look-alike. Experiment with your own wacky design - wheels, body, and accessories. Next, work together to build a ramp. Finally, organize multiple races and creative challenges. Ages 9-12

#### Marble Runs & Superball Walks

Create mazes, contraptions and games for spheres of all sizes and speeds! Make your versions of pinball, shoot the moon, marble runs or mazes! You'll take your amazing games home at the end of the week to challenge and amaze your family! Ages 6-9

#### Craft Lab

Make purses out of albums, boards out of cork, unicorns out of horses, rainbows out of beads, robots out of wire . . . AND/OR anything and everything out of paint, ribbon, fabric, wax, needles, thread, buttons, plastic flowers, rubber bands, heat gun, CD's, costume jewelry, stickers, leather, beaded chain, Shrinky-Dinks, sharpies, duct tape, colorful cellophane, glitter, Modge-Podge, seashells, bottle caps, tennis balls, feathers, pom-poms, key rings, dowels, and craft sticks. Use hot glue, rivets, staples, screws, drills, and heat guns. What will you craft? Ages 9-14

#### Explorations in Laser Cutting

Design projects that will use the laser engraver. You can etch wood, metal, plastic or glass. You can also cut thin pieces of wood and cardboard with precision. Start by designing your project using Inkscape software, then send your design to the laser for "printing." Make dioramas, puzzles or castle models. Etch a logo on your phone or laptop. Make multiple pieces and glue them together to make 3-dimensional objects. Ages 12-17

# Summer Classes 2026

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## Week 10 - August 24-28

### AM

#### Adventure Playground

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#### Invent What You Want

This week, the workshop is yours. Your scientific lab, woodshop, studio, craft room, giant junk drawer. Yes, we are here to help you; but the big project decisions are all yours! Look everywhere for the exact materials, tools and equipment that you will need to create your project(s). Ages 6-12

#### University of Collage

Craft framed pieces of art, coasters, artifacts or 'zines. We have been saving vintage postcards, slides, cards, maps, stickers, and books just for YOU! Add a 3rd dimension to your projects by exploring materials like beads, tiles, picture frames, game pieces, ribbon, magnets, glass, wood, and baubles. Perhaps decoupage 3-dimensional objects. No two projects will be the same. Share your voice as you hone techniques for collaging, sticker making, stamp carving, button creating and other crafts!

Ages 11-17

#### Causation Contraption

Build the most amazing Rube Goldberg-esque apparatus that you can. Design and create an incredible machine that will send energy across the bay! It will knock things over, and make other things move. Maybe flip a light switch! Perhaps you will add noisemaking or physics-defying features to a track. How big can you make it? How cool? How many times will you and your friends rebuild it? Ages 9-14

#### Classic Video Games IRL

NEW

Make iconic pieces from your favorite games. Maybe host a race of Mario & Luigi cars, Zelda's sword, a Minecraft landscape or a PacMan that eats marbles! We have necessary tools and stuff. You come up with the ideas! Ages 8-14

### PM

#### Build What YOU Want

This week the workshop is yours. Your scientific lab, woodshop, studio, craft room, giant junk drawer. Yes, we are here to help you; but the big project decisions are all yours! Look everywhere for the exact materials, tools, and equipment that you will need to create your project(s). Ages 6-12

#### Engineering Simple Machines

Who knew that you could build so many cool machines with stuff lying around the house? Explore materials & tools to construct simple machines. You will be the engineer using your own designs for vehicles, a pulley system and an inclined plane racetrack. Ages 6-10

#### CAD Basics

Discover and explore the exciting world of 3D design. Create projects using 3D printers and laser cutters. Learn how to bring your ideas to life with easy-to-use Computer-Aided-Design (CAD) tools, and print clever inventions to improve your life, or trinkets to decorate it! Ages 12-17



#### Civil Engineering with Water

Construct rivers of water using hoses, PVC pipes and containers of various shapes and sizes to create your own stream complete with boulders, waterfalls, lakes, and rapids. Add a bridge. Or bridges. Construct small boats or rafts, perhaps add sea monsters or mermaids to navigate the treacherous waters. Will they make it to the ocean? Ages 9-14

#### Vikings and Pirates\*

Sea travel cartography and great headwear are just a few things Vikings and Pirates have in common! Build a ship of your own design - complete with sails and oars. How about an island where buried treasure lies? You'll need to create a map. Perhaps a sea monster or two? Make a helmet or hat, a cat or parrot, to wear as you build an immersive experience. Ages 7-10

\*Not necessarily the NFL or MLB versions.

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## Week 11 - August 31-September 4

### AM

#### All You Can Build Buffet

Choose from a smörgåsbord of materials (think: wood, game pieces, pulleys, fabric and bins, boxes and trays of other tasty options). Prepare them and/or take them apart with utensils, I mean . . . tools, like saws, drills, tape, hot glue, and wire. What you cook is up to you! Ages 6-12

#### KPop Demon Prop Shop

Huntrix characters are sooo cool. And the Saja Boys are also amazing. Carve Rumi's sword or Mira's polearm or Zoey's daggers out of wood if you wish. Or figure out how to use LEDs to demonstrate a sword's magical energy. Perhaps use foam and carve Derpy or Sussie. Or one of the demons! Craft Huntrix costumes or Jinu's hat. You might want to use KPDH inspiration to design your own props or costumery. Ages 10-17

#### Building Buildings

Like making structures and buildings? Like designing houses or castles? You will design and build whatever kind of edifice that you desire. Start with graph paper or a simple prototype. Then source material and construct your final dream house, skyscraper, treehouse, faerie house, or replica of a famous building. Ages 9-12

#### H2(g)O

Work inside the shop to build seaworthy projects and then take them outside to launch in multiple water resources in the Adventure Playground. You will design, build, and test vessels that go in, on, or under the water. Use foam, wood, upcycled objects and the necessary tools. Perhaps you'll make boats, narwhal, rafts, submarines, mermaids, octopi, Sponge Bob, sharks, launchers, squirters, or splashers. You'll decide! Ages 6-12



### PM

#### Figments of Your Imagination

This week the workshop is yours. Your scientific lab, woodshop, studio, craft room, giant junk drawer. Yes, we are here to help you; but the big project decisions are all yours! Look everywhere for the exact materials, tools, and equipment that you will need to create your project(s). Ages 6-17

#### Projectile Palooza!

Use springs, rubber bands, air power and more to get objects - small & large - to fly through the air! Learn how to make your launchers work accurately and then scale them up or down to make different objects fly! Use your new launchers to create a game to play with your friends. Teddy bears, balls, water balloons, cupcakes, or . . . are all possible projectiles this week. Ages 9-12



#### LEGO Universe

The universe is already huge, and it's expanding. Use our extensive collection of LEGO to build your own city (and the occasional monster), spaceship (with aliens), planet or other extraterrestrial creation. How will your world function, change and grow? Expect a few surprise pop-up building competitions during the week. The only requirement is an interest in the world's favorite construction toy. (LEGO maniacs encouraged.) Ages 8-15

#### Faerie Castles, Goblin Huts, and Troll Bridges

Create the perfect habitat for the creatures that live in your garden or porch. Perhaps a castle with a slip-n-slide; A carousel with a popcorn cart; Or a magical shoe with a duck pond? You decide what they need and use metal, wood, rock and plastic (with the corresponding tools) to build the world of their dreams. Ages 6-12