

Why should you make with **MAKER BREAK**



SHEBOYGAN



Maker Break is a free community makerspace program for children and young adults in Sheboygan, WI. We recognize the value of hands-on learning and work to provide equitable access to experiences that empower young people through problem solving, divergent thinking, and resilience.

2019 Season | June through August



Engage in the creative process through facilitated workshops and self-directed making in both professional and pop-up spaces.



Develop new techniques & the habits necessary for critical problem solving, divergent thinking, & resilience.



Join a diverse community of practice with opportunities for leadership development & professional mentorship.



JOHN MICHAEL KOHLER
ARTS CENTER



ÉTUDE
group



MEAD LIBRARY

Everything kicks off with Sheboygan Mini Maker Faire June 15th, 2019

For more programs information, visit <http://www.etudegroup.org/maker-break> or contact Tim Pasche, Maker Break Program Director: tpasche@etudegroup.org
All programs are free and open to all! Some require advance sign up! Follow us on Facebook.



June Programs 2019

[Pallet Workshop](#) | June 17th | 9:00am-12:00pm | Étude High/Middle School

[First Lego League Workshop](#) | June 18th | 9:00am-11:00am | Étude High/Middle School

[First Tech Challenge Workshop](#) | June 25th | 9:00am-12:00pm | Étude High/Middle School

Open Robotics Lab

June 19th and 26th | 12:00pm-4:00pm | Étude High/Middle School

Maker Break In The Park

June 17th and 24th | 5:00pm-8:00pm | Vollrath Park

June 19th and 26th | 9:00am-12:00pm | Fountain Park

June 22nd and 29th | 9:00am-12:00pm | Fountain Park

Mead Public Library

Tinker Time | Imaginarium | June 5th, 12th, 19th, & 26th | 4:00pm- 7:00pm

Tinker Time | Imaginarium | June 8 | 1:00pm- 4:00pm

Maker Break Monday | June 17th and 24th | 1:00pm-3:00pm

Zine Making Workshop | Imaginarium | June 24th | 4:00pm - 6:00pm

Sheboygan Mini Maker Faire

June 15th | Mead, City Green | 10:00am-4:00pm

Levitt Amp | John Michael Kohler Art Center

June 20th and 27th | 5:00pm-8:00pm | City Green



July Programs 2019

[Intro To Scratch](#) | July 1st | 12:00pm-3:00pm | Étude High/Middle School

Lego WeDo Workshops | July 2nd | [9:00-10:30am](#) | [10:45am-12:15pm](#) | Étude High/Middle School

Open Robotics Lab | July 3rd, 10th, 17th, 24th, & 31st | 12:00pm-4:00pm | Étude High/Middle School

[3D Printing Workshop](#) | July 8th | 12:00 - 4:00 pm | Étude High/Middle School

[First Lego League Workshop](#) | July 9th | 9:00am-11:00am | Étude High/Middle School

[Laser Cutting & Engraving Workshop](#) | July 15th | 9:00am-12:00pm | Étude High/Middle School

[First Tech Challenge Workshop](#) | July 16th | 9:00am-12:00pm | Étude High/Middle School

Lego WeDo Workshops | July 23rd | [9:00-10:30am](#) | [10:45am-12:15pm](#) | Étude High/Middle School

[Intro to App Inventor](#) | July 29th | 12:00pm-3:00pm | Étude High/Middle School

[Projects for Mini Makers](#) | July 2, 9, 16, 23, & 30 | 1:00pm-3:00pm | Étude Elementary School

Maker Break In The Park

Every Monday | 5:00pm-8:00pm | Vollrath Park

July 10th, 17th and 24th | 9:00am-12:00pm | Fountain Park

Every Saturday | 9:00am-12:00pm | Fountain Park

Mead Public Library

Maker Break Monday | **Every Monday** | 1:00pm-3:00pm

Tinker Time | Imaginarium | **July 3rd, 10th, 17th, 24th, & 31st** | 4:00pm- 7:00pm

Tinker Time | Imaginarium | **July 13th** | 1:00pm- 4:00pm

Lego Club | **July 3rd** | 10:00am - 11:15am

Explorative Art w/Erica Huntzinger | **July 9th, 16th, & 23rd** | 2:00pm - 3:30pm

Explorative Art w/Erica Huntzinger | **July 10th & 24th** | 6:00pm - 7:30pm

Late at the Library | **July 26th** | 6:30pm-9:00pm | Adults Only

Book to Art Club | **July 15** | 6:00pm - 7:30pm

Family Fun Night | **Every Wednesday** | 5:00pm-7:00pm | City Green

Levitt Amp | John Michael Kohler Art Center

July 3rd, 11th, 18th, and 25th | 5:00pm-8:00pm | City Green



August Programs 2019

Open Robotics Lab

August 7th, 14th, 21st, & 28th | 12:00pm-4:00pm | Étude High/Middle School

Maker Break In The Park

Every Monday | 5:00pm-8:00pm | Vollrath Park

Every Wednesday | 9:00am-12:00pm | Fountain Park

August 1st, 8th, 15th and 22nd | 5:00pm-8:00pm | City Green

Every Saturday | 9:00am-12:00pm | Fountain Park

Mead Public Library

Maker Break Monday | **August 5th** | 1:00pm-3:00pm

Tinker Time| Imaginarium| **August 7th, 14th, 21st, & 28th** | 4:00pm- 7:00pm

Tinker Time | Imaginarium | **August 10th** | 1:00pm- 4:00pm

Explorative Art w/Erica Huntzinger | **August 7th** | 6:00pm - 7:30pm

Lego Club | **August 7th** | 10:00am - 11:15am

Hot Glue and Finger Painting | **August 19th** | 6:00pm - 7:30pm

Levitt Amp | John Michael Kohler Art Center

August 1st, 8th, 15th, 22nd, & 29th | 5:00pm-8:00pm | City Green

Programs & Workshops Information

OPEN ROBOTICS LAB

At Étude High/Middle School

Ages: 10 & Under with an adult AND 11-18

Wednesdays | June 19 until August 28 | 12:00 PM - 4:00 PM

Open Studios are staffed by Maker Corps members and are available for all young makers in the Sheboygan community. Swing by Étude High/ Middle School and use our tools (listed below) to start, continue, or finish a self-directed project. Come and go as you please, dropping in once or twice for a few minutes or using the entire time all summer. Collaboration and crowdsourcing will be encouraged in Open Studios. Let's make and play and solve things as we share our space, knowledge, and ingenuity.

MAKER BREAK MONDAYS @ MEAD

Mead Public Library | Imaginarium

Ages: 13 & Under with an adult, AND 14+

Mondays | June 17th -August 5th | 1:00 PM - 3:00 PM

Maker Corps Staff and Volunteers will be running directed workshops during this time to allow for people of any age to come explore a variety of Maker opportunities. Participants will dive into the use of Lego Mindstorms and a variety of other technologies.

FAMILY NIGHT ON THE CITY GREEN

Mead Public Library | The City Green

Ages: All

Wednesdays | July 3rd-July 31st | 5:00 PM - 7:00 PM

Join the Library and Maker Break in an early evening of fun for the family with movement, stories and crafts on the City Green (green space between the Library and JMKAC). Check the Library's facebook page for details on each evenings activities. Rain location is the 3rd floor storygarden and children's activity center.

MAKER BREAK AT THE AMP (LEVITT AMP SERIES NIGHTS)

John Michael Kohler Arts Center

Ages: Any

Thursdays | June 20-August 22 | 5:00 - 8:00 PM (Drop In) [NOTE: Wednesday, July 3rd will replace Thursday, July 4th]

As families attend the Levitt Amp Music Series at the John Michael Kohler Arts Center, there will be opportunities to make facilitated by a Maker Corps member created kit. Adults and children will be able to enjoy the music while engaging in the making process. Workshops will vary for each night.

PALLET UPCYCLING: BIRD HOUSES ([RSVP](#))

Maker: Tim Pasche

Étude High School

Ages: 11-18

Monday | June 17 | 1:00 PM - 3:00 PM

Have you ever been interested in making birdhouses or just interested in working with wood? Pallets are a great resource that are typically thrown out. We will take used pallets and turn them into pieces of art with practical use. In this workshop, we will learn how to build a basic birdhouse. Students will learn how to use some power tools such as a table saw, compound miter saw, drills, pocket hole jigs, and a pneumatic brad nailer. Manual options such as hammers, nails, and hand saws will also be available if a student/parent is not comfortable with power tools. Safety glasses are provided.

MAKER BREAK IN THE PARK

Area Parks of Sheboygan

Ages: 3+

Mondays, Wednesdays and Saturdays | June 19 until August 4

Monday | Food Truck Night (5:00-7:00 PM) at Vollrath Park

June 17 & 24

July 1, 8, 15, 22, & 29

August 5, 12, 19, & 26

Wednesday | Fountain Park (10:00 AM-2:00 PM)

June 19 & 26

July 3, 10, 17, 24, 31

August 7, 14, 21, & 28

Saturday | Fountain Park (10:00 AM-2:00 PM)

June 22 & 29

July 6, 13, 20, & 27

August 3, 10, 17, & 24

Participants will be welcomed by the Maker Corps Staff members at many of the local parks to engage in Pop Up Maker Workshops. During this time, participants will be offered a problem to solve with materials and direction from a staff member. Activities will vary on a daily basis with opportunities to Make and Take. Join us for one of the many days.

SPEECH AND DRAMA PERFORMANCE CREATION JAMS

Makers: Dan Burkey, Heath Reinl, & Ben Kroll

Étude High School | South High School

Ages: 13-18

Wednesdays | 4-6 PM July 24th, 31st, Aug 7th, & 14th Étude High School

Performing for a room full of people doesn't have to be scary. Join high school forensics coaches Dan Burkey (Étude) and Ben Kroll (Sheboygan South) for a series of low-pressure, non-competitive workshops that will help you build skills for all kinds of spoken performance, from poetry and acting to speechmaking. Each week, we'll focus on a different aspect of performance creation, such as physical acting, making up a speech on the spot, interpreting poetry and prose, mashing up multiple genres and cutting a text for performance, or the art of transforming a manuscript into a prop. Whether you are new to performing or a veteran public speaker, there will be fun opportunities to grow as a speaker, actor, or performer.

MAKER PROGRAMMING BREAK

Maker: Tim Pasche

Étude High School

Ages: 7+

Introduction to Scratch ([RSVP](#))

Monday | July 2 | 12:00 - 3:00 PM

Do you want to learn the basics of programming? We will define what an algorithm is and dive into programming using the computer program Scratch. Students will be able to develop games and animations based on learning experiences using Scratch.

Introduction to MIT App Inventor 2 ([RSVP](#))

Monday | July 30 | 12:00 - 3:00 PM

Bring along an android device and learn how to make your own apps! Students will be able to learn the basics of app development and learn how to create their own apps using MIT App Inventor 2. It is the same platform used by FIRST Robotics to develop apps for First Tech Challenge (FTC).

3D PRINTING WORKSHOP ([RSVP](#))

Étude High School

Ages: 11+

Monday | July 8th | 12:00 PM - 4:00 PM

Do you have your own 3D printer? Not that many people do, so if you want to experience how to 3d Print or even learn how to improve your own 3D printer can print more effectively, join us for this session. We will look at 3D printer slicing for G-Code along with generating our own creations for 3D printing in Minecraft or TinkerCAD. Each participant will have the opportunity to 3D print* or take a file of their own creation home to 3D print.

**3D printing takes time and prints may take longer than the time allotted for class, participants may need to retrieve their 3D prints at a later time.*

LATE @ THE LIBRARY | ULTIMATE MAKER PARTY

Mead Public Library

Ages: 18+ (Adults Only)

Friday | June 26 | 6:30-9:00 PM

Adults get the opportunity learn and make the way we encourage youth to do all summer throughout the city of Sheboygan. Workshops will be run by volunteers from Mead Library, surrounding businesses, and teachers of The Étude Group. Join us!

MINI MAKER FAIRE SHEBOYGAN

Mead Public Library Courtyard

Ages: All

Saturday | June 15th | 10:00 AM - 4:00 PM

During the 48th annual Midsummer Festival of the Arts the Mead Public Library is hosting the First Annual Mini Maker Faire Sheboygan in collaboration with the John Michael Kohler Arts Center. Maker Break will be there in full force facilitating workshops, maker kits, robotics demonstrations, and everything else “making”. Our Sheboygan community will be showcasing the numerous makers in our region, sharing how and what they make!

LASER CUTTING & ENGRAVING WORKSHOP ([RSVP](#))

Étude High School

Ages: 11+

Monday | July 15th | 9:00 AM - 12:00 PM

Have you ever wanted to make something out of 2D designs? Laser cutting and engraving gives you the ability to make your own designs a reality. Each participant will walk away with a laser cut puzzle with an engraved design of their own creation.* Each participant has the opportunity to also learn how to use software such as TinkerCAD and Inkscape to create laser cut and engraved design.

**Laser engraving takes time and may take longer than the time allotted for class, participants may need to retrieve their laser engraved pieces at a later time.*

PROJECTS FOR MINI MAKERS ([RSVP](#))

Étude Elementary

Ages: 3 - 8 with parent and/or guardian

Tuesdays | July | 1:00 - 3:00 PM

July 2 | Light Exploration

July 9 | Chalk Exploration

July 16 | Paint Exploration

July 23 | Sand Exploration

July 30 | Natural Found Material Exploration

Mini Makers are innovative and creative. These workshop are intended to explore different mediums and materials to discover something that your Mini Maker finds fascinating. Parents, guardians, and/or caregivers are expected to attend. Please sign up ahead of time so materials will be prepared. These drop-in workshops will take place outside with a rain plan of Étude Elementary room 124.

FIRST ROBOTICS WORKSHOPS

FIRST Robotics is a staple program in Sheboygan County with FIRST Lego League, FIRST Tech Challenge, and FIRST Robotics Championship teams throughout. These programs provide STEM experiences for participants, while exposing them to “coopertition” rather than competition and Gracious Professionalism. Participants build robots collaboratively to complete tasks. These workshops provide participants opportunities to work with high tech kits to complete complex tasks that challenge their thinking. They will learn to design, build, program, and refine a robot to complete specific tasks.

Tetrix With Android Robotics (FTC)

Étude High School

Ages: 11+

Chassis Building | Tuesday | June 25 | 9:00 AM - 12:00 PM [\(RSVP\)](#)

Students will be building small scale Chassis of multiple drive types for an FTC robot. Students will learn the theory behind each type of drive train and understand the advantages of each. With this experience, students will be able to return and add more features to their robots in the open robotics lab throughout the summer.

Programming with MIT App Inventor 2 | Tuesday | July 16 | 9:00 AM - 12:00 PM [\(RSVP\)](#)

Students will learn to program the base FTC application using MIT App Inventor 2 to be able to run a teleoperated robot. Students can also adventure into autonomous programming based on using sensors to allow the robot to navigate the playing field.

Lego Mindstorms Robots (EV3 & NXT for FLL)

Étude High School

Ages: 9+

FLL Game Simulation | Tuesday | June 18 | 9:00 AM - 11:00 AM [\(RSVP\)](#)

Learn to program and build attachments for First Lego League (FLL) robots and see what it’s like to be an FLL student. Students will learn about the base FLL robot that can be altered to meet any need a student would have. Students will be able to run their robots to complete tasks on the previous season’s FLL table.

Robot Maze | Tuesday | July 9 | 9:00 AM - 11:00 AM [\(RSVP\)](#)

Program a robot to travel through a maze using sensors. Students will program a robot to navigate a premade maze by using sensors such as: Push sensors, gyro sensors, sonic distance sensors, color sensors, and light sensors.

Lego Wedo (FLL JR.)

Étude High School

Ages: 4-10

Cotton Ball Launchers | Tuesday | July 2 | 9:00 AM - 10:30 AM [\(RSVP\)](#)

Cotton Ball Launchers | Tuesday | July 2 | 10:45 AM - 12:15 PM [\(RSVP\)](#)

Spinning motors and using gears are key to making a moving robot. Students will explore the use of motors and gears as they develop their own Cotton Ball Launcher.

Pet Sitter | Tuesday | July 23 | 9:00 AM - 10:30 AM [\(RSVP\)](#)

Pet Sitter | Tuesday | July 23 | 10:45 AM - 12:15 PM [\(RSVP\)](#)

Do you wish you could make sure your pet is always taken care of when you are not home? Maybe even when you are home? We will help you develop a robot that can do just that. Think about a problem that you have with your own pets and develop an automated robot that can solve that problem using the creative process as an engineer.

Maker Break is supported by the following Partners in Making:

The Étude Group

The Étude Group is a primary partner and co-founder behind Maker Break - providing instructional and administrative support for all of the Maker Break sites around Sheboygan. Étude provides Maker Corps training for student and adult facilitators.

Étude High & Middle School host open studio spaces for students to use any of the tools in the building. Students may choose to carry over any projects from workshops or even work on their own personal projects. Spaces that will be open are the Music Studio, Video & Photography Editing studio, Visual Arts space, CAD Lab, Shop space, and 3D Printing space.

Étude is an educational network that applies an experiential approach to empower people to think critically, engage creatively, and establish strong human connection in order to cultivate the next generation of changemakers.

The schools of The Étude Group are tuition-free, public charter schools within the Sheboygan Area School District.

Étude students:

- Develop creative/innovative thinking through authentic, disciplinary projects.
- Value a culture that promotes thinking.
- Become independent, self – directed learners.
- Build a connected, participatory community.
- Actively prepare for college and career.

These core values provide the foundation for an enduring education. In our schools, students learn the skills and content that will support them through a lifetime of learning. We foster the Habits of Learning and Habits of Mind that take students beyond simple measures of achievement and support them in a world that increasingly values creativity and innovation.

Thank you for your interest in The Étude Group of schools! We invite you to visit us in person and experience all that our schools have to offer first-hand. We are thrilled to be part of a school community that is dedicated, innovative and compassionate. We know you will be, too.



John Michael Kohler Arts Center

The ARTery at the John Michael Kohler Arts Center is one of the founding partner of Maker Break. The ARTery hosts workshops and open studio times to be able to use the tools of the space along with Maker Kits that have a wide variety of making options. The ARTery is a FREE drop-in art-making studio. Stop in and collaborate on community works of art. Children under the age of ten must be accompanied by an adult.

JOHN MICHAEL KOHLER ARTS CENTER

Mead Public Library

The Imaginarium at Mead Public Library provides making opportunities through workshops and open studio times. The library also offers Tinker Time, Curiosity Labs, Teen Tech, Teen Craft, and multiple other programs that are great opportunities to make. Students can attend any of the workshops and open studio times. Children under the age of 14 must be accompanied by an adult.



Above & Beyond Children's Museum

The Above & Beyond Children's Museum (ABCM) will host workshops in their green space next to their building and inside. ABCM is a non-profit organization serving children and families of Sheboygan County and it's out of town visitors. Located in downtown Sheboygan, it has enjoyed 17 years of community service enhancing the lives and experiences of children and their families. From its humble beginning as a traveling road show featuring interactive children's exhibits, it quickly outgrew its first location open only one day a month, and became an established community treasure offering service 6 days a week. It has been operating from its three-story historic location at 902 N. 8th Street since 1999 enriching thousands of children's lives.



Boys & Girls Clubs of Sheboygan County

The Boys & Girls Clubs of Sheboygan County will host some workshops for Maker Break this summer.

The Boys & Girls Clubs provide a world-class club experience that assures success is within reach of every young person who walks through our door, with all members on track to graduate from high school with a plan for the future, demonstrating good character and citizenship, and living a healthy lifestyle.



TOOLS & CAPABILITIES OF OPEN STUDIOS

LOCATION	TOOLS
Étude High School & Étude Middle School	<p>3D Printing</p> <ul style="list-style-type: none"> ● Flashforge Creator X ● LulzBot Taz 4 ● Skanect (3D Scanning) <p>Laser Cutter & Engraving</p> <ul style="list-style-type: none"> ● Glowforge Plus <p>Computers (13 CAD capable 6 Adobe capable)</p> <ul style="list-style-type: none"> ● Software: <ul style="list-style-type: none"> ○ PTC Creo Parametric ○ Solidworks ○ MinecraftEDU/Minecraft ○ Adobe Suite <ul style="list-style-type: none"> ■ Photoshop ■ Video ■ Audio ○ MakerDesktop ○ Matter Control ○ Skanect (3D Scanning) <p>Woodworking Tools</p> <ul style="list-style-type: none"> ● Saws (Power & Hand) ● Drills (Drivers & Impacts) ● Hammers ● Table Saw, Compound Miter Saw, & Scroll Saw ● Work Benches ● Fasteners ● Recycled wood ● Sanding ● Clamping ● Vacuum Forming <p>Robotics</p> <ul style="list-style-type: none"> ● Tetrix with Android Devices ● EV3 Kits ● NXT Kits <p>Drawing Tools</p> <ul style="list-style-type: none"> ● Graph Paper and drafting capabilities ● Painting capabilities ● Light Tables ● Cutting Mats ● Sculpting tools
Mead Library	<ul style="list-style-type: none"> ● Lulzbot Mini (3mm PLA) ● Silhouette Cameo ● iMac <ul style="list-style-type: none"> ○ Adobe Creative Suite (4) ○ Garageband (1) ○ Soundboard & Microphone ● iPads (4)

	<ul style="list-style-type: none"> ● Inkjet Printer ● Microcontrollers <ul style="list-style-type: none"> ○ Arduino Uno Rev 3 Starter Kit (11) ○ Raspberry Pi (8) ○ LilyPad Starter Kit (5) ○ Arduino Uno Car Kit (6) ○ Ozobot Bit (2) ○ Sphero (1) ○ MakeyMakey (1) ○ Lego Mindstorms EV3 Kits (4) ● T-shirt Press ● Button Maker (2.25") ● Digital VHS to DVD Converter ● Wacom Cintiq Scanner ● VHS to DVD Recorder/Player ● Photo/Negative/Slide Scanner ● Sewing Machines (3) ● GoPro Camera ● Large Paper Cutter (Slide) ● Circuit Building <ul style="list-style-type: none"> ○ LittleBits Synth Kit ○ LittleBits Gadgets and Gizmos ○ Soldering Iron ○ Bare Conductive Touch Board Starter Kit ● Jewelry Tools and basic supplies ● Drawing Supplies ● Stamping Supplies ● Beads, Buttons, Etc. ● Yarn, Crochet Hooks, Knitting Needles ● Screen Printing Ink and Paper ● Scrapbooking Supplies, Paper, Punches ● Basic Tools: hammer, screwdriver, etc.
John Michael Kohler Arts Center	<ul style="list-style-type: none"> ● Maker Kits <ul style="list-style-type: none"> ○ Weaving ○ Floating Chalk Prints ○ Drawing ○ Embroidery ○ Super Hero Comic ○ Levi Fish Ames inspired Clay Creatures