TechSavvv A program of AAUW

April 30, 2016 Gaylord, Michigan



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"Resilience isn't a single skill. It's a variety of skills and coping mechanisms.

To bounce back from bumps in the road as well as failures, you should focus on emphasizing the positive."

- Jean Chatzky, Michigan-born financial journalist, author, and motivational speaker

SCHEDULE - GIRLS

Time	Activity	Location
8:30-9:00 am	Check in and Breakfast	GHS Commons
9:00-9:20 am	Welcome (girls and adults)	GHS Auditorium
9:30-10:20 am	STEM Workshop or College Savvy	UCG (see below)
10:30-11:20 am	STEM Workshop or College Savvy	UCG (see below)
11:30-12:20 pm	STEM Workshop or College Savvy	UCG (see below)
12:30-1:15 pm	Lunch (includes get-acquainted BINGO)	GHS Commons
1:30-2:20 pm	STEM Panel – recent college graduates and experienced STEM professionals (girls and adults)	GHS Auditorium
2:30-3:15 pm	Savvy Life Skills Workshop	Assigned by grade; see room # below
3:30-4:15 pm	Closing and Key Note Speaker (girls and adults)	GHS Auditorium
4:15-4:30 pm	Closing Remarks / Evaluations (girls and adults)	GHS Auditorium

Morning STEM Workshop / Room

Rockin' Robots	U-103
Dizzy with Fun	U-107
Scarlett's Mysterious Rash	U-111
Exploring Engineering	U-109
A World of Plastics	U-113
You Crack Me Up	M-107A
Rocket Your World	M-109
Something Fishy Going On	U-112
College Savvy*	Start in U-101

Afternoon Savvy Life Skills Workshop/ Room

The Science of Mindfulness	Grade 6: U111/112
Online Etiquette in a Digital Age	Grade 7: M103/105
Resilience-Building Strategies	Grade 8: U107
Learning to be Resilient	Grade 9: U113

^{*} NOTE: Hands-on demo of **Manufacturing Robotics Arm** will occur concurrently with College Savvy

WORKSHOPS FOR GIRLS

Morning STEM Workshops

Rockin' Robots!

Presented by Dr. Lisa Gandy, Central Michigan University Meet Ozobot plus Dash-and-Dot! See how they operate, how to program them, and set up an obstacle course for them to navigate. Discover what's happening in robotics and its future impact on our day-to-day lives.

Dizzy with Fun

Presented by Teresa Collins, Gaylord Community Schools Build a balloon-powered vehicle that spins! You will observe and experience what physics calls "rotational inertia". You will be dizzy with fun by the end of this session.

Exploring Engineering

Presented by Cheri Leach, Raven Hill Discovery Center Discover how engineers solve problems and shape our world while actively exploring different engineering careers from electrical to mechanical, civil to environmental and more.

A World of Plastics

Presented by Elizabeth Egan, Hoffman Plastics/ PlastiVan Educational Outreach See and experience hands-on activities that include chemistry, history, and social impact of plastics in our world while exploring related career choices and educational connections.

Rocket Your World

Presented by Stacy Paul, Belcan Engineering Investigate how design impacts a rocket's speed, and then work in teams to build and launch your own model rocket.

Something Fishy Going On

Presented by Judy Falk and Sharon Moeke, Char-Em ISD Experience the real world practice of sampling wildlife populations. Practice estimating a population size and learn its importance in tackling environmental problems.

Ms. Scarlett's Mysterious Rash

Presented by Dr. Katie Coady, Jennifer Williams and Jessica Sampson, Dow Chemical Co. Solve the mystery of Ms. Scarlett's rash which she acquired after the purchase of several new personal care products, and a weekend getaway dining and swimming at Walloon Lake (Charlevoix, MI). Work in small groups to conduct risk assessments to determine the cause of the mysterious rash. Participants will have the opportunity to learn about STEM careers in toxicology, risk assessment and related fields.

You Crack Me Up

Presented by Hannah Pankratz and Katy Dvorak, Western Michigan University Explore the science of the earth and experience a hands-on model of hydraulic fracturing - a process used to break apart rock and extract valuable resources. Examine rocks, cores, and fossils while uncovering more what the fields of the geosciences have to offer.

Afternoon Savvy Life Skills Workshops

6th Grade Girls: The Science of Mindfulness

Presented by Leila Jeanne Greer, Teacher and Yoga Instructor Discover how schoolwork and relationships benefit from a clear focus and attentive presence. Practice the art of mindfulness and how to use it in everyday life.

7th Grade Girls: Online Etiquette in a Digital Age

Presented by Elizabeth VanPate, Mancelona Public Schools Learn online and social media best practices to assure that you leave a positive "digital footprint" for years to come.

8th Grade Girls: 8 Strategies for Building Resilience

Presented by Kristy Torsky Northern Family Intervention Services

9th Grade Girls: Learning to Be Resilient

Presented by Luann Mabarak Kirtland Community College Resilience is a key skill for not only surviving, but for thriving when we face life challenges. We are all born with the capacity to tolerate a certain amount of stress, but like our muscles, our resiliency becomes stronger and more functional with use. Come and learn 8 strategies to become more resilient.

Explore what it takes to bounce back from stress and challenges we may encounter. Appreciate resilience through real-life stories and discover how to build resilience in our everyday lives.

When I look at the kids training today ... I can tell which ones are going to do well. It's not necessarily the ones who have the most natural talent or who fall the least. Sometimes it's the ones who fall the most and keep pulling themselves up and trying again.

- Michelle Kwan, figure skater

People think that when something goes "wrong", it's their fault. If only they had done something differently. But sometimes things go wrong to teach you what is right.

- Alice Walker, writer

SCHEDULE - ADULTS

Time	Activity	Location
8:30-9:00 am	Check in and Breakfast	GHS Commons
9:00-9:20 am	Welcome (girls and adults)	GHS Auditorium
9:30-10:20 am	Encouraging Girls in STEM Pursuits Mary Fox, Tech Savvy Chair	GHS Auditorium
10:30-11:15 am	Anticipating college and finding the right fit Audra Leininger, Spring Arbor University	GHS Auditorium
11:15-11:35 am	Becoming College Savvy (visit College Savvy tables)	UCG Corridor
11:35-12:20 pm	Building Resilience in our Daughters Luann Mabarak, Kirtland M-TEC	M103/105
12:30-1:15 pm	Lunch (girls and adults)	GHS Commons
1:30-2:20 pm	STEM Panel - see description below	GHS Auditorium
2:30-3:15 pm	Hands-on STEM activities – visit a hands-on activity and continue the dialogue with STEM professionals	Rockets: M109 Engineering: U109 Careers: M107A
3:30-4:15 pm	Closing and Key Note Speaker (girls and adults)	GHS Auditorium
4:15-4:30 pm	Closing Remarks / Evaluations / (girls and adults)	GHS Auditorium

STEM Panel Presentation (1:30 – 2:20 pm)

Meet a number of women from northern Michigan who have chosen studies and careers in typically male-dominated STEM fields. Learn about their experiences, what led to their career choices, challenges they may have encountered along the way, and keys to their success. Time will be allotted for Q & A with audience. Questions are encouraged.

Moderator: Sheila Simpson, University Center Gaylord

Panelists: Katie Amar-Fox, Michigan Tech Materials Science & Engineering Student

Joan Becker, Petroleum Engineer

Kelly Carroll, Funeral Director/Embalmer Brandie Meisner, Aeronautical Engineer

Lisa Patischnock, Manufacturing and Mechanical Engineer Ashley Switalski, Kettering University Engineering Student

Julie Timperley, Doctor of Optometry

COLLEGE SAVVY

Tables Located in UCG-Central Corridor

Membership Information: AAUW Gaylord Area Branch

Table A

Robotics & Automation Demo: <u>Integrated Systems Technology / FANUC</u>

Table B

COLLEGES / UNIVERSITIES

Ferris State University

Table 1

Kirtland Gaylord M-TEC

Table 2

Lake Superior State University

Table 3

North Central Michigan College

Table 4

Northwestern Michigan College

Table 5

Western Michigan University

Table 6

Kettering University

Table 7

Michigan Technological University

Table 8

KEYNOTE SPEAKER

Mary F. Draves

GHS Auditorium 3:30-4:15 pm



Mary Draves currently acts as the Global Director of Environmental Remediation and Restoration for The Dow Chemical Company and as implementation leader for the Company's ambitious "Valuing Nature" sustainability goal, which aims to identify \$1 billion worth of value to Dow from projects that enhance nature.

Draves is responsible for managing Dow's remediation organization and the implementation of Dow's global remediation strategy in a safe, cost efficient manner consistent with Dow's commitment to sustainability. In addition, Draves has direct responsibility for the engagement with regulatory agencies and stakeholders on matters

related to the Michigan Operations historical dioxin issue. In her role as leader of the goal to Value Nature, she heads a small team focused on creating the processes and employee engagement necessary to integrate nature into corporate decision-making. Prior to assuming this role Draves acted as the External Engagement Leader for the Global Remediation and Restoration Team.

Draves has spent the majority of her 25-year career at Dow at the Midland Michigan Operations Manufacturing site where she has served as a Manufacturing Leader, a Division Maintenance Leader and the site's Reliability Services Leader. Draves began her career at Dow in the Toxicology and Environmental Health Research Lab where her work supported product registration in the US and Europe. Capitalizing on her work in research, Draves also spent time in the Environmental, Health and Safety Group providing support for the Midland Michigan Operations site as a Project Leader for site-wide environmental requirements. She has also served as issues management expertise for multiple products in the Dow portfolio both in the US and Europe.

Draves holds both a Bachelor of Science in Biology and Master of Science in Technological Processes from Saginaw Valley State University in Michigan. She currently is a member of the board for the North Midland Family Center, serves as a trustee on both the Michigan 4-H Foundation State Board and the Saginaw Valley State University Foundation Board and participates in numerous other community projects in the Great Lakes Bay Region. Mary and her husband Todd own and operate two businesses, both located in Midland.

In her spare time she enjoys multiple activities involving her two children Melissa, 16 and David, 14.

MEET THE PRESENTERS



Katie Amar-Fox

Katie is a recent graduate of Gaylord High School and currently attends Michigan Technological University (MTU, aka "Michigan Tech") where she just completed her freshman year. Her major is in materials science and engineering. During high school, Katie attended a Women in Engineering summer camp which helped her decide to pursue her current studies. Katie is enjoying her time at MTU and is a member of the Society of Women Engineers (SWE). In her free time, Katie likes to explore the Houghton area with her

college friends. "Go Huskies!"

Joan Becker

Joan is an engineer in the oil and gas field. She graduated from Tulane University with a Bachelor of Science in Chemical Engineering. Joan spent her college summers interning for ARCO Oil and Gas in Dallas, Lafayette and Denver, then went to work for Shell Oil in New Orleans upon graduation. She was a drilling and production engineer in the Gulf of Mexico prior to moving to Gaylord, where she worked as a drilling and production engineer on Antrim gas wells for Ward Lake Energy. Joan is currently an engineer/part owner of an independent oil and gas company in Gaylord, Michigan.





Katie Coady

Dr. Coady (Katie) is an Environmental Toxicology Consulting Specialist for The Dow Chemical Company in Midland. A biology major with a minor in chemistry, Katie obtained her B.A. in Anderson, IN and later earned both her M.S. and Ph.D. from Michigan State University in Zoology and Environmental Toxicology. Dr. Coady has taught a broad range of science courses at the college level and served as a Senior Staff Scientist for an environmental consulting firm.

Teresa Collins

Teresa Collins is a graduate of Michigan Technological University with a Bachelor of Science in Applied Mathematics. After college, she joined the U.S. Peace Corps and taught math in a small African village for two years. After returning from Africa, Teresa went back to Michigan Tech and became certified to teach math and physics. She has been a teacher in the Gaylord school district for 22 years, has a master's degree in teaching, and loves her job as an 8th grade math teacher. Teresa is married to Mike – also a teacher – and they have two children, Sam (17) and Maia (14).





Kelly Carroll

Kelly Carroll originates from Toledo, Ohio. She is a 2003 graduate of St. Ursula Academy. Kelly earned her bachelor's of arts and sciences from John Carroll University in Cleveland, Ohio in 2007. From there she went on to pursue a career in funeral service. As a 2008 graduate from the Cincinnati College of Mortuary Science, she began working in funeral service at a family owned funeral home in a suburb of Cincinnati as a licensed funeral director and embalmer. Licensed in the states of Michigan and Ohio, Kelly and her husband, Pat, joined the Nelson Funeral Home & Cremation Service in June of 2012. They have

two children, Delanev and Dolan.

Katherine (Katy) Dvorak

Katy is currently a Doctoral Candidate and Research Associate at Western Michigan University in Kalamazoo. She previously earned her M.S. in Geology from the University of Akron in Ohio, and her B.S. in Geology from State University of New York (SUNY) at Fredonia. Katy has significant prior experience in teaching geology, including field skills, GIS, geology safety and lab practices. Katy is a member of the Geological Society of America and Association of Women Geoscientists, among others. She has been a volunteer ski coach and actively involved in community theatre.





Elizabeth Egan

Ms. Egan attended Michigan State University, graduating with a bachelor's degree in Packaging Engineering, and then earned a master's degree in Business Administration from Central Michigan University. She worked for 18 years for The Dow Chemical Company Plastics, Consumer Products, and also automotive business units. She is a member of the Society of Plastics Engineers. She is currently the owner of Hoffman Plastics, an educational consulting business supporting the education of Plastics in society. She is also an elected trustee for the Clarkston

Community Schools Board of Education. Her hobbies include gardening and playing and teaching the piano.

Judy Falk

Judy is a math consultant with the Char-Em ISD where she provides instructional leadership to 14 member school districts. A former Gaylord Middle School mathematics teacher and an adjunct mathematics instructor at North Central Michigan College, Judy received her B.S. from the University of Michigan - Dearborn and holds an M.A. in Education from CMU.





Mary Fox

A native of Northern Michigan, Mary attended the University of Michigan where she earned a B.S. degree in biomedical sciences and a master's in health services administration. Success in science and math studies resulted in Mary's first job as a computer programmer for a health care consulting firm. The skills she gained in computer programming combined with a strong STEM background led to a variety of professional roles involving financial planning and data analysis. Mary currently works as a consultant in the fields of health care and economic development.

Lisa Gandy

Dr. Gandy (Lisa) is an Assistant Professor at Central Michigan University where she has taught Principles of Computer Programming and serves as a Faculty Advisor for Women in Technology. Lisa earned her B.S. and M.S. degrees in Computer Science prior to completing her Ph.D. in Computer Science at Northwestern University. She has published and presented her research in a many professional venues. Lisa is member of the Association for the Advancement of Artificial Intelligence and the Institute of Electrical and Electronics Engineers.



Leila Jeanne Greer

Leila Jeanne is a certified Yoga instructor who formerly taught 6th grade Language Arts and Humanities in Hailey, Idaho for more than a decade. LJ has a B.S. in Biology/History and her M.S. in Technology and Human Affairs from the School of Engineering at Washington University in St. Louis. A Michigan resident for less than a year, LJ has spent her summers in Bay View since her childhood and has a keen interest in mindful meditation.

Cheri Leach

Cheri is the co-founder, CEO and director of Programming at Raven Hill Discovery Center, where science, history and art connect. In 1991, she and her husband, Tim, founded Raven Hill. Cheri currently teaches art, history and science off-campus graduate classes for teachers through Central Michigan University, as well as professional development classes, adult and student art, history and science classes at Raven Hill and through the center's outreach programs. A teacher for the past 47 years and an art, history and science workshop presenter since 1987, Cheri works as a mentor to youngsters, families and teachers interested in science, history, art and their connections to all other aspects of our lives.





Audra Leininger

Audra Leininger is the Admissions Representative for Spring Arbor University in Gaylord, MI. She recruited for Spring Arbor University's main campus for two years before moving to Gaylord. She is passionate about helping people pursue their dreams and reach their potential, and she believes higher education can open incredible opportunities for people. She graduated with her bachelor's degree from Spring Arbor University in 2004. She had an individualized degree called Communication in Ministry with a concentration in

Global Studies. She is currently working on her Master of Business Administration (MBA) through SAU in Gaylord.

Luann Mabarak

Luann is the Director/Academic Advisor for Kirtland Community College's northern site, the M-TEC in Gaylord where she blends her passions of positive thinking, servant leadership and compassion for others. She attained Master of Art degrees in both Organizational Management and Counseling and is a Licensed Professional Counselor, HealthRHYTHMS Group Empowerment Drumming Facilitator and Certified Appreciative Inquiry Facilitator. Born with strong connections to nature, Luann credits some of her greatest lessons in life and leadership to her four-legged teachers.





Brandie Meisner

Brandie received her pilot's license on the earliest date allowed by the FAA, on her 17th birthday. She developed her love for aviation at Embry-Riddle Aeronautical University earning a B.S. in aeronautical science with a focus on flight instruction and a minor in meteorology. Brandie now serves as the Chief Financial Officer of M&M Excavating, a heavy highway contractor, where she and her cousin are transitioning the family business to the next generation. With her husband and two sons, Brandie enjoys traveling, scuba diving, downhill skiing and hiking. While her personal and professional life is filled with

male influences, she balances her world-view by volunteering with Guardian Gals.

Sharon Moeke

Sharon, a recipient of the Michigan "Science Teacher of the Year", taught high school science and math in East Jordan and Vanderbilt. While in East Jordan, Sharon guided students in the Mathematics, Science and Technology Center (MST). She holds her B.S. in Education with a major in Biology and minor in Chemistry from CMU, and later obtained a continuing certificate in mathematics from CMU.





Hannah Pankratz

Hannah is pursuing her Ph.D. in Geosciences at Western Michigan University in Kalamazoo where she also serves as a teaching and research assistant. Hannah earned her B.A. in Geology (with honors) from Albion College. She enjoys using a variety of approaches to investigate environmental and natural hazard problems and she is currently involved with research in Saudi Arabia.

Lisa Patischnock

Lisa Patishnock graduated from the University of Michigan with a B.S. in Mechanical Engineering. Three years in England and two children later, she returned to the U.S. to work for 16 years in a variety of engineering positions in diverse industries. For the past 10 years, she has been employed as a Manufacturing Engineer by Springs Window Fashions, LLC at the Grayling, Michigan plant.





Stacy Paul

Stacy is an engineer with a wide range of experience in the aerospace and high tech electronics industry. She currently works for Belcan Engineering in Grand Rapids where she develops software programs for airplane manufacturers Boeing and GE Aviation. Stacey is a graduate of Johannesburg-Lewiston Area Schools. Following graduation she earned her B.S. in aerospace engineering from Embry-Riddle Aeronautical University in Florida. Prior to returning to

Michigan, Stacy worked as an aerospace engineer for NASA in Houston, TX.

Jessica Sampson

Jessica is a Consulting Support Specialist at The Dow Chemical Company in Toxicology and Environmental Research and Consulting. She began working at the Dow Corning Corporation in the Bioassurance Quality Control Lab before becoming a quality control technician in 2011. Jessica graduated from CMU with a B.S. in Environmental Science and Biology.





Ashley Switalski

Ashley is a fourth term co-op student from Kettering University pursuing her degree in Chemical Engineering with a Course of Study in Innovation to Entrepreneurship. Some of her experiences have included work for CLS on human livers, insect cells, and developmental plastics along with her current role at Dow Chemical in Analytical Technology. She certainly likes to keep busy and never stop looking for opportunities to learn!

Julie Timperley

Julie is a Doctor of Optometry and business owner – a profession in which the majority of owner optometrists are men. Dr. Timperley earned her Optometry degree from the Michigan College of Optometry in 2001 and has a Bachelor of Science degree in Applied Biology from Ferris State University. She completed expanded training to include treatment and management of ocular conditions including low vision, cataract, diabetes, glaucoma, and ocular surface disease. Dr. Timperley returned to Gaylord in 2010 after practicing optometry for 10 years in the greater metro Detroit area. Being raised in Gaylord, she and her husband of 14 years are happy to be raising their two children here as well. Julie enjoys both summer and winter sports, volunteers in



Gaylord Community Schools and as a Girl Scout leader, and actively participates in philanthropy through church and community foundations.



Kristy Torsky

Kristy is a family therapist at Northern Family Intervention Services and works in conjunction with human service agencies all across Northern Michigan to provide home-based, intensive therapy for children and families. As a Solution-Focused therapist, Kristy is able to help those in her care discover what is going right and how to accomplish more of it! She graduated with a M.A. in counselor education from Western Michigan University and did continuing education in SFBT at the University of Wisconsin-Milwaukee.

Elizabeth Van Pate

Elizabeth is the District Media Specialist at Mancelona Public Schools where she addresses technology needs throughout the schools, coaches high school robotics, and creates technology curricula including classes on social media. Elizabeth grew up in rural northern Florida, and has worked in public, private, and international education. She holds a B.S. and two master's degrees and is currently working on her doctorate degree in instructional systems design at Indiana University.





Jennifer Williams

Jennifer, a Consulting Support Specialist for The Dow Chemical Company, graduated from CMU in 2010 with her B.S. in Biology with a focus on Microscopy. Jennifer has worked at Dow in Toxicology and Environmental Research and Consulting since 2011.



CONTACT INFORMATION

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MEET THE VOLUNTEERS

Planning Committee

Mary Fox
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Joy Leisen
Luann Mabarak
Margo Noss
Ursula Owens
Jane Sekora
Sheila Simpson
Brandy Solak
Amber Theriault
Lisa Marie Tobin
Mary Tomaski

Additional Tech Savvy Event Volunteers

Sharon Agren	Tracy Goble	Ashley Ochoa
Janet Allen	Emma Hall	Jessie Owens
Katie Amar-Fox	Abby Hamilton	Lisa Patishnock
Laura Bailey	Katherine Houpt	Amy Rivest
Dana Bensinger	Raeann Keivit	Brittany Rupprecht Brittany Stripp
Kaitlyn Broz	Jan Kellog	
Staci Brown	Sarah Korff	Ashley Switalski
Myah Courterier	Kelly Lauster	Jane Urban
•		Bonnie Vance
Victoria Crandell	Kristin McCormick	Terese Vanuum
Maureen Derenzy	Brandie Meisner	Carrie Wilkison
Renee' Elias		

This event truly would not have been possible without all of our volunteers. If we have missed naming volunteers who signed up after our program was assembled, we sincerely apologize.

We greatly appreciate all of your time and energy. Thank you!



AAUW Gaylord Area Branch thanks these sponsors whose generosities of funding and in-kind contributions have made Tech Savvy possible:

American Association of University Women
The Dow Chemical Company
Gaylord Community Schools
Kirtland Gaylord M-TEC
Mary Kay Smith Sklarczyk Fund of the Otsego County
Community Foundation
Scott and Janice Lampert Fund of the Otsego County
Community Foundation
Tempest Enterprises LLC
Treetops Resort & Spa
University Center Gaylord

We also appreciate these groups and businesses, which graciously donated prizes or talents that made Tech Savvy exceptional:

Animal Behavior Consultants of Northern Michigan
Consumers Energy
Crossroad Industries
Gaylord Walmart
Gaylord High School Culinary Arts Crew
Janice Lampert
Judy Burkhardt's "Transition Class" at Gaylord High School
Zound Industries

Many in our town and the surrounding area believe in our goal to inspire girls toward STEM education and career opportunities. Thank you to everyone who had a part in supporting Tech Savvy.