

2017
MAINE
SCIENCE
FESTIVAL



March 16-19, 2017
Bangor, Maine

learn more at mainesciencefestival.org

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58 Main

Aquaculture Research Institute
at the University of Maine

Axiom Education & Training Center

Bangor Greendrinks

Bangor Public Library

Bangor Symphony Orchestra

Bioscience Association of Maine

Challenger Learning Center
of Maine

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Marine Research & Education

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GE Power - Bangor

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Hampden Academy

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The Jackson Laboratory

Kennebec River Biosciences

Live & Work in Maine

Mad Science Maine

Maine Campus Compact

Maine Discovery Museum

Maine Math & Science Alliance

Manufacturers Association
of Maine

Maine Robotics

Maine School of Science and Math

Maine Sea Grant

Maine State Science Fair

Maine Writing Project

MDI Biological Laboratory

Penobscot Theatre Company

Portland Science Center

Project Login

The Telephone Museum

Schoodic Institute at
Acadia National Park

SnowCon

Specialty Sweets

University of Maine

University of Maine Advanced
Structures & Composite Center

University of Maine
College of Engineering

University of Maine Museum of Art

University of New England

Waterfall Arts

WBRC



Welcome to the 3rd Annual Maine Science Festival!

On behalf of the whole MSF Team, and our many partners and sponsors, we are really excited to have you join us for the 2017 Maine Science Festival. There is no other place in Maine where you can get a more complete overview of the remarkable science that happens on a daily basis here in our great state. Add in the chance to meet and talk to the scientists themselves who are doing the work, and to see how what they are working on impacts our lives in Maine and beyond, and it is hard to grasp the level of excitement and inspiration this weekend brings to all of us. One of the best parts of the MSF is the chance to hear about science and engineering in ways that you haven't before: through exhibits, forums where you get to ask questions, presentations that are easily-understandable explanations of years of work, films, through art – there really is no limit to how we are presenting the science all around us. In fact, the MSF itself is a perfect reminder that #scienceiseverywhere.

Kate Dickerson, Founder & Director, Maine Science Festival



mainesciencefestival.org
#scienceiseverywhere



Welcome to Bangor, Maine and Welcome to the Future!

Bangor is very privileged and honored to serve as the host of the 2017 Maine Science Festival, which will be held on March 16th – 19th.

The Maine Science Festival brings together Maine's premier, nationally renowned science organizations all in one place to showcase the remarkable work being done throughout the region and to spark the curiosity and imagination of thousands of young people.

There are so many shows and exhibits in 4 jam packed days of activity. Some I'm looking forward to are "Exploration Station" where you can roll up your sleeves and play scientist with real scientists helping out; "Green Energy- a bright idea" where you can learn so much more about solar power; "Human Anatomy- A Photographic Exhibit" from selected dissections; and of course a "Made in Maine" discussion- to name just a few of all the different projects and talks going on.

The nationally broadcast PBS radio show "You're the Expert" will be broadcasting from Hampden Academy on March 18th- come and try out if you think you're so smart! On the 19th there will be the "MSF Partner Event: Emera Astronomy Center and M.F Jordan Planetarium presents One World, One Sky.: Big Bird's Adventure".

There will be fun for kids of all ages including big kids like us.

Bangor has a nationally ranked and recognized public school system. Bangor is a city of readers at the Library, Bangor is a City of learners of all ages, a City that Welcomes the Future and our role in it.

Welcome to Bangor and Welcome to the 2017 Maine Science Festival and all who come here Welcome to the Future.

Joe Baldacci
Mayor, Bangor, Maine

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**Follow along with us! Visit us on
Facebook, Twitter and Instagram
#scienceiseverywhere
#MSF2017**

**To find out more visit:
mainesciencefestival.org**



MAINE SCIENCE FESTIVAL

Things to note:

EventBrite events. (Those that are outlined in dashes in the Festival at a Glance) Please note that some of our events require pre-registration through EventBrite. There is still no charge for these events (with the exception of our headliner event, see page 22 for more info), but priority will be given to individuals who have pre-registered.

Schedule Changes. Please note that all events are subject to change. Be sure to check our website or social media for the most up-to-date information.

Suitability key: Families  / Teens  / Adult 

Within the program we will do our best to note the best suited audience for programming provided. Please reference the graphics above and keep your eyes out for any special delineation like 21+ or 10+.

What is a MSF Showcase Event?



Maine Science Festival Showcase events are events that happen every year, with new presenters, activities and experiences for festival goers. Showcase events are a mix of dynamic presentations, hands-on activities, and workshops that provide festival goers with a deep dive into the science happening in Maine. If you are able to attend only a few MSF events, the Showcase events are the ones to catch.

FESTIVAL AT A GLANCE

THURSDAY, March 16th



Science on Tap - Myth-buster Style

7:30-9:30pm

Sea Dog Brewing Company, 21+



FESTIVAL AT A GLANCE

FRIDAY, March 17th



Friday Field Trip Day*

**pre-registration only*

8:30am-3:00pm

Cross Insurance Center

Tech Night - For Middle School Students

4:00-7:30pm

Maine Discovery
Museum



MSF Partner Event: Penobscot Theatre presents "Papermaker" by Monica Wood

5:00pm - TICKETS REQUIRED
Penobscot Theatre Co.

5 Minute Genius

7:30-9:30pm

Union Street
Brick Church

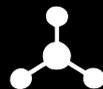


Waterfall Arts Presents: Created in the Lab - Interpreting Science through Comics

Time TBD - check online
for schedule
COESpace

FESTIVAL AT A GLANCE

SATURDAY, March 18th



Exploration Station

9:00am-4:00pm

Cross Center Ballroom



Wireless Networks

9:00am-4:00pm

CC Pre-function Area

Created in the Lab - Interpreting Science through Comics - *Time TBD*
COESpace

Printing the Farm

9:00-10:30am

CC Mtg Rm 3/4

Green energy - a bright idea!

10:00-11:00am

Session 1,
CC Mtg Rm 2

Maine Robotics Workshop

9:30-10:30am

Session 1,
CC Mtg Rm A/B

Maine Robotics Workshop

10:45-11:45am

Session 2,
CC Mtg Rm A/B

Help Sculpt the Skull!

11:00am-3:00pm

University of Maine
Museum of Art

Marvels of Motion

11:00-12:00pm

Bangor Public Library - Lecture Hall

Why parasites control the world

11:00am-12:15pm

CC Mtg Rm D

Green energy - a bright idea!

11:30am-12:30pm

Session 2,
CC Mtg Rm 2

The Loudness Wars

11:30-12:30pm

CC Mtg Rm C

Maine Robotics Open Workshop

12:30-4:00pm

CC Mtg Rm C

FESTIVAL AT A GLANCE

SATURDAY, March 18th



Human Anatomy Photography Exhibit

12:00-3:00pm
CC Mtg Rm 3&4

Minecraft Work- shop PARENTS/ ADULTS ONLY

12:30-2:00pm
Session 1,
CC Mtg Rm 1

VEMI Workshop

1:00-2:15pm
Session 1,
CC Mtg Rm 2

Made in Maine

1:00-2:15pm
CC Mtg Rm C

Cave of Forgotten Dreams

1:30-3:30pm
Bangor Public Library
Crofutt Mtg Rm

From Your Back Pocket to the World: How Wireless Con- nections Work

2:30-3:30pm
CC Mtg Rm D

Minecraft Work- shop PARENTS/ ADULTS ONLY

2:30-4:00pm
Session 2,
CC Mtg Rm 1

Science in Popular Culture

3:30-4:30pm
CC Mtg Rm C

MSF Partner Event Penobscot Theatre presents “Papermaker” by Monica Wood

5:00pm - TICKETS REQUIRED
Penobscot Theatre Company

Headliner Event: You're the Expert

7:30pm - TICKETS REQUIRED
Hampden Academy Performing Arts Center

Sponsored by Idexx



FESTIVAL AT A GLANCE

SUNDAY, March 19th



Created in the Lab – Interpreting Science through Comics - *Time TBD*
COESpace

Science Board Gaming

11:30-3:00pm
Fork & Spoon

Audio Recording 101

11:30am-12:45pm
58 Main

Fail Fast, Fail Cheap

1:00-2:00pm
Maine Discovery Museum

3-D Printing Demo

1:00-2:00pm
Maine Discovery Museum

8-Bit Generation: The Commodore Wars

1:30-3:15pm
58 Main

MSF Partner Event “One World, One Sky: Big Bird’s Adventure”

2:00pm
Emera Astronomy Center and M. F. Jordan Planetarium, University of Maine
TICKETS REQUIRED

Science at the Bangor CSA Fair!

2:30-5:00pm
Sea Dog Brewing Banquet Room

MSF Films: Student Film Competition

3:15-3:45
58 Main

Papermaker Talkback

5:00-6:00pm
Penobscot Theatre Company

MSF Partner Event “Dynamic Earth”

3:30pm
Emera Astronomy Center and M. F. Jordan Planetarium, University of Maine
TICKETS REQUIRED

MSF Partner Event “Papermaker” by Monica Wood

3:00pm
Penobscot Theatre Company
TICKETS REQUIRED

Science on Tap 21+

Sea Dog Brewing Company

7:30-9:30pm



Myth-Busting, MSF Style! What does science have to do with the world around us? Plenty! Combine libation, laughter, and lessons you'll never forget. Join us as we kick off this year's MSF by busting some of the myths surrounding GMOs and people who chose to be child-free.

Presenters: Amy Blackstone, Professor of Sociology at the University of Maine; Kristen Brown, PhD candidate in plant science at the University of Maine. Presentation Titles: You'll die alone! And other myths of the childfree; GMO WTF!

Moderator: Aymie Walshe, Maine Education Association and MSF Programming Team members

Event type: discussion

Free Event, space is limited, sign-up is suggested on EventBrite

THURSDAY, March 16

Friday Field Trip Day

Cross Insurance Center

7:30-9:30pm

These events are part of our Friday Field Trip Day (FFTD) for middle school students in Maine. These events are limited to those schools and parents that have signed up.

The following sponsors have helped make the field trip day possible: Emera Maine; University of Maine - College of Engineering, Office of Research, and the President's Office; University of New England; Unum; and WLBZ.



FRIDAY, March 17

Suitability key: Families  / Teens  / Adult 

Tech Night ^{ages} 10-14

Maine Discovery Museum

4:00-7:30pm



Hey middle schoolers - want to find out about the world of computers and information technology? Learn, share, collaborate, and explore cutting-edge software and web-based tools. There will be workshops and hands-on activities offered, and the program is designed for maximum engagement. Pizza dinner provided. Produced by Project>Login. Events include:

- Manipulating the Web with Browser Tools Hands-on activity (ongoing, drop-in). Exploration of development tools built into browsers. Presented by Husson University.
- Exploring Higher Dimensions Hands-on activity (ongoing, drop-in). Use your hands to play with 3 and 4 dimensional objects in Virtual Reality! Presented by University of Maine College of Education and Human Development.
- Advanced Materials in Infrastructure and Energy Information table on student opportunities at the UMaine Composites Center, including offshore wind to 3D printing/additive manufacturing. Presented by Advanced Structures and Composites Center, University of Maine

Event type: Workshop

Participating MSF Partners: Husson University; Maine Discovery Museum; Project>Login; University of Maine

Free Event, space is limited, sign-up is suggested on EventBrite

FRIDAY, March 17

MSF Partner Event:

Penobscot Theatre presents "Papermaker" by Monica Wood

Penobscot Theatre Company

7:00pm *TICKETS REQUIRED

During a paper mill strike in a small Maine town, the lives of two families collide and tensions rise around a company CEO and a man building a wooden ark in his yard. Criss- crossing the lines between workers and management, novelist Monica Wood's first play is a revealing drama about family, loyalty, and the dignity and tragedy of mill-town life.

*\$27; Students (up to age 25, with student ID): \$10 - online or box office at 207-942-3333

Participating MSF Partners: Penobscot Theatre Company

Suitability key: Families  / Teens  / Adult 

Waterfall Arts Presents: Created in the Lab - Interpreting Science through Comics

COESpace

Time TBD - check online schedule

Each year, Waterfall Arts, Belfast, ME, chooses a theme that links together exhibitions, educational programs and events. In 2016, Waterfall Arts celebrated the art of the scientific method, and the places where art and science inform each other. Waterfall Arts is honored to reproduce this exhibition for the Maine Science Festival held in Bangor, ME, March 16-19, 2017.

What do artists and scientists share? A sense of wonder about the world around them. Inquiry. Experimentation. Trial and error. Discovery. Innovation. What occurs when art and science collide? Created in the Lab - Interpreting Science through Comics tests the boundaries of how we interpret the world around us and explores topical or timeless issues, including what is a comic, what is art, and even what is science. In the words of scholar Nick Sousanis, comics encompass the “notion of how working visually-verbally expands the possibilities for our creative discoveries,” and “the process itself facilitates the making of unexpected connections.”

Sounds like a science experiment, doesn't it?

This amazing piece and several other works by individual artists, Shawn Brewer, Michael Connor, Deanne Dutton, Dante Shepard and Wade Warman are on display at COSpace for the 2017 Maine Science Festival.

Event type: Exhibit

Participating MSF Partners: Waterfall Arts

FRIDAY, March 17

Suitability key: Families  / Teens  / Adult 

5 Minute Genius

Union Street Brick Church

7:30-9:30pm



Come and join us for the MSF's answer to Ted Talks. 5 Minute Genius features short, sharp talks by some of **Maine's finest scientists 5 minutes per talk, plus 5 minutes for questions.** Presenting a sprint through some of the most remarkable, cutting-edge science happening in Maine - you will feel like a genius in no time! Want more? Stick around for Q&A and a reception after this event.

Presenters: Sandra De Urioste, University of Maine; Heather Hamlin, University of Maine; Kraig King, GE Power; Sarah Millington, IDEXX; Steve Munger, The Jackson Laboratory; Sandra Rieger, MDI Biological Laboratory; Nadir Yildirim, Revolution Research, Inc.

Event type: Workshop

Moderator: Kate Dickerson, Maine Science Festival

Participating MSF Partners: GE Bangor; Idexx; The Jackson Laboratory; MDI Biological Laboratory; University of Maine

Free Event, space is limited, sign-up is suggested on EventBrite

FRIDAY, March 17

Sponsored by



**END OF DAY 2 OF THE
2017
MAINE SCIENCE FESTIVAL**



Suitability key: Families



/Teens



/Adult



Exploration Station

Cross Center Ballroom

9:00am-4:00pm

Roll-up your sleeves and learn through various hands-on activities from scientists and practitioners around the state. Make sure to stop in and visit each booth, and see how science is everywhere!

- *Connecting the Flow* - Presented by Bangor Area Stormwater Group
- *Probability* - Presented by University of New England Math Club
- *Home Scientist* - Presented by Girl Scouts of Maine
- *We All Have the Same Genes* - Presented by University of Maine
- *Getting Up to Speed on Seaweed* - Presented by Hurricane Island Center for Science and Leadership
- *What is ocean acidification and how can you help?* - Presented by Maine Maritime Academy
- *App Creation* - Presented by Husson University
- *Catapults* - Presented by University of Maine, College of Engineering
- *Astronomy Fun!* - Presented by Emera Astronomy Center
- *Coding and space building* - Presented by Challenger Learning Center of Maine
- *Adventures as a Marine Biologist* - Presented by University of New England
- *Vector Borne Workshop* - Presented by Maine Medical Center Research Institute
- *Robotic Rescue Mission Control Center* - Presented by Maine Robotics

Event type: hands-on

Participating MSF partners: Challenger Learning Center of Maine; Downeast Institute; Emera Astronomy Center; Girl Scouts of Maine; Hurricane Island; Husson University; Maine Maritime Academy; University of Maine; and the University of New England; Maine Robotics

The Way Wireless Networks Work

Cross Center Pre-function area

9:00am-4:00pm

This exhibit provides a step-by-step overview of how wireless networks. Presented by Redzone Wireless

Event type: Exhibit

Suitability key: Families  / Teens  / Adult 

SATURDAY, March 18

Waterfall Arts Presents: Created in the Lab - Interpreting Science through Comics

COESpace

Time TBD - check online schedule

Each year, Waterfall Arts, Belfast, ME, chooses a theme that links together exhibitions, educational programs and events. In 2016, Waterfall Arts celebrated the art of the scientific method, and the places where art and science inform each other. Waterfall Arts is honored to reproduce this exhibition for the Maine Science Festival held in Bangor, ME, March 16-19, 2017.

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Sounds like a science experiment, doesn't it?

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Event type: Exhibit

Participating MSF Partners: Waterfall Arts

Printing the Farm: Interdisciplinary/ Site Specific- Art & Science

Cross Center Meeting Room 3&4

9:00-10:30am

Join Susan Smith, who recently completed a Maine Farmland Trust residency program, as she explains and discusses the process she uses to "print the farm." Susan will provide the context of the work and its relationship to science-based thinking and environmental concerns.

Event type: Talk.Hands-On

Moderator: Angela Oechsle, Project>Login/Educate Maine

Participating MSF Partners: Project>Login

Free Event, space is limited, sign-up is suggested on EventBrite

Suitability key: Families  / Teens  / Adult 

SATURDAY, March 18

Maine Robotics Workshop

Cross Center Meeting Room A&B

Session 1 - 9:30-10:30am

Session 2 - 10:45-11:45am



ages
9+

SATURDAY, March 18

Come spend an hour learning how to program a LEGO robot to perform! Participants will use laptops to write the programs; download the programs to the pre-built LEGO robots; and then run the robots. Missions will be setup for the participants to work towards, with lots of time to try, try, and try again! *Presented by Maine Robotics*

Event type: Workshop

Participating MSF Partners: Maine Robotics

Sponsored by



Free Event, space is limited, sign-up is suggested on EventBrite

Green energy - a bright idea!

Cross Center Meeting Room 2

Session 1 - 10:00-11:00am • Session 2 - 11:30-12:30pm

Have you ever wondered how energy could be “green”? Want to learn about solar cells - and build your own made from blackberry juice? This workshop is for you! *Presented by the University of New England Chemistry Club*

Event type: workshop

Participating MSF Partners: University of New England

Free Event, space is limited, sign-up is suggested on EventBrite

Help Sculpt the Skull! ages 10+

University of Maine Museum of Art

11:00am-3:00pm

Creating a colossal cranium out of paper mâché. You'll learn the basics of large scale sculpture, and help build a giant human skull inspired by the upcoming Smithsonian Exhibition - Exploring Human Origins - at the Bangor Public Library. The sculpture will be on display at the library later in March and will be unveiled at a reception on March 28th. *Presented by the University of Maine Museum of Art.*

Event type: Drop-In Workshop

Participating MSF Partners: University of Maine Museum of Art

Suitability key: Families  / Teens  / Adult 

Marvels of Motion

Bangor Public Library - Lecture Hall ages 3-10

11:00am-12:00pm

This show is sure to make Isaac Newton proud! This is a forcibly fantastic show about Newton's three laws of physics and other properties of the laws of motion and gravity! Rotational forces, a rocket pack blast off, electromagnetic propulsion, and our exclusive Newton's rocket car are just a few action packed experiments we will investigate. Just when you thought jetpacks were something of the future, you'll see us propel several members of the audience across the floor using our own, very special Mad Science rocket car! Come join us in our version of Mad Science Olympics. This engaging physics performance is sure to please everyone and inspire more imaginative learning in all of our audience members! *Presented by Mad Science of Maine*

Event type: show - * audience limited to ~100; first come-first served

Participating MSF Partners: Bangor Public Library, Mad Science of Maine

SATURDAY, March 18

Why parasites control the world



Cross Center Meeting Room D

11:00-12:15pm

Parasites are some of the most important organisms on earth, impacting organisms from amoeba to orchids, from fish to bats. Parasites are the greatest predators on earth, and are more important to ecosystems than the great whales or lions and tigers. And, parasites remain the number one infectious disease issues of humans, farm animals, and crops. In this forum we will present our personal experience why parasites have become so important to us as individuals and how they rule the world by stopping wars, changing the human genome and even influencing the sports we enjoy doing. Parasites are even opening up new fields of medicine as a treatment for asthma and severe allergies.

Event type: Forum

Panelists: Ian Bricknell, University of Maine; Anne Lichtenwalner, University of Maine

Moderator: Jonathan Sprague, Rocky Coast Consulting

Participating MSF Partners: University of Maine

Suitability key: Families  / Teens  / Adult 

The Loudness Wars

Cross Center Meeting Room 3

11:30-12:30pm

Eric Ferguson from Husson University explores why musical recordings have grown increasingly loud over the last thirty years. Not only will you learn about the causes, potential solutions to the loudness wars will be revealed.

Presenter: Eric Ferguson, NESCOM, Husson University

Moderator: Jason Judd, Project>Login

Event type: Presentation

Participating MSF Partners: Husson University, Project>Login, Educate Maine

Sponsored by 

SATURDAY, March 18

Human Anatomy - Photography Exhibit

Cross Center Meeting Room 3&4   **ages 14+**

12:00-3:00pm

This exhibit has photographs taken from selected dissections done at the University of New England, College of Osteopathic Medicine, Human Anatomy Program. UNE medical students will be on-hand to curate, answer questions, and explain concepts. *Presented by University of New England College of Osteopathic Medicine*

Event type: Exhibit

Participating MSF Partners: University of New England

Sponsored by 

Suitability key: Families  / Teens  / Adult 

Maine Robotics Open Workshop

Cross Center Meeting Room A&B

12:30-4:00pm

young children
need to bring an
adult to help out

Come in for a few minutes or longer and try your hand at programming a LEGO robot. Use the laptops to write a short program and download it to the LEGO Mindstorms robot and see if it works! Open to anyone who wants to give it a try, but best for youth over the age of 9. If younger children want to give it a try, they'll need to bring an adult along to help them out (or maybe it will be the other way around). *Presented by Maine Robotics*

Event type: Workshop

Participating MSF Partners: Maine Robotics



SATURDAY, March 18

VEMI Workshop - World Building

Cross Center Meeting Room 2

12:30-2:00pm

Have you ever wondered how to create a virtual world? This Unity seminar is directed for relative beginners with little to no experience in Unity who are interested in building their own virtual world. It will cover the basics to set up and implement Unity, and teach you how to create different items and tools in your virtual world, as well as how to control a player-character and interact in your virtual world. *Presented by VEMI Lab from the University of Maine*

*You must bring your own laptop, with Unity pre-installed

Event type: Workshop

Participating MSF Partners: University of Maine

Free Event, space is limited, sign-up is suggested on EventBrite



Suitability key: Families  / Teens  / Adult 

Minecraft Workshop - PARENTS and ADULTS ONLY

Cross Center Meeting Room 1

Session 1 - 12:30-2:00pm

Session 2 - 2:30-4:00pm

Minecraft is more than just a fun computer game - In this workshop, the Maine LearnToMod Project will introduce parents to LearnToMod, computer software that teaches users computer programming skills to mod (modify) Minecraft gameplay. Blockly, a visually based programming language is taught to introduce computer programming concepts and built computational thinking skills. Skills developed through LearnToMod allow users to advance into using a more complex programming language, Javascript, used in many today's applications. Anyone 7-107 can learn how to code in a fun hands-on engaging way. *Presented by the Advanced Computing Group at University of Maine*

Event type: Workshop

Participating MSF Partners: University of Maine

Sponsored by



Free Event, space is limited, sign-up is suggested on EventBrite

Made in Maine Cross Center Meeting Room C 1:00-2:15pm

Manufacturing and what we make in Maine (and the U.S.) has been in the news in recent months, and it is much more vibrant and diverse in Maine than most of us realize. Maine manufacturers include large, multi-national corporations with a base of operations in Maine. In this forum, you'll hear from some of these Maine manufacturers, and how they use science in both their manufacturing processes and in what they produce

Panelists: Eric Anderson, GE Power - Bangor; Jeff Hamilton, FMC; Mick Bruskotter, Pratt & Whitney; David Levine, Idexx

Moderator: Nathan Sheranian, GE - Power

Event type: Forum

Participating MSF Partners: GE Power, FMC, IDEXX

Suitability key: Families  / Teens  / Adult 

SATURDAY, March 18

Cave of Forgotten Dreams ages 10+

Bangor Public Library - Crofutt Meeting Room (first floor)

1:30-3:30pm

Join us for a screening of the documentary movie Cave of Forgotten Dreams and discussion afterward.

“Cave of Forgotten Dreams, a documentary from the incomparable Werner Herzog (Encounters at the End of the World, Grizzly Man) follows an exclusive expedition into the nearly inaccessible Chauvet Cave in France, home to the most ancient visual art known to have been created by man. Cave of Forgotten Dreams is an unforgettable cinematic experience that provides a unique glimpse of pristine artwork dating back to human hands over 30,000 years ago — almost twice as old as any previous discovery.”

*This event is in partnership with the Bangor Public Library and a primer for their April 2017 Smithsonian Exhibition - **Exploring Human Origins***

Moderator: Linda Silka, Senator George Mitchell Center for Sustainability Solutions, University of Maine

Event type: Film & Discussion

Participating MSF Partners: Bangor Public Library, University of Maine

From Your Back Pocket to the World: How Wireless Connections Work

Cross Center Meeting Room D

2:30-3:30pm

Have you ever wondered how you're able to pull up a map of a city half-way around the world in the amount of time it takes you to just type in the location? Or what it means when your wireless connection seems to be running slow? Wonder no more! In this presentation, you'll learn how wireless networks are able to connect you all over the world, and find out how wireless internet innovation is happening right here in Maine.

Presenter: Michael Forcillo, RedZone Wireless

Moderator: Niles Parker, Maine Discovery Museum

Sponsored by

Event type: Presentation

Participating MSF Partners: Redzone Wireless



Suitability key: Families  / Teens  / Adult 

SATURDAY, March 18

Science in Popular Culture

Cross Insurance Center, Meeting Room C

3:30-4:30pm

Have you ever read a novel where science plays a prominent role in the plot? Or wondered if the television shows that use science to move the plot are accurate? In this forum, our panelists will look at how science is presented (and explained) in different types of popular culture: comic books, novels/fiction and television.

Panelists: Mark McLaughlin, University of Maine;
Fran Hodgkins, author; Jamie Wren,
Margaret Chase Smith Policy Center, University of Maine

Moderator: Liam Riordan, University of Maine

Event type: Forum

Participating MSF Partners: University of Maine

Sponsored by



SATURDAY, March 18

MSF Partner Event:

Penobscot Theatre presents "Papermaker"

by Monica Wood  

Penobscot Theatre Company

5:00pm *TICKETS REQUIRED

During a paper mill strike in a small Maine town, the lives of two families collide and tensions rise around a company CEO and a man building a wooden ark in his yard. Criss- crossing the lines between workers and management, novelist Monica Wood's first play is a revealing drama about family, loyalty, and the dignity and tragedy of mill-town life.

*\$27; Students (up to age 25, with student ID): \$10 - online or box office at 207-942-3333

Participating MSF Partners: Penobscot Theatre Company

Suitability key: Families  / Teens  / Adult 

MSF HEADLINER EVENT

You're the Expert



Hampden Academy Performing Arts Center
7:30pm *TICKETS REQUIRED



You're the Expert is a live show, podcast, and public radio program on 90.9 WBUR, Boston's NPR station. *You're the Expert* uses comedy to make academic research more accessible and exciting. Through game show segments and hilariously misguided guesses, a panel of comedians will try to get to the bottom of what a distinguished scientist studies all day. You won't want to miss being part of the audience for this live show and podcast taping!

Participants: Chris Duffy, host of *You're the Expert*

Panelists: Jo Firestone, Roy Wood Jr., Michelle Buteau & a Maine Scientist - to be revealed at the show.

Event type: Show

Participating MSF Partners: Hampden Academy

TICKETED EVENT - Tickets are \$20 for adults, \$15 for students when pre-ordered through EventBrite, prices increase by \$5 at the door.

SATURDAY, March 18

**END OF DAY 3 OF THE
2017
MAINE SCIENCE FESTIVAL**

Suitability key: Families



/ Teens



/ Adult



Waterfall Arts Presents:

Created in the Lab - Interpreting Science through Comics

COESpace

Time TBD - check online schedule

Each year, Waterfall Arts, Belfast, ME, chooses a theme that links together exhibitions, educational programs and events. In 2016, Waterfall Arts celebrated the art of the scientific method, and the places where art and science inform each other. Waterfall Arts is honored to reproduce this exhibition for the Maine Science Festival held in Bangor, ME, March 16-19, 2017.

What do artists and scientists share? A sense of wonder about the world around them. Inquiry. Experimentation. Trial and error. Discovery. Innovation. What occurs when art and science collide? Created in the Lab - Interpreting Science through Comics tests the boundaries of how we interpret the world around us and explores topical or timeless issues, including what is a comic, what is art, and even what is science. In the words of scholar Nick Sousanis, comics encompass the "notion of how working visually-verbally expands the possibilities for our creative discoveries," and "the process itself facilitates the making of unexpected connections."

Sounds like a science experiment, doesn't it?

This amazing piece and several other works by individual artists, Shawn Brewer, Michael Connor, Deanne Dutton, Dante Shepard and Wade Warman are on display at COSpace for the 2017 Maine Science Festival.

Event type: Exhibit

Participating MSF Partners: Waterfall Arts

SUNDAY, March 19

Suitability key: Families  / Teens  / Adult 

Science Board Gaming

Fork & Spoon

11:30-3:00pm

What do science, math, innovation, and board games have in common? A lot, actually! Come and enjoy an afternoon of drop-in gaming at Fork and Spoon hosted by the SnowCon gaming convention crew. From resource management to agriculture to space travel, SnowCon regulars will be available to teach gamers of all ages how to play a curated selection of games to celebrate the Maine Science Festival!

Event type: Games

Participating MSF Partners: Fork & Spoon; SnowCon

Audio Recording 101

58 Main

11:30-12:45pm

When listening to our favorite music, we often get lost in the soulful lyrics, or maybe dance to the infectious grooves. Music can mean so much to so many, but we rarely think about the process involved in transferring the music from the artist to the listener. Making a great audio recordings takes skill and practice. Joshua Small from Husson University (New England School of Communications) will presenting a workshop on how to mix audio. Josh will discuss mix strategies, equalization, compression, reverb, phase considerations all in an effort to make the music come alive for the listener.

Event type: Presentation

Participating MSF Partners: 58 Main, Husson University

Science Scavenger Hunt

Downtown Bangor - MDM has paper lists

12:00-5:00pm

Find some of the science surrounding you in Downtown Bangor! Pick up your sheet/information at the Maine Discovery Museum or print one off from our website and search through the businesses to find the science-themed items in Downtown Bangor. Take a selfie with the objects you find and post them on Facebook and/or Instagram with the hashtags #MSF2017 and #scienceiseverywhere. Those who complete the full hunt will be entered into a drawing for MSF & Downtown Bangor goodies.

Event type: Games

Participating MSF Partners: a mystery, to make the hunt harder

Suitability key: Families  / Teens  / Adult 

SUNDAY, March 19

Fail Fast, Fail Cheap ages 9-14

Maine Discovery Museum

1:00-2:00pm *space is limited, sign-up required

Most of today's successful inventors and innovators attribute their success to the failures they have had - the only way they learned how to do what worked was to figure out what didn't work. One way they have made failing become a success is by minimizing the time and money they have lost in while failing. That idea is brought to the forefront by this workshop on Innovation Engineering. You'll be invited to solve a problem and create a "Fail Fast, Fail Cheap" Prototype to demonstrate your solution. *Presented by the Foster Center for Student Innovation, University of Maine.*

Event type: Workshop

Participating MSF Partners: Maine Discovery Museum;
University of Maine

Sponsored by 

Free Event, space is limited, sign-up is suggested on EventBrite

8-Bit Generation: The Commodore Wars ages 10+

58 Main Street

1:30-3:15pm

Join us for a Maine Premier of the documentary film **8-Bit Generation**. *"When Jack Tramiel invented Commodore in the 1970's, he envisioned computing for the masses and not just the upper classes. Spearheading the personal technology revolution and combatting giants like Apple and IBM, Commodore became a household name by changing the way in which we interact, create and play with computers. From the advent of the groundbreaking Atari and Tetris games to the evolution of contemporary technological design, 8-Bit Generation dives into the home computer explosion and explores Commodore's key role in shaping the future in which we now live."*

As an added bonus: one of the key figures is a 1959 graduate of the University of Maine.

Moderator: Kim Stewart, MSF Programming Leader

Event type: Film

Participating MSF Partners: 58 Main, University of Maine

Suitability key: Families  / Teens  / Adult 

SUNDAY, March 19

Beginner 3D Printer Workshop

Maine Discovery Museum

1:00-2:00pm

Always been curious about 3D technology? This is your chance to learn a little more about this technology, and see how it easy it is to make something go from your computer screen to being created. Sean Taylor from UMaine's IMRC will also have some examples of things they have printed, and will talk about the real-life applications for 3D printing.

Event type: Workshop

Participating MSF Partners: Maine Discovery Museum; University of Maine

MSF Films: Student Film Competition

58 Main



3:15-3:45pm

Join us for the first public screening of the MSF Mock Movie Trailers, and as we unveil the winners.

Event type: Film

Participating MSF Partners: 58 Main

MSF Partner Event:

Emera Astronomy Center and M. F. Jordan Planetarium presents "One World, One Sky: Big Bird's Adventure"  ages 3-7

Emera Astronomy Center and M. F. Jordan Planetarium, University of Maine

2:00pm *TICKETS REQUIRED

Explore the night sky with your favorite friends from Sesame Street in One World, One Sky: Big Bird's Adventure. Follow along with Big Bird, Elmo and their friend from China, Hu Hu Zhu, as they take an imaginary trip from Sesame Street to the moon, where they discover how different it is from Earth. They explore the day and night sky, learn about the Big Dipper, the North Star, the Sun and the Moon. Along the way, they learn how the sky we see is shared by many people around the world. Children attending the show can interact as they watch, drawing constellations and counting the time it takes the sun to set.

Event type: Planetarium Show

Participating MSF Partners: Emera Astronomy Center, University of Maine

SUNDAY, March 19

Suitability key: Families  / Teens  / Adult 

Science at the Bangor CSA Fair

Sea Dog Brewing - Banquet Room & Conference Center

2:30-5:00pm



ages
5-10

While you explore the different Community Supported Agriculture that's available at the Bangor CSA fair, you can learn about some of the science that happens on Maine farms. Activities include:

- "Meet Your Farmer!": Get your Farm Passport Book and take a trip around the Bangor CSA Fair! Ask your farmer how science makes it possible for you to put all those delicious fruits and veggies on your plate and savory grass fed beef in your stew!
- "Vermicomposting": Roll-up your sleeves and take a peek into the life of a composting worm! Meet our red worms, check out the menu in the Wiggly Worm Café, learn how to build a compost bin AND take care of it! Do you know what compost has to do with organic farming?
- "Plant Parts We Eat": Taste-test some GREAT local in-season foods and see if you know what parts of the plants you are eating? Learn some plant botany too!

Presented by the Bangor Greendrinks

Event type: Hands-On

Participating MSF Partners: Bangor Greendrinks

MSF Partner Event:

Penobscot Theatre presents "Papermaker"

by Monica Wood



Penobscot Theatre Company

3:00pm *TICKETS REQUIRED

During a paper mill strike in a small Maine town, the lives of two families collide and tensions rise around a company CEO and a man building a wooden ark in his yard. Criss- crossing the lines between workers and management, novelist Monica Wood's first play is a revealing drama about family, loyalty, and the dignity and tragedy of mill-town life.

**\$27; Students (up to age 25, with student ID): \$10 - online or box office at 207-942-3333*

Participating MSF Partners: Penobscot Theatre Company

SUNDAY, March 19

Suitability key: Families



/ Teens



/ Adult



MSF Partner Event:

Emera Astronomy Center and M. F. Jordan Planetarium presents “Dynamic Earth”

Emera Astronomy Center and M. F. Jordan Planetarium, University of Maine



3:30pm *TICKETS REQUIRED

Explore the inner workings of Earth’s climate system with visualizations based on satellite monitoring data and advanced supercomputer simulations. This exciting program follows a trail of energy that flows from the Sun into the interlocking systems that shape our climate: the atmosphere, oceans, and the biosphere. Audiences will ride along on swirling ocean and wind currents, dive into the heart of a monster hurricane, come face-to-face with sharks and gigantic whales, and fly into roiling volcanoes. We explore the relationship between Earth and the Sun, life and the carbon cycle, Earth’s climate control system, and how human activities are changing our planet. Come learn how dynamic planet Earth really is!

Event type: Planetarium Show

Participating MSF Partners: Emera Astronomy Center, University of Maine

Papermaker Talkback

Penobscot Theatre Company

5:00-6:00pm

Get behind the scenes of a play inspired by the dramatic changes in Maine’s papermaking industry. Hear from the playwright, Maine novelist Monica Wood, who will join a panel of industry and business development experts and others impacted by mill closures and restructuring. Learn about the story being told on Penobscot Theatre Company’s stage and the one still unfolding in communities statewide!

Event type: Forum

Participating MSF Partners: Penobscot Theatre Company; College of Engineering, University of Maine

SUNDAY, March 19

Suitability key: Families  / Teens  / Adult 

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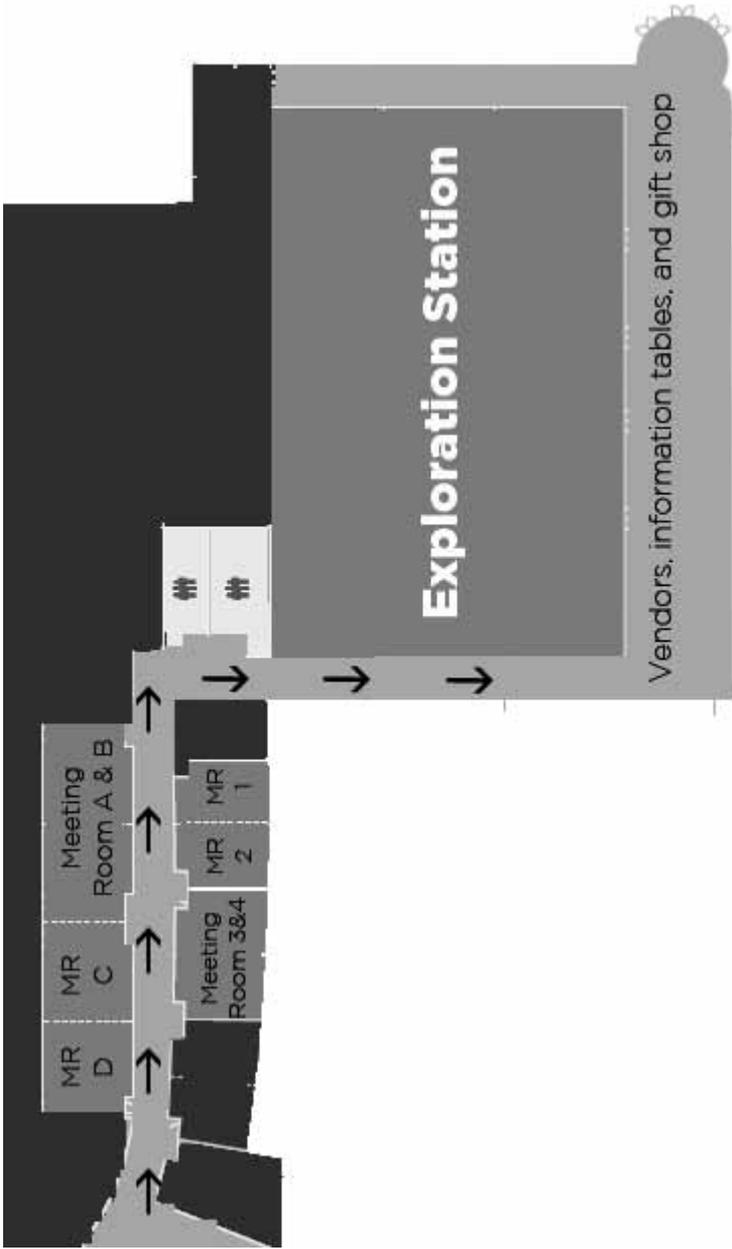
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Venue Map



Cross Center layout

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PROJECT > LOGIN

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Maine Science Festival

Join us March 17th from 4:00-7:30PM

Hands-on activities

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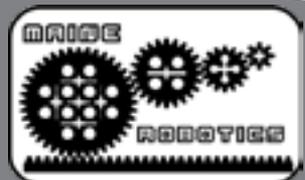
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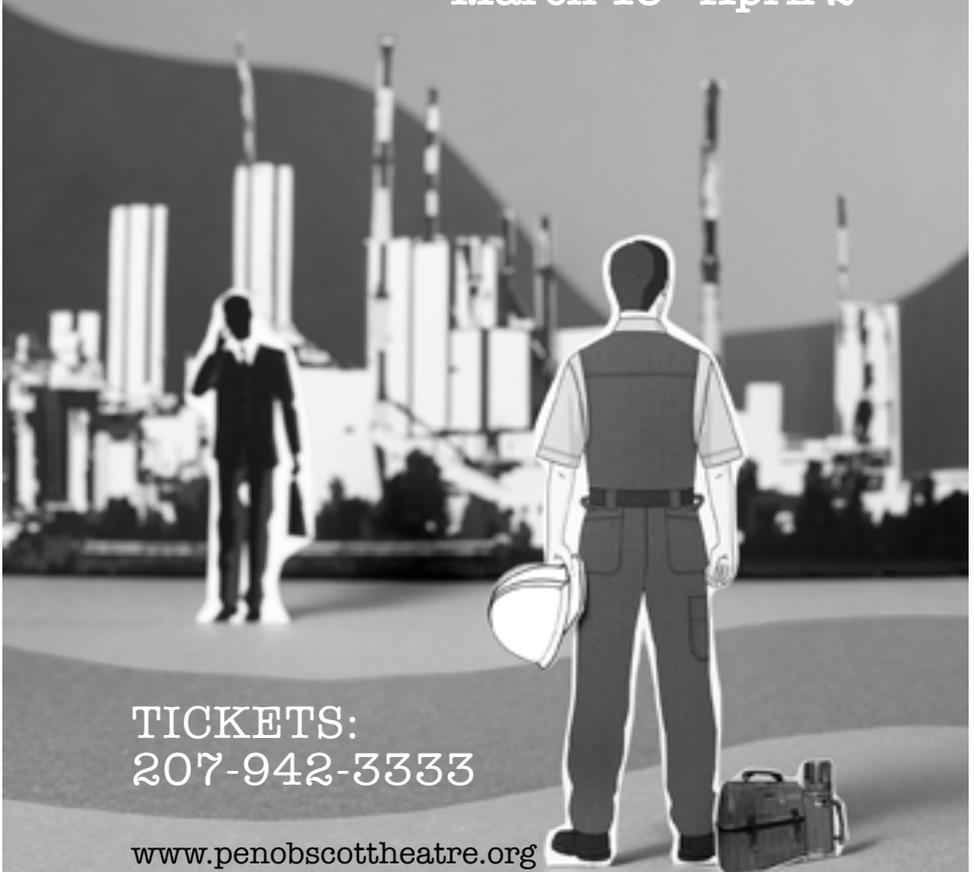
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PRESENTS

PAPERMAKER

by Monica Wood

March 16 - April 2



TICKETS:
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