

SectionID		Section Name	Description	Presenter	CoPresenter
<i>Tuesday PM 1:30-3</i>					
A101	<i>Repeated: B102</i>	Exploring the Human Brain through Zombie Behavior	Have you ever wondered why zombies act the way they do? Join us in exploring how different parts of the human brain influence our abilities and see how zombie brains differ from ours. Come create your own zombie "brain" and investigate how the brain affects your behaviors in a set of mini-experiments.	Naomi Aldrich	
A201	<i>Repeated: E205</i>	Why is an Apple Red and an Orange Orange?	Do you like to play with your food? Come and mash up some fruit and learn the science behind why every living thing is different. Participants will collect the DNA from their favorite fruits and learn how scientists visualize DNA and analyze it.	Matt Christians	
A301		Introduction to Law Enforcement	This course will focus on some of the activities that a law enforcement officer might perform in the course of his or her regular duty shift. We will provide classroom information as well as allow participants to observe some of the special skills, such as physical training, the process of making traffic stops, defensive tactics, criminal investigations and other special unit functions (SWAT and/or K-9). *Participants need to be willing to walk an additional 10 minutes from classroom to observe recruits in training.*	Police Academy	
A401	<i>Repeated: B402</i>	There's Something Fishy Going On: Estimate a Population Size	Have you ever wondered how many fish were in a pond or how many bugs are in your yard? Statisticians wonder the same thing! They discovered a variety of methods to do just that! This session will allow you to try the capture and recapture method to discover different populations.	Neal Rogness	Paul Stephenson
A501		Zen Inspired Garden: Create Your Own Miniature Art Garden	Learn about Japanese Zen (rock) gardens and explore different types and functions of gardens in American and Japanese cultures. Design and create a garden of your own desire using nature-found objects and/or manmade materials to create a miniature art garden in sculpture form.	Hsiao-ping Chen	
A701	<i>Repeated: E705</i>	The Sun at Work	On December 20, 2013, the United Nations General Assembly formally declared 2015 as, "The International Year of Light." To help promote an increased awareness about how light and its single largest source, the Sun, works in our daily lives, we will explore a variety of solar powered devices and learn how they work. Weather permitting, participants will see an engine at work, bake bread, do wood burning, and paint tiles. All with the power from the sun!	Glen Swanson	
<i>Tuesday PM 3:30-5</i>					
B102	<i>Repeated: A101</i>	Exploring the Human Brain through Zombie Behavior	Have you ever wondered why zombies act the way they do? Join us in exploring how different parts of the human brain influence our abilities and see how zombie brains differ from ours. Come create your own zombie "brain" and investigate how the brain affects your behaviors in a set of mini-experiments.	Naomi Aldrich	
B202	<i>Repeated: F206</i>	Hands On Heads Up Astronomy	Learn how to identify key constellations and tell time by the stars using tools you make with paper, tape and scissors.	Douglas Furton	
B302		Sampling of Living and Non Living Factors in an Ecosystem	On GVSU's beautiful campus we will head out into the field and do an ecological survey of the living and non living factors in a given ecosystem. Plant and animal identification, drawings, and interactions will be explored. Emphasis will be on the balance in an ecosystem that provides the overall health of community.	Erin McNally-Goward	

B402	<i>Repeated: A401</i>	There's Something Fishy Going On: Estimate a Population Size	Have you ever wondered how many fish were in a pond or how many bugs are in your yard? Statisticians wonder the same thing! They discovered a variety of methods to do just that! This session will allow you to try the capture and recapture method to discover different populations.	Neal Rogness	Paul Stephenson
B502		Canine Law Enforcement Officers	Throughout time, dogs have been bred and trained to help people in their daily lives. Come to this session to learn how police dogs are trained to help police officers combat crime and keep the public safe from criminal activity. These four-legged crime fighters are often the Officer's best friends!	Ottawa County Sheriff Department	

Wednesday 8:30-10 AM

C103		Spork and Beans!	In this fun and hands-on activity we model how natural selection adapts populations to different environments.	Chris Dobson	Alexandra Evans and Emily Kelly
C203	<i>Repeated: G207</i>	Stop Pete the Polluter	Grand Valley's Mary Idema Pew Library has been nationally recognized as a cutting edge, environmentally friendly building, but the villainous 'Pete the Polluter' and his army of Energy Suckers are trying to wreck this! By solving clues and tracking Pete the Polluter around the library, you can help stop him from destroying the library's eco-friendly features just in the nick of time. Working in teams, participants will learn about the library's unique, eco-friendly features and what it means to be LEED Platinum while helping to save the building from ruin.	Lindy Scripps Hoekstra	
C303		What Do the Forests Provide? Incredibly Wonderful Uses for Forest Plants	Forests would not be replaced by urban areas if their value was widely recognized. Scientists are discovering new ways to use forest plants. These sustainable products which are extracted from forests are new glues, dyes, fiber, and fuel for energy. Come to this session to explore the possibilities!	Alexandra Locher	
CD403-04	Must register for CD403 and CD404.	Hands-on Science on the W.G. Jackson Research Vessel	*Come on a water quality testing excursion on a research vessel. We will explore Muskegon Lake and see Lake Michigan. Be a scientist for the morning as you collect samples and analyze them in the onboard laboratory. Learn about invasive species and how we can protect our lakes. (Register for both sessions CD403 and CD404. You must provide your own transportation to AWRI in Muskegon.)	AWRI Staff	
C603		Free Time	No session. Family free time.	None.	

Wednesday 10:30 AM-12 N

D104	<i>Repeated: G107</i>	Exploring Rocks and Minerals	Do you have a curiosity about rocks and minerals? We'll learn what minerals we consume as part of our daily lives, simulate volcanic eruptions using Mentos, and inspect minerals from the GVSU collection that range from meteorites to Petoskey stones. We will test your ability to make observations and identify minerals and rocks. We will examine stone buildings and boulders on campus and unravel the story they have to tell us about how they formed. Then, take home a rock from the GVSU Rock Pile!	Peter Riemersma	
D204		GVSU Farmers Market and the Sustainability Initiative	Visit the GVSU CSA (Community Supported Agriculture) Garden and learn about the conception of the GVSU Farmers Market and the Community Garden in line with the GVSU Sustainability Initiative. This event will coincide with Kids Day at the GVSU Farmer's Market which includes activities for kids and a kid-friendly lunch. A scavenger hunt through the Farmer's Market will allow opportunities for grandparents and grandchildren to find healthy produce.	Kay Hart	

CD404-03	Must register for CD403 and CD404.	Hands-on Science on the W.G. Jackson Research Vessel	*Come on a water quality testing excursion on a research vessel. We will explore Muskegon Lake and see Lake Michigan. Be a scientist for the morning as you collect samples and analyze them in the onboard laboratory. Learn about invasive species and how we can protect our lakes. (Register for both sessions CD403 and CD404. You must provide your own transportation to AWRI in Muskegon.)	AWRI Staff	
D504		Sounds Great! Let's Learn about Sound!	Sound is an exciting and interesting phenomenon. It gives us much information about the world around us. This session will use hands-on activities to explore how sounds are created and how we hear them, as well as physical ways to describe and characterize sounds.	Richard Vallery	Karen Gipson
D604		Free Time	No session. Family free time.	None.	

Wednesday 1:30-3:00 PM

E105		Making Sense of Our Senses	Inspire your senses in this interactive exploration of the five basic human sensory systems. We will learn how and why grandkids and grandparents sensory systems differ in the stimuli we can detect.	Dan Bergman	
E205	Repeated: A201	Why is an Apple Red and an Orange Orange?	Do you like to play with your food? Come and mash up some fruit and learn the science behind why every living thing is different. Participants will collect the DNA from their favorite fruits and learn how scientists visualize DNA and analyze it.	Matt Christians	
E305		Summertime Snacks	Get your mini-chefs excited about eating healthy and nutritious foods. Learn how to make fun kid friendly snacks, dinner, and desserts that your kids will not only love to make and eat, but are also good for them!	Raymond Kusmack	
E405		Trash Bots	In this session we will look at how robots are being used to study water resources, land use, and climate change. Participants will be given a chance to design and build a simple rover robot using common, readily available materials. These "Trash Bots" will be tested on an obstacle course in a completion created to measure their speed, agility, and durability, as well as determine the skill level of their pilots! (You must provide your own transportation to AWRI in Muskegon.)	John Koches	
E505		Squishy Circuits	You are never too young or too old to learn how circuits work!! Learn how electricity makes everyday objects, like light bulbs, work using specially formulated squishy dough.	Richard Vallery	Karen Gipson
E605		Free Time	No session. Family free time.	None.	
E705	Repeated: A701	The Sun at Work	On December 20, 2013, the United Nations General Assembly formally declared 2015 as, "The International Year of Light." To help promote an increased awareness about how light and its single largest source, the Sun, works in our daily lives, we will explore a variety of solar powered devices and learn how they work. Weather permitting, participants will see an engine at work, bake bread, do wood burning, and paint tiles. All with the power from the sun!	Glen Swanson	

Wednesday 3:30-5:00 PM

F106		Shadow Sculpture	Light transforms 3-D shapes into intricate and fascinating projections. Make an art investigation into the possibilities.	John Golden	
F206	Repeated: B202	Hands On Heads Up Astronomy	Learn how to identify key constellations and tell time by the stars using tools you make with paper, tape and scissors.	Douglas Furton	

F306	<i>Repeated: G307</i>	Family Engineering	Explore the world of engineering through fun, hands-on activities. Learn how engineers are inspired by nature and participate in design challenges that will stretch your creativity and problem solving skills.	Karen Meyers	Kathy Agee
F406	<i>Repeated: G407</i>	Illusion of Light in Art	Artists rely on illusion to create light in drawings and paintings. This event explores how we can imply light and 3D-space where there is none! Learn about the history of light in art while using shadow, perspective and simple tools to make your own illuminated artwork. Learn about the art on campus and how daylight can change art before our eyes.	Stacey Tvedten	
F506		From the Equator to the Poles: How People Live with Light	This event explores how humans across the world adapt to ultraviolet light from the sun through both biology and culture. Participants will use maps comparing skin color and solar radiation. Where in the world is your skin color?	Deana Wiebel	
F606		Free Time	No session. Family free time.	None.	

Thursday 9:00-10:30 AM

G107	<i>Repeated: D104</i>	Exploring Rocks and Minerals	Do you have a curiosity about rocks and minerals? We'll learn what minerals we consume as part of our daily lives, simulate volcanic eruptions using Mentos, and inspect minerals from the GVSU collection that range from meteorites to Petoskey stones. We will test your ability to make observations and identify minerals and rocks. We will examine stone buildings and boulders on campus and unravel the story they have to tell us about how they formed. Then, take home a rock from the GVSU Rock Pile!	Peter Riemersma	
G207	<i>Repeated: C203</i>	Stop Pete the Polluter	Grand Valley's Mary Idema Pew Library has been nationally recognized as an environmentally friendly building, but the villainous 'Pete the Polluter' is trying to wreck this! By solving clues and tracking Pete the Polluter around the library, you can help stop him from destroying the library's eco-friendly features just in the nick of time. Working in teams, participants will learn online search tips to help them solve clues and will be able to check out the new library's features by tracking Pete the Polluter through the building.	Lindy Scripps Hoekstra	
G307	<i>Repeated: F306</i>	Family Engineering	Explore the world of engineering through fun, hands-on activities. Learn how engineers are inspired by nature and participate in design challenges that will stretch your creativity and problem solving skills.	Karen Meyers	Kathy Agee
G407	<i>Repeated: F406</i>	Illusion of Light in Art	Artists rely on illusion to create light in drawings and paintings. This event explores how we can imply light and 3D-space where there is none! Learn about the history of light in art while using shadow, perspective and simple tools to make your own illuminated artwork. Learn about the art on campus and how daylight can change art before our eyes.	Stacey Tvedten	
G507		WGVU Public Media- PBS & NPR: Behind the Scenes Look	Do you ever wonder how your favorite WGVU Radio program gets to your car radio, or how your favorite WGVU TV program magically appears on your television set? Take a behind the scenes tour of WGVU Public Media to learn how this all comes together. See a production control room, edit suite, television and radio studios and a case full of Emmys for outstanding WGVU productions. You may even bump into one of the WGVU TV or Radio personalities during the tour.	Brad Gordon	Amy TerHaar