

Thursday morning, October 6 • Technical Sessions

Room		9:45–10:00	10:00–10:15	10:15–10:30	10:30–10:45	10:45–11:00
Theater (Pond Student Union Bldg.)	I. Volcanology and Geology <i>Chairs: Reuben Ganske & Cooper Brossy</i>	Topography, Geochemistry and Volcanology of ESRP Basaltic Shields Studied as Analogs to Mars Plains-style Volcanoes / <i>Scott Hughes et al.</i>	Basaltic Volcanism and Hydrogeology of the Eastern Snake River Plain, Idaho / <i>Mel Kuntz</i>	How do Continental Flood Basalt Lava Flows Grow? The Importance of the Pahoehoe Inflation Mechanism / <i>Stephen Self</i>	Paleomagnetic Studies of the Basalt Lava Flows of the Eastern Snake River Plain / <i>Duane Champion & Mel Kuntz</i>	Reconstructing a Breached Cinder Cone at Craters of the Moon National Monument: A Geographic Information Systems Approach / <i>Cooper Brossy et al.</i>
		11:00–11:15	11:15–11:30	11:30–11:45	11:45–12:00	12:00–12:15
		Contrasting Petro- genetic Evolution of Contemporaneous Quaternary Rhyolites of the Eastern Snake River Plain and Black- foot Volcanic Field / <i>Michael McCurry & Mark T. Ford</i>	Petrogenesis of Rhyolite and Cogenetic Mafic Magmatic Enclaves at East Butte Volcanic Dome, Eastern Snake River Plain / <i>Reuben Ganske & Michael McCurry</i>	Whither the Big Lost River? Detrital Zircon Constraints on Neogene Drainage on the Snake River Plain / <i>Paul Link</i>	The Influence of Eastern Snake River Plain Stratigraphic and Rift Architecture on Surface-Water and Groundwater Flow / <i>Catherine Helm-Clark</i>	Inside the Great Rift – Deep Inside! A Caver's Perspective / <i>Scott Earl</i>
Salmon River Suite (Pond Student Union Bldg.)	Iia. Snake River Plain Geohydrology and Subsurface Science <i>Chairs: Catherine Helm-Clark & Thomas Wood</i>	9:45–10:00	10:00–10:15	10:15–10:30	10:30–10:45	10:45–11:00
		An Overview of the Idaho National Labora- tory Site Wide Ground Water Model for Operable Unit 10-08 Remedial Investigation and Feasibility Study / <i>Thomas Wood et al.</i>	Overview of the Conceptual Model of Groundwater Flow within the Snake River Plain Aquifer at the INL Groundwater / <i>Brennon Orr et al.</i>	The Stratigraphy of the Snake River Plain Aquifer from Mud Lake to the Great Rift of Idaho at Craters of the Moon / <i>Catherine Helm-Clark & Brennon Orr</i>	Status of Drilling for 2005 for the INL WAG 10 Deep-Corehole Project / <i>Erik Whitmore et al.</i>	Determination of Large-Scale Effective Hydrostratigraphic Units In The Vicinity of the Idaho National Laboratory / <i>Robert Podgorney et al.</i>
		11:00–11:15	11:15–11:30	11:30–11:45	11:45–12:00	
		Interpretation of Water Level Data for the OU 10-08 Model Development / <i>Michael Rohe et al.</i>	Combined Use of Aquifer Temperature Distribution and Chemical/Isotopic Characteristics to Define Groundwater Flowpaths / <i>Travis McLing et al.</i>	Anthropogenic Contaminants as Groundwater Flow Tracers at the Idaho National Laboratory / <i>Michael Roddy</i>	Flow Model Development for the Idaho National Laboratory Operable Unit 10-08 Sitewide Groundwater Model / <i>Hai Huang et al.</i>	

Thursday morning, October 6 • ISTA Workshops

Room	10:00–10:45	11:00–11:45
PS 132	• Make & Take Electromagnetic Toys / <i>Steve Shropshire</i>	
PS 215	• Inquiry-based Lessons to Teach Biology Using Native Plants and Animals / <i>Rosemary J. Smith</i>	
PS 220	• Identifying Rocks and Minerals / <i>Laura Eder</i>	
PS 221	• Integrating Environmental Health into your Existing Curriculum / <i>Chris Corwin</i>	
PS 232	• Visiting the Moon – Without Leaving Idaho / <i>Timothy Gunderson</i>	
Selway	• Understanding Idaho’s Science Achievement Test / <i>Kevin Collins</i>	• Keeping the Focus on Quality Instruction – Teaching Science Better / <i>Kevin Collins</i>
Clearwater	• From the Jelly Lab to Gummy Bears – Teaching Variables and Measurement / <i>Vana Richards</i>	
Bear River	• Dynamic Student Presentations through the Use of Movie-making Software / <i>Michael Wiedenfeld</i>	• NSBRI Space Physiology / <i>Mike Alm</i>

Note: All PS rooms are located in the Physical Science Building. The Selway, Clearwater, and Bear River Rooms are located in the Pond Student Union.

Thursday afternoon, October 6 • Technical Sessions

Room		2:00–2:15	2:15–2:30	2:30–2:45	2:45–3:00	3:00–3:15	
Salmon River Suite (Pond Student Union Bldg.)	IIb. Snake River Plain Geohydrology and Subsurface Science <i>Chairs: Catherine Helm-Clark & Thomas Wood</i>	Modeling Heat Flow in the Snake River Plain Aquifer / <i>Mitchell Plummer et al.</i>	Multi-objective and Multi-scale Modeling Approach for Idaho National Laboratory Operable Unit 10-08 Sitewide Groundwater Model / <i>Swen Magnuson et al.</i>	Response Surface Modeling Activities To Simulate Transport in the Snake River Plain Aquifer at the Idaho National Laboratory / <i>Arthur Rood</i>	Water Quality and Chemical Analysis to Determine the Hydrology Affecting Springs within the Hagerman Fossil Beds National Monument / <i>Brock Dille et al.</i>	Using GIS to Estimate Recharge from Precipitation on Non-irrigated Arid Lands / <i>Bryce Contor</i>	
		3:15–3:30	3:30–4:30				
		BREAK	Discussion – Geology, Volcanology, and Geohydrology of the Eastern Snake River Plain				
		2:00–2:15	2:15–2:30	2:30–2:45	2:45–3:00	3:00–3:15	3:15–3:30
Theater (Pond Student Union Bldg.)	III. Resource Management and Environmental Education <i>Chairs: Mary Tess O'Sullivan & Kimberly Truitt</i>	A Brief History of Science and Science-based Management at Craters of the Moon / <i>John Apel</i>	Landscape Scale Conservation and Science-based Land Management in the Greater Great Rift Region / <i>Mary Tess O'Sullivan et al.</i>	Volcanology Interpretive Training Manual for Craters of the Moon National Monument / <i>Kimberly Truitt</i>	Geologic Resource Inventory Monitoring of Sensitive Volcanic Features, Craters of the Moon National Monument & Preserve / <i>Scott Hughes et al.</i>	Creating Opportunities for Citizen Science and Education in the National Park Service Inventory and Monitoring Program / <i>Tom Rodhouse</i>	BREAK
		3:30–3:45	3:45–4:00	4:00–4:15	4:15–4:30	4:30–4:45	
		Native Waters / <i>Ed Galindo</i>	Initial Results of Risk-focused Monitoring for Ecological Receptors at the Idaho National Laboratory / <i>Robin VanHorn</i>	Employing Unmanned Aerial Vehicles for Monitoring Habitat and Species in Sagebrush-Steppe Ecosystems / <i>Robert Breckenridge</i>	Preliminary Assessment of Radioactive Fossils and Mineralization at Hagerman Fossil Beds National Monument / <i>Neal Farmer</i>	Abandoned Mine Safety Remediation: Closing the Holes while Preserving the Habitat / <i>Christopher Ross</i>	Cave Gates of Idaho / <i>Jim Hathorn</i>

Thursday afternoon, October 6 • ISTA Workshops

Room	2:00–2:45	3:00–3:45	4:00–4:45
PS 126	• Drawing Them in and Making Family Science Nights Successful / <i>Vana Richards</i>		• Dynamic Student Presentations through the Use of Movie-making Software / <i>Michael Wiedenfeld</i>
PS 132	• Waves and Sound Make & Take Activities / <i>Steve Shropshire</i>		
PS 215	• Yellowstone’s Geysers, Earthquakes, and Supervolcanoes – Teaching Strategies / <i>Bob Fuhrmann</i>	• The McDougal Science Toolkit — A Unique Resource / <i>John Black</i>	
PS 220	• A Patchwork of Ideas For The Science Classroom / <i>Marjorie Freeman</i>		
PS 232		• Digital Geology of Idaho: New Web-Based Vehicle to Teach Earth Science Standards / <i>Paul Link</i>	
Selway	• MESSENGER Mission to Mercury for High School and Middle School Science teachers / <i>Virginia Jones</i>	• Success with Tom Lord’s Constructivism in High School Biology / <i>Larry Barnes</i>	• Voyage Through Time Curriculum Modules / <i>Alexa Davis</i>
Clearwater	• The Magic of NSTA / <i>Walter Woolbaugh</i>	• Rock Art Recording Methods and Educational Opportunities / <i>Carolynne Merrell</i>	
Bear River	• Non-Confrontational Evolution / <i>Ralph Peterson</i>	• MESSENGER Mission to Mercury for Elementary and Middle School Teachers / <i>Virginia Jones</i>	• MESSENGER Mission to Mercury for Elementary and Middle School Teachers / <i>Virginia Jones</i>

Thursday Evening Events

- ISTA Awards Ceremony • 6:00–7:15 pm • Wood River Room (Pond Student Union Building)
- Idaho Museum of Natural History Open House • 6:00–7:45 pm
- Steve Shropshire Physics Demo Show • 8:00–9:30 pm • Goranson Hall (Fine Arts Building)

Friday morning, October 7 • Technical Sessions

Room		9:45–10:00	10:00–10:15	10:15–10:30	10:30–10:45	10:45–11:00	
Theater (Pond Student Union Bldg.)	IV. Archeology <i>Chairs: Kaylon McAlister & Mark O'Brien</i>	Archaeological Investigations at 10-BN-1066: A Late Prehistoric Water Catchment Site on the Lava's Edge, Craters of the Moon National Monument & Preserve / <i>Mark O'Brien</i>	Pictographs from the Lava Tube Caves in the Idaho Area of the Great Rift / <i>Carolynne Merrell</i>	Using Geospatial Data to Interpret the Holocene Archaeological Record on the Craters of the Moon National Monument and Preserve / <i>Lael Suzann Henrikson</i>	Seeking the Source: Obsidian XRF Analysis of Projectile Points from the Craters of the Moon National Monument and Preserve / <i>Kaylon McAlister & L. Suzann Henrikson</i>	Traditional Cultural Practices of the Shoshone-Bannock in the Great Rift Region / <i>Lisa Cresswell, et al.</i>	
		11:00–11:15	11:15–11:30	11:30–12:00			
		Geophysical Investigations of Archaeological Resources in Southern Idaho / <i>Brenda Ringe Pace, et al.</i>	Prehistoric Use of Lava Tube Caves in the Cerro Grande Lava Flow: The Eastern Snake River Plain / <i>Julie-anna Rodman</i>	Archeology – Open Discussion			
Salmon River Suite (Pond Student Union Bldg.)	V. Animal Ecology <i>Chairs: Monte Sanford & Brad Lowe</i>	9:45–10:00	10:00–10:15	10:15–10:30	10:30–10:45	10:45–11:00	
		Juniper and Sagebrush Dependent Wildlife Species in South Central Idaho / <i>Peggy Bartels</i>	Burrowing Owls of the Great Rift and Adjacent Snake River Plain: A Growing Conservation Concern / <i>Miriam Austin</i>	Patterns of Pocket Gopher Mound Production in Response to Shrub Removal, Nitrogen Addition, and Drought in Sagebrush Steppe / <i>Richard Inouye</i>	Diversity, Abundance, and Seasonal Phenology of Arthropods on Big Sagebrush / <i>Monte Sanford & Nancy Huntly</i>	The Big Sagebrush (<i>Artemisia tridentata</i>): Home of a Rich Arthropod Fauna / <i>José Ramirez & Nancy Huntly</i>	
		11:00–11:15	11:15–11:30	11:30–11:45	11:45–12:00		
		The Diversity, Abundance, and Trophic Structure of Arthropods on Sagebrush (<i>Artemisia tridentata tridentata</i>) of Craters of the Moon NM and a Nearby Agricultural Region / <i>José Ramirez et al.</i>	Linking Landscape Disturbance to Population Level Variation in Western Rattlesnake Life Histories / <i>Christopher Jenkins</i>	Greater Sage-Grouse Use of Threetip Sagebrush Communities in Idaho's Great Rift Region / <i>Brad Lowe & David J. Delehanty</i>	Animal Ecology – Discussion		

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PS 132	• Make & Take Electromagnetic Toys / <i>Steve Shropshire</i>	
PS 219	• Drawing Them In and Making Family Science Nights Successful / <i>Vana Richards</i>	
PS 220	• Integrating Environmental Health into your Existing Curriculum / <i>Chris Corwin</i>	
PS 221	• The Perfect Crime: A Forensics Simulation for High School Students / <i>Eric Rude</i>	
PS 232	• NASA Educational Resources for Your Classroom using Worldwind and Celestia Exploration Activity / <i>Mick Bowen</i>	
Selway	• REVEL (Research and Education: Volcanoes, Exploration, and Life) Project / <i>Jo Dodds</i>	• MESSENGER Mission to Mercury for High School and Middle School Science Teachers / <i>Virginia Jones</i>
Clearwater	• Mnemonics — Help Students Quickly Memorize Terms so You Can Get On to the Really Important Work / <i>Lee Leroy</i>	• Introduction to Using Craters of the Moon as an Outdoor Classroom / <i>Douglass Owen and Ted Stout</i>
Bear River	• Increase Student Participation with Quizdom Audience Response System / <i>Larry Barnes</i>	

Friday afternoon, October 7 • Technical Sessions

Room		2:00–2:15	2:15–2:30	2:30–2:45	2:45–3:00
Salmon River Suite (Pond Student Union Bldg.)	VI. Plant and Ecosystems Ecology <i>Chairs: Heather Bechtold & Cameron Pedersen</i>	Sagebrush Steppe Vegetation Recovery Following a Wildland Fire on the Upper Snake River Plain / <i>Roger D. Blew, et al.</i>	Relationships of Fire, Soil, Water, and Invasive Forbs in Sagebrush Steppe / <i>Matthew Germino, et al.</i>	Distribution of Soil Nutrients Following Shrub Removal and Nitrogen Addition in Sagebrush Steppe / <i>Heather Bechtold & Richard Inouye</i>	Patterns of Diversity at Multiple Scales in a Fragmented Sagebrush-steppe Landscape / <i>Cameron Pedersen & Nancy J. Huntly</i>
		3:00–3:15	3:15–3:30	3:30–3:45	3:45–4:00
		The Flora of Kipukas of Craters of the Moon National Monument and Preserve / <i>Nancy J. Huntly & Cameron Pedersen</i>	Distribution of Cesium in Soils and Plants of the Eastern Snake River Plain / <i>Lawrence Cook, et al.</i>	Plant and Ecosystems Ecology – Discussion	BREAK
		2:00–2:15	2:15–2:30	2:30–2:45	2:45–3:00
Theater (Pond Student Union Bldg.)	VII. History and Cultural Arts <i>Chairs: Julie Braun & Lennie Ramacher</i>	The First Hundred Years (1830-1930) of Historical Comments Regarding and Geologic Studies of Basaltic Volcanism of the Eastern Snake River Plain, Idaho / <i>Mel Kuntz</i>	The First Exploration of the Great Rift and Craters of the Moon / <i>Clark Heglar</i>	National Geographic and Craters of the Moon / <i>Clark Heglar</i>	Among the Craters of the Moon, The Life of Idaho Explorer Robert W. Limbert / <i>Steve Wursta</i>
		3:00–3:15	3:15–3:30	3:30–3:45	3:45–4:00
		Photography: “Art” Becoming a Baseline for Scientific Inquiry / <i>Clark Heglar</i>	Craters of the Moon Photographic Project / <i>Tim Frazier</i>	Passing Impressions: Human Encounters with a Desolate Landscape / <i>Lennie Ramacher</i>	The Idaho National Laboratory: An Historic World War II Trash Trove / <i>Julie Braun</i>
		4:00–5:00			
	Art and Science: Bridging the Gap <i>Moderator: Stephen Trimble</i>	Panel discussion: <i>Roger Boe, Tim Frazier and Clark Heglar</i>			

Friday afternoon, October 7 • ISTA Workshops

	1:45–2:30	2:45–3:30	3:45–4:30
PS 132	• The Genetics of Addiction / <i>Virginia Jones</i>	• Waves and Sound Make & Take Activities / <i>Steve Shropshire</i>	
PS 220	• BLAST OFF!!! Design, Build and Launch Your Own Rocket / <i>Martha Kelley & Rhetta Anderson</i>		
PS 221	• Keeping the Focus on Quality Instruction: Teaching Science Better / <i>Kevin Collins</i>	• Using Inquiry Activities to Teach Science in the Elementary Classroom / <i>Marv Tolman</i>	• Introduction to Using Craters of the Moon as an Outdoor Classroom / <i>Douglass Owen & Ted Stout</i>
PS 232	• Using the Free Quizstar Website to Write Tests and Assess Students Online / <i>Larry Barnes</i>	• Visiting the Moon – Without Leaving Idaho / <i>Timothy Gunderson</i>	
Selway	• From the Jelly Lab to Gummy Bears – Teaching Variables and Measurement / <i>Vana Richards</i>		• Elementary Science, They Love To Get Their Hands On It! / <i>Joyce Sutter</i>
Clearwater	• Outdoor Science: Using Science to Assess the Environmental Health of a Local Area / <i>Teri Mitton & Jennifer Claypool</i>	• Success with Tom Lord's Constructivism in High School Biology / <i>Larry Barnes</i>	• Understanding Idaho's Science Achievement Test / <i>Kevin Collins</i>
Bear River	• ASSET: Astrobiology Summer Science Experience for Teachers / <i>Jo Dodds & Linda Selvig</i>	• The Magic of NSTA / <i>Walter Woolbaugh</i>	• Science with Handhelds / <i>Jo Dodds</i>

Friday Evening Event

- Stephen Trimble Lecture / Slide Show • 7:30–9:00 pm • Stephens Performing Arts Center