

# Teacher Enhancement Program for K-12 Educators

AT THE COLORADO SCHOOL OF MINES



SUMMER 2013

<http://te.csmspace.com>

# COLORADO SCHOOL OF MINES

## Teacher Enhancement Program

### Summer 2013

#### REGISTRATION

All of the courses announced in this brochure are coordinated through the Office of Special Programs and Continuing Education at the Colorado School of Mines. **Unless another organization or individual is specified as the registration contact in a course listing, enrollment forms and tuition check(s) should be mailed to:**

Teacher Enhancement Program  
Office of Special Programs & Continuing Education  
Colorado School of Mines  
Golden, CO 80401-0028  
(303) 279-3855

**To view the most current course listings or to order an official TE transcript, visit our home page at:**  
**<http://te.csmspace.com>**

**You must pre-register at least 48 hours prior to the start of a workshop (Saturday and Sunday excluded). Do not show up for a class without a confirmed registration from the Teacher Enhancement Office or person/organization taking the registrations. You are likely to be turned away by the instructor. CSM reserves the right to assign audit (non-credit) status with full tuition responsibility to walk-in participants.**

#### TUITION AND REFUND POLICIES

Registration through Teacher Enhancement must be accompanied by full tuition payment by check or credit card authorization. If a course registrant cancels or transfers an enrollment, the tuition amount **minus** a \$25 cancellation/transfer fee will be refunded or applied to another course. Unless otherwise indicated, you must cancel at least 48 hours in advance of a workshop to qualify for a refund (Saturday and Sunday excluded). **Once a class has begun, no full or partial tuition refunds will be granted.** Colorado School of Mines reserves the right to cancel a course (usually one week prior to delivery) if the minimum enrollment is not reached (with full tuition refund to registrants). Colorado School of Mines and the Teacher Enhancement Office will not be liable for any other expenses incurred by registrants.

When paying tuition by check, please make out a **separate** check to "CSM Continuing Education" for **each** course and for **each** participant.

#### ATTENDANCE POLICY

**Course participants are expected to attend each class session in its entirety.** This includes arriving on time and staying until dismissal. Credit will be granted for a course only when the full contact hour requirements have been met. Missed sessions of a course cannot be made up by attending subsequent offerings of the same class or by completing additional assignments. In consideration of the instructor and other course registrants, **DO NOT** bring children of any age to class under any circumstances.

#### TRANSCRIPT AND CREDIT INFORMATION

The Teacher Enhancement Office and Colorado School of Mines cannot be responsible for meeting individual deadlines for credits toward teacher licensure and/or salary increases. Official transcripts for current course work can be printed upon written request approximately two weeks after the instructor submits course grades to the Teacher Enhancement Office. Individual letters of completion are not available. We are unable to give you any information via phone or email on what courses appear on your transcript due to FERPA. Graduate-level semester credit offered for each course is applicable for license renewal in the State of Colorado and is generally accepted elsewhere. The credit is not applicable toward a degree at CSM. Request for Transcript of Record forms can be found at <http://te.csmspace.com>.

**All policies and requirements stated above are program-wide and not at the discretion of individual instructors. Enrollment in any course offered for CSM credit implies your agreement to comply with program policies and requirements.**

*All courses offered in cooperation with the Extended Studies Program of the Colorado Commission on Higher Education*

## Summer 2013 Course Offerings

### COLORADO HISTORY BY TRAIN: DENVER TO GLENWOOD (K-12)

CT-1303-13D  
1 semester credit hour  
Dates: June 1-2  
Location: Denver to Glenwood Springs  
Instructor: Melanie Phelps  
Tuition Fee: \$380 (includes train fare, lodging, tours)

Ride Amtrak from Denver through the historic Moffat Tunnel, Winter Park, Gore Canyon, and into Glenwood Springs. Explore caves and soak in the soothing waters the Ute Indians believed had magical powers. Learn the history of Colorado railroads and how the West was tamed.

**To register or for more information, contact:**

Melanie Phelps, 719/252-1789  
melaniephe@aol.com  
www.coloradorivertrip.com

### RMNA TEACHER INSTITUTE (K-12)

CT-1044-13D  
2 semester credit hours  
Dates: June 3-6  
Time: 8:00am-4:30pm  
Location: Rocky Mtn. Nature Assoc., Estes Park  
Instructors: Jennifer Taylor, Rachel Balduzzi  
Tuition Fee: \$50 (**payable during workshop**)

The RMNA Institute is designed to provide you with a hands-on learning experience while helping you explore the resources available through the RMNA and Rocky Mountain National Park. Develop ways to integrate environmental awareness and stewardship into your curricula. The first credit is paid through a grant from the Next Generation Fund.

**To register or for more information, contact:**

Rachel Balduzzi, Rocky Mtn Nature Assoc.  
970/586-3262, [Rachel.balduzzi@rmna.org](mailto:Rachel.balduzzi@rmna.org)

### PRINCIPLES AND FOUNDATIONS FOR ENVIRONMENTAL EDUCATION ONLINE (K-12)

CT-1216-13M  
2 semester credit hours  
Dates: June 3-August 11  
Instructor: Katie Navin  
Tuition Fee: \$90 (**payable during workshop**)  
Registration Fee: \$125 CAEE members, \$160 non-members

Explore the history and goals of environmental education; develop an understanding of the professional roles and instructional methods of environmental educators; and interact with other educators via distance learning. Become eligible to submit your work for certification in CAEE's certification program for a discount.

**To register or for more information, contact:**

Malinda Mochizuki, CAEE  
303/273-9527, [www.cae.org](http://www.cae.org)

### ITALY REVEALED: EXPLORING THE LAND OF THE ANCIENT ROMANS (K-12)

CT-0805-13D  
5 semester credit hours  
Dates: June 6-18  
Location: Italy  
Instructor: Joyce Webb  
Tuition Fee: \$4,410 (includes airfare, lodging, ground transportation, entry fees)

Travel from Roman temples to medieval churches, and from the ruins of Pompeii to Vatican City's treasure trove. Walk through the Roman Forum and sleep in the city of Siena. Experience Florence, the artistic capital of the world; hike along Le Cinque Terra, the sun-drenched Italian Riviera; marvel at the Leaning Tower of Pisa; and absorb Venice, the most romantic city in the world.

**To register or for more information, contact:**

Joyce Webb, 719/229-5482  
[joycewebb@ymail.com](mailto:joycewebb@ymail.com)  
www.coloradorivertrip.com

### ALASKA: GLACIERS, GOLD, AND GRIZZLIES (K-12)

CT-1304-13D  
6 semester credit hours  
Dates: June 7-21  
Location: Alaska  
Instructor: Melanie Phelps  
Tuition Fee: \$4,850 (includes airfares, lodging, transportation)

Explore Alaska's towering mountains with sparkling deep blue glaciers, fjords, whales, grizzlies, sea lions, and rookeries. Cruise the Inland Passage on the Marine Alaska Highway Ferry. Tour Ketchikan Totem Pole Park, Glacier Bay, Kenai Fjords, Denali, and Lake Clark to see fishing grizzlies. Fee includes flights, ferries, tours, and lodging. Price may vary based upon air and ferry fares.

**To register or for more information, contact:**

Melanie Phelps, 719/252-1789  
melaniephe@aol.com  
www.coloradorivertrip.com

### ECOLOGICAL CATTLE RANCHING (K-12)

CT-0300  
3 semester credit hours  
Dates:  
**Session I:** June 8-15  
**Session II:** July 13-20  
Location: North of Cortez, CO  
Tuition Fee: \$130 (**payable during workshop**)  
Registration Fee: \$1,200 (includes all meals, bunkhouse, horses, tours; **\$250 deposit required**)

Learn how an ecological cattle rancher works to maintain the balance between man and nature. Be an active participant in herding cattle from one area to another to prevent overgrazing. Study desert flora/fauna and wild horse management while riding through the beautiful canyonlands of southwest Colorado.

**To register or for more information, contact:**

Catherine Jones  
970/883-2548 or [cjscolors@frontier.net](mailto:cjscolors@frontier.net)

## **TEACHING COMPASSION AND RESPECT: HUMANE EDUCATION IN THE CLASSROOM**

### **(K-12)**

CT-9157-13D

1 semester credit hour

Dates: June 10-11

Time: 9:00am-5:00pm

Location: Dumb Friends League, Denver

Instructor: Nicole Schimming

Tuition Fee: \$125

Learn easy ways to integrate lessons of kindness, compassion and respect into your current curriculum. Take grade-appropriate curriculum guides and information back to your classroom. Tour behind the scenes of our animal shelter, and learn about our services for pets and people of Colorado.

To register, mail the enrollment form and full tuition amount to the CSM Teacher Enhancement Office.

## **SCIENCE AND ART (K-6)**

CT-0054-13D

2 semester credit hours

Dates: June 10-13

Time: 8:00am-5:00pm

Location: Jeffco Schools, Lakewood

Course Coordinator: Sue Berger

Tuition Fee: \$90 (**payable during workshop**)

Materials & Supplies Fee: \$300 (registration Deadline May 1)

Learn how a science teacher and an art teacher can integrate science and art. Explore scientific background, perform hands-on science and art activities, acquire materials for classroom use, and receive an extensive literature resource list. A strong emphasis will be placed on the National Standards and Assessment. Work with hot air balloons, chromatography, papermaking, polymers and plastics, kaleidoscopes, and more.

### **To obtain an application, contact:**

Sue Berger, 303/674-7386

saberger2011@gmail.com

## **ALL ABOUT MINING: A TOTAL CONCEPT OF THE MINING INDUSTRY (K-12)**

CT-5700-13M

6 semester credit hours

Dates: June 10-July 3

Time: approx. 8:00am-mid-late afternoon (except on all-day field trips)

Location: CSM campus, Golden

Instructors: more than eighty authorities from industry, government, academia & private groups

Tuition Fee: \$250 (\$300 for registrations after May 31)

Obtain a general overview of the minerals industries, including geology, mining, ore-processing, environmental responsibility, career opportunities, etc., from industry experts via classroom lectures and nine days of field trips to surface/underground mines and processing plants. Finish the course with a set of lesson plans developed by course participants that you can apply in your classroom this fall.

### **To register or for more information, contact:**

CMA Education Foundation, Inc.

303/575-9199, colomine@coloradomining.org

www.allaboutmining.org

## **DINOSAUR RIDGE TEACHERS' WORKSHOP (K-12)**

CT-9206-13D

1 semester credit hour

Dates: June 17-18

Time: 8:30am-5:00pm

Location: Dinosaur Ridge Visitors Center, Morrison

Instructors: Pete Modreski, Norb Cygan

Tuition Fee: \$120

Experience an in-depth teacher orientation to the dinosaur bones and tracks found on Dinosaur Ridge near Morrison, and learn how to use them as a resource for teaching. Visit the Trek Through Time Learning Center, the Morrison Natural History Museum, and the Triceratops Trail interpretive site near Fossil Trace in Golden.

To register, mail the enrollment form and full tuition amount to the CSM Teacher Enhancement Office.

## **ASTRONOMY FOR EDUCATORS (K-12)**

CT-1231-13D

1 semester credit hour

Dates: June 17-18

Times:

8:00am-5:00pm and 8:30-10:30pm – day 1

8:00am-5:00pm – day 2

Location: Colorado Mountain Club, Golden

Instructor: Mike Zawaski, 970/302-8043

Tuition Fee: \$50 (**payable during workshop**)

Registration Fee: \$105

Immerse yourself in the study of astronomy and the practice of sky watching with inquiry-based lessons (including Kinesthetic Astronomy) and evening sky watching. Content will include sky motions of the sun, planets, stars, seasons, and phase of the moon. Teaching materials will be provided.

### **To register or for more information, contact:**

Colorado Mountain Center

www.cmc.org/astronomy

## **HANDS-ON SCIENCE ACTIVITIES (GR. 6-9)**

CT-0829-13D

2 semester credit hours

Dates: June 17-20

Time: 8:00am-5:00pm

Location: Jeffco Schools, Lakewood

Course Coordinator: Sue Berger

Tuition Fee: \$90 (**payable during workshop**)

Materials & Supplies Fee: \$300 (registration deadline May 1)

Receive hands-on, discovery-oriented physical science activities that utilize inexpensive items and toys combined with real-world experiences that will enable your students to better understand abstract concepts. Align these activities with state science standards and assessments. Some of the topics covered will include global warming, electricity, wind and solar power, the scientific method, energy, weather, and Newton's Laws.

### **To obtain an application, contact:**

Sue Anne Berger, 303/674-7386

saberger2011@gmail.com

## DIGITAL PHOTOGRAPHY ONLINE (K-12)

CT-0562-13M  
1.5 semester credit hours  
Dates: June 17-July 15  
Location: Online course  
Instructor: John LaFerlita  
Registration Fee: \$200

Learn how to take better photographs and to edit the images using the free online version of Picasa. Topics will include light, composition, nature (landscape and close-ups). This class is for beginners using a PC or a Mac with a DVD player. You will need a basic understanding of computers and the Internet. Instruction is by online videos created specifically for the class.

### To register or for more information, contact:

John LaFerlita, 303/678-0312 or  
laferlit@hotmail.com

## DIGITAL PHOTOGRAPHY AND POWERPOINT ONLINE (K-12)

CT-05120-13M  
1.5 semester credit hours  
Dates: June 17-July 15  
Location: Online course  
Instructor: John LaFerlita  
Registration Fee: \$200

Learn how to take better photographs and transfer them into PowerPoint. Emphasis will be on creating a more visually oriented presentation. This class is for beginners using a PC or a Mac with a DVD player. You will need a basic understanding of computers and the Internet. Instruction is by online videos that have been created specifically for the class.

### To register or for more information, contact:

John LaFerlita, 303/678-0312 or  
laferlit@hotmail.com

## MUSEUMS OF PARIS (K-12)

CT-04132-13D  
4 semester credit hours  
Dates: June 18-26  
Location: Paris, France  
Instructor: Joyce Webb  
Tuition Fee: \$3,670 (includes airfare, lodging, ground transportation, entrance fees)

Visit the Louvre, Orsay, Rodin, and Picasso Museums plus tour Versailles. Climb Notre-Dame, cruise the Seine, zip up the Eiffel Tower, and saunter down the Avenue des Champs Elysees to the Arc de Triomphe. Capture the romance and joie de vivre that Paris exudes.

### To register or for more information, contact:

Joyce Webb, 719/229-5482  
[joycewebb@ymail.com](mailto:joycewebb@ymail.com)  
[www.coloradorivertrip.com](http://www.coloradorivertrip.com)

## WASTEWATER AND RENEWABLE RESOURCES (K-12)

CT-1215-13D  
0.5 semester credit hour  
Date: June 19  
Time: 8:00am-5:00pm  
Location: Metro Wastewater Reclamation District, Denver  
Instructor: Alicia Gilley  
Tuition Fee: no charge (you must pre-register)

Learn the science behind wastewater treatment. Highlight the biosolids management process, including land application of solid materials and the production of electricity. Tour the 52,000 acre METROGRO Farm, the Robert W. Hite Treatment Facility, and a working laboratory.

### To register or for more information, contact:

Kelley Merritt,  
Metro Wastewater Reclamation District  
303/286-3455 or [kmerritt@mwr.dst.co.us](mailto:kmerritt@mwr.dst.co.us)

## GEOLOGIC PRINCIPLES FOR EDUCATORS (GR. 5-12)

CT-1121-13D  
1.5 semester credit hours  
Dates & Locations:  
**Session I:** June 19-21, Dinosaur Ridge, Morrison  
**Session II:** June 24-26, Walking Mtns Science Center, Avon  
Time: 8:00am-5:00pm  
Instructor: Mike Zawaski  
Tuition Fee: \$80 (**payable during workshop**)  
Registration Fee: \$140

The first skill in learning geology is making good observations of rocks. Learn how to determine past environments that existed when different Colorado rocks formed, and why those rocks are now at the tops of mountains. Receive inquiry-based lesson plans and 40+ rocks. For more information, visit <http://observantnaturalist.org/teachers-rock.html>.

### To register or for more information, contact:

Mike Zawaski, 970/302-8043  
[mike@observantnaturalist.org](mailto:mike@observantnaturalist.org)

## ROCKY MOUNTAIN FIELD CAMP (K-12)

CT-1312-13D  
2.5 semester credit hours  
Dates: June 21-26  
Location: starts in Boulder  
Instructors: Davida Buehler, Matt Dawson  
Tuition Fee: \$120 (**payable during camp**)  
Registration Fee: \$550-\$700

Join the Geological Society of America on an adventure to study some of the most spectacular and fascinating geology in the U.S. During our trip around Colorado, collect rocks and minerals, tour a gold mine, participate in a fossil dig, and soak in mineral hot springs. You must be able to hike in high altitudes. More information available at [www.geoventures.org](http://www.geoventures.org).

### To register or for more information, contact:

Davida Buehler, GSA  
303/357-1015 or [dbuehler@geosociety.org](mailto:dbuehler@geosociety.org)

## HIGH COUNTRY EQUESTRIAN ADVENTURE I (K-12)

CT-9667

3 semester credit hours

Dates:

Session I: June 23-28

Session II: July 21-26

Location: San Juan Mtns.

Tuition Fee: \$130 (**payable during workshop**)

Registration Fee: \$900 (includes all meals, group camping equipment, horse expenses, and wranglers; **\$250 deposit required**)

Take a horse pack trip through the beautiful wilderness area of the San Juan Mountains to observe flora and fauna in various altitude zones, incredible geological features, and the ecological impact of human activity in the mountains. Provide your own transportation to and from the trailhead north of Durango. You should be in good physical condition.

**To register or for more information, contact:**

Catherine Entihar Jones

970/883-2548 or [cjscolors@frontier.net](mailto:cjscolors@frontier.net)

## ROCKS AND MINERALS (K-12)

CT-9666-13D

1 semester credit hour

Dates: June 24-25

Time: 8:00am-5:00pm

Location: CSM campus, Golden

Instructors: Pete Modreski, Jane Dianich

Tuition Fee: \$95

Learn or review the basics of rocks and minerals in dynamic and interactive ways in order to engage your students to learn about them. Examine specimens, do activities, and tour the CSM Geology Museum. See complementary field course below.

To register, mail the enrollment form and full tuition amount to the CSM Teacher Enhancement Office.

## WALKING TOUR OF BUILDING STONES IN DENVER (K-12)

CT-04131-13D

0.5 semester credit hour

Date: June 26

Time: 8:30am-5:00pm

Location: Downtown Denver

Instructors: Pete Modreski, Jane Dianich

Tuition Fee: \$75

Learn about rocks and geology as you tour historic Denver buildings in the vicinity of the State Capitol, Denver City and County Building, and the 16<sup>th</sup> Street Mall. Receive a copy of a field guide written specifically for school groups. See the complementary Rocks and Minerals class above.

To register, mail the enrollment form and full tuition amount to the CSM Teacher Enhancement Office.

## CLASSROOM PETS: SMALL MAMMALS IN THE CLASSROOM (K-6)

CT-0915-13D

0.5 semester credit hour

Date: June 26

Time: 9:00am-5:00pm

Location: Dumb Friends League, Denver

Instructor: Nicole Schimming

Tuition Fee: \$70

Does having a pet in your classroom foster learning? Does having a classroom pet teach responsibility? Explore these questions and more. Learn about different species of small mammals, including rabbits, ferrets, guinea pigs, and mice. Meet with some of these small creatures and decide if a classroom pet is right for you and your classroom.

To register, mail the enrollment form and full tuition amount to the CSM Teacher Enhancement Office.

## IRELAND: HAUNTED BY HISTORY AND RICH IN LEGENDS (K-12)

CT-0419-13M

4 semester credit hours

Dates: June 26-July 5

Location: Ireland

Instructor: Joyce Webb

Tuition Fee: \$2,870 (includes airfare, lodging, ground transportation, and tours)

Experience the unpretentious simplicity of Ireland. Tour the southwestern Emerald Isle from castles to peat bogs, and explore the famous Aran Islands, the Burrens, and the Gaelic-speaking Dingle Peninsula. Kiss the Blarney Stone and climb the Rock of Cashel.

**To register or for more information, contact:**

Joyce Webb, 719/229-5482

[joycewebb@ymail.com](mailto:joycewebb@ymail.com)

[www.coloradorivertrip.com](http://www.coloradorivertrip.com)

## THE GRAND CANYON OF THE COLORADO – THE ULTIMATE RIVER EXPEDITION (K-12)

CT-0428-13M

3.5 semester credit hours

Dates: July 4-10

Location: Grand Canyon

Instructor: Melanie Phelps

Tuition Fee: \$2,765

Experience the stunning geology of more than two billion years of earth history as you whitewater raft through some of the world's most famous rapids. Includes 6.5 days on a motorized raft, helicopter airlift to the rim, flight on a twin engine plane, and all food. This is the ultimate river trip.

**To register or for more information, contact:**

Melanie Phelps, 719/252-1789

[melaniephe@aol.com](mailto:melaniephe@aol.com)

[www.coloradorivertrip.com](http://www.coloradorivertrip.com)

## **SCOTLAND: THE HIGHLANDS OF GLADES AND LOCHS (K-12)**

CT-0706-13M  
4 semester credit hours  
Dates: July 5-14  
Location: Scotland  
Instructor: Joyce Webb  
Tuition Fee: \$3,570 (includes airfare, lodging, ground transportation, entry fees)

Journey along mossy mountains, salty isles, and bottomless lochs. Taste haggis, hear bagpipes, and feel the winds of history blowing through the glens. Go time tripping through stone castles, and savor the pristine atmosphere of the Hebrides Islands. Wander with us and scan Loch Ness for legendary monsters.

### **To register or for more information, contact:**

Joyce Webb, 719/229-5482  
[joycewebb@ymail.com](mailto:joycewebb@ymail.com)  
[www.coloradorivertrip.com](http://www.coloradorivertrip.com)

## **EXPLORING THE ECOLOGY OF YOUR LOCAL LANDSCAPE (K-12)**

CT-0841-13M  
1 semester credit hour  
Dates: July 9 & 11  
Time: 8:00am-5:00pm  
Locations: Denver and Centennial  
Instructors: Raylene Owen, JoAnne Scarbeary  
Tuition Fee: \$50 (**payable during workshop**)  
Registration Fee: \$35

Explore the history, science, and civics of water in Colorado through the use of hands-on, inquiry-based lessons. Using a variety of curricula support materials, leave with a heightened awareness of water issues and resources to bring standards-based water education to your students.

### **To register or for more information, contact:**

Casey Davenhill  
Cherry Creek Stewardship Partners  
303/345-1675 or [casey@cherry-creek.org](mailto:casey@cherry-creek.org)

## **SCIENCE NOTEBOOKING NATURALLY (K-6)**

CT-1331-13M  
0.5 semester credit hour  
Date: July 10  
Time: 9:00am-5:00pm  
Location: Parker Library  
Instructor: Laura Arndt  
Tuition: \$90

Create a science notebook model while you investigate a variety of inquiry science topics outdoors and in. Explore how to capture your student's thinking through free writing, guided scientific process writing and data analysis, and drawing. These entries are logical first steps to formal writing and research that support the Common Core.

### **To register or for more information, contact:**

Laura Arndt, Nature Connections  
303/660-6925 or [laura.arndt1@gmail.com](mailto:laura.arndt1@gmail.com)

## **USING FORENSIC SCIENCE TO SOLVE A WILDLIFE CRIME (GR. 6-12)**

CT-0748-13M  
1 semester credit hour  
Dates: July 13 & 20  
Time: 9:00am-5:00pm  
Location: PS Miller Library, Castle Rock  
Instructor: Laura Arndt  
Tuition Fee: \$130

Become an investigator of a wildlife crime with NSTA's forensics CSI curriculum book. Practice eight forensic lab procedures; then piece together clues from the crime reports, interviews, and physical evidence. Finally, identify the victim, suspect, and violated wildlife laws. Course facilitated by the author.

### **To register or for more information, contact:**

Laura Arndt  
303/660-6925 or [laura.arndt1@gmail.com](mailto:laura.arndt1@gmail.com)

## **PARIS TO NORMANDY: WORLD WAR I AND II SITES (K-12)**

CT-0964-13M  
4 semester credit hours  
Dates: July 14-24  
Locations: Belgium & France  
Instructor: Joyce Webb  
Tuition Fee: \$3,970 (includes airfare, lodging, ground transportation, entry fees)

Explore trenches and bunkers used during the German occupation of Belgium's North Coast. Tour the battlefields in Southern Belgium's Flanders Field; then travel to Normandy for an in-depth view of WWII's beaches, cemeteries and other war sites. Continue your journey to Paris for a visit to one of the world's best WWI and II museums. Learn how the German occupation affected Belgium, Paris, and the rest of France.

### **To register or for more information, contact:**

Joyce Webb, 719/229-5482  
[joycewebb@ymail.com](mailto:joycewebb@ymail.com)  
[www.coloradorivertrip.com](http://www.coloradorivertrip.com)

## **MIDDLE/HIGH SCHOOL IPS PHYSICAL SCIENCE (GR. 7-10)**

CT-0786/CT-0845/CT-1039-13M  
2 semester credit hours (each week)  
Dates:  
July 14-19 (chapters 1-6)  
July 21-26 (chapters 7-11)  
July 21-26 (chapters 12-16)  
Time: 8:30am-4:00pm  
Location: CSM Campus, Golden  
Instructor: Bob Stair  
Tuition Fee: \$390 (per week)

Cover 6, 11 or all 16 chapters of the 9<sup>th</sup> edition of the IPS text to enhance your knowledge and classroom performance in physical science. Experience the use of student experiments while developing an understanding of basic concepts and laboratory skills.

### **To obtain an application, contact:**

Bob Stair, SCI  
303/988-5041 or [rstair@sci-ips.com](mailto:rstair@sci-ips.com)

## **YOUR HOME IS YOUR HABITAT (PREK-12)**

CT-0296-13M  
0.5 semester credit hour  
Date: July 16  
Time: 9:00am-5:00pm  
Location: Downtown Aquarium, Denver  
Course Coordinator: Colleen Shipley, 303/561-4565  
Tuition Fee: \$35 (**payable during workshop**)  
Registration Fee: \$75

Take an in-depth look at aquatic and terrestrial habitats while participating in cross-curricular activities that you can take back to your classroom. Take home a curriculum guide that includes background information in each habitat as well as standards-connected activities to use both in your classroom and during future visits.

### **To register or for more information, contact:**

Downtown Aquarium Sales & Service Center  
303/561-4444

## **LOOKING AT PLANTS OF THE PAST (GR. 4-12)**

CT-1330-13M  
2.0 semester credit hours  
Dates & Times:  
July 18-20 (9:00am-9:00pm)  
July 21 (7:00am-7:00pm)  
Locations: CSM campus, Florissant Fossil Beds  
Instructor: Walt Wright  
Tuition Fee: \$90 (**payable during workshop**)  
Registration Fee: \$125 (plus textbook; registration deadline May 30<sup>th</sup>)

Explore wood's wonders, petrification, and identification using microscopic structures. Study samples in the CSM Geology Museum's paleontological collection along with a trip to Florissant Fossil Beds and a Paleozoic fossil forest.

### **To register or for more information, contact:**

Beth Simmons  
303/986-9693 or cloverknoll@comcast.net

## **CAVES, CASTLES, AND COLORFUL CHARACTERS: HISTORY OF GLENWOOD SPRINGS TO MARBLE (K-12)**

CT-1042-13M  
1 semester credit hour  
Dates & Times:  
July 24 (8:00am-5:00pm)  
July 25 (9:00am-5:00pm)  
Locations: Glenwood Springs, Carbondale, Marble  
Instructor: Tonya MacKendrick  
Tuition Fee: \$50 (**payable during workshop**)  
Registration Fee: \$150 (meals, lodging, and transportation on your own)

Experience the rich natural and human history of Glenwood Springs, Carbondale, and Marble. Pass into the underworld for a thrilling tour of the Fairy Caves. Enjoy learning about colorful characters such as Doc Holiday. Take a guided jeep tour to the historic Crystal Mills and Crystal City, learning about the rich mining history of the Marble area.

### **To register or for more information, contact:**

Tonya MacKendrick, 970/216-2326  
[TJS4294@aol.com](mailto:TJS4294@aol.com)  
[www.wcoloradohistoricadventures.weebly.com](http://www.wcoloradohistoricadventures.weebly.com)

## **WASTEWATER AND AQUATIC BIOLOGY (K-12)**

CT-1082-13M  
0.5 semester credit hour  
Date: July 25  
Time: 8:00am-5:00pm  
Location: Metro Wastewater Reclamation District, Denver  
Instructor: Julie Stahl  
Tuition Fee: no charge (you must pre-register)

Obtain an introduction to the science behind wastewater treatment. Learn about industry efforts to preserve, protect, and improve aquatic environments while protecting public health. Tour a wastewater treatment plant, a working water quality laboratory, and the site of an aquatic habitat improvement program.

### **To register or for more information, contact:**

Kelley Merritt  
Metro Wastewater Reclamation District  
303/286-3455 or kmerritt@mwr.dst.co.us

## **HAWAII: VOLCANOES & CORAL REEFS (K-12)**

CT-0906-13M  
4 semester credit hours  
Dates: July 16-25  
Location: Big Island of Hawaii  
Instructor: Melanie Phelps  
Tuition Fee: \$3,370 (includes airfare, ground transportation, lodging, entrance fees)

Explore Hawaii's Big Island – the newest land on earth. Tiptoe across Kilauea's active volcano caldera; step gently through aa and pahoehoe lava flows; and gaze upon molten lava flowing to the sea. Submerge into the shimmering brilliance of coral reef life to conduct biodiversity and environmental impact research.

### **To register or for more information, contact:**

Melanie Phelps, 719/252-1789  
[melaniephe@aol.com](mailto:melaniephe@aol.com)  
[www.coloradorivertrip.com](http://www.coloradorivertrip.com)

## **SILVER, GOLD, AND GHOSTS: HISTORY OF MINING IN THE SAN JUANS (K-12)**

CT-0559-13M  
1 semester credit hour  
Dates & Times:  
July 29 (8:00am-5:00pm)  
July 30 (7:45am-4:00pm)  
Location: Ouray  
Instructor: Tonya MacKendrick  
Tuition Fee: \$50 (**payable during workshop**)  
Registration Fee: \$150 (meals, lodging, and transportation on your own)

Explore the history of silver and gold in the beautiful San Juan Mountains. Walk through old ghost town remains, and enjoy a guided tour through the Mayflower Mill and Old Hundred Gold Mine in Silverton. Finish with a guided jeep tour to the top of Imogene Pass to view historical mining sites along the way.

### **To register or for more information, contact:**

Tonya MacKendrick, 970/216-2326  
[TJS4294@aol.com](mailto:TJS4294@aol.com)  
[www.wcoloradohistoricadventures.weebly.com](http://www.wcoloradohistoricadventures.weebly.com)



## **THE GREEN RIVER – MAJESTIC JOURNEY FROM GLACIERS TO GORGES (K-12)**

CT-0355-13M

5 semester credit hours

Dates: July 29-August 7

Locations: Yellowstone & Grand Teton National Parks, Flaming Gorge, Dinosaur National Monument

Instructor: Melanie Phelps

Tuition Fee: \$1,810

Discover river headwaters, geysers, mud pots, and mountains while exploring Yellowstone and the Grand Tetons National Parks. Follow the Green River from its mother snowfields in the Wind River Range of Wyoming through the beautiful Flaming Gorge and into the sandstone cliffs of Dinosaur National Monument. Whitewater raft and canoe through convoluted canyons, and gaze upon dinosaur bones and Fremont rock art while conducting authentic environmental research.

### **To register or for more information, contact:**

Melanie Phelps, 719/252-1789

[melaniephe@aol.com](mailto:melaniephe@aol.com)

[www.coloradorivertrip.com](http://www.coloradorivertrip.com)

## **AQUARIUMS AND YOUR CLASSROOM (GR. 1-12)**

CT-0259-13M

0.5 semester credit hour

Date: August 8

Time: 9:00am-5:30pm

Location: Downtown Aquarium, Denver

Course Coordinator: Colleen Shipley, 303/561-4565

Tuition Fee: \$35 (**payable during workshop**)

Registration Fee: \$75

Take home a starter classroom aquarium. Practice aquarium set-up, learn maintenance tips, and try out a variety of activities that you and your students can do with your classroom aquarium as well as with our million-gallon version. Receive an interdisciplinary curriculum guide, go on a behind-the-scenes tour, and meet staff to discuss aquarium careers.

### **To register or for more information, contact:**

Downtown Aquarium Sales & Service Center

303/561-4444

## **THE ILLUSTRATED FIELD JOURNAL (K-12)**

CT-9939-13M

1 semester credit hour

Dates: August 10-11

Time: 9:00am-5:00pm

Location: CSM campus, Golden

Instructor: Marty Colon

Tuition Fee: \$125

Learn to blend the approaches of artist, writer, and scientist to create a unique and powerful tool for exploring and learning about the natural world. Focus on skills and strategies for creating the Illustrated Field Journal regardless of artistic or writing experience.

To register, mail the enrollment form and full tuition amount to the CSM Teacher Enhancement Office.

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## **Additional Programs of Interest**

### **SOUTH PLATTE EDUCATION SERIES**

CT-9421; **Natural History of the South Platte**

A natural history series designed to your interests and teaching needs. Choose from a menu of courses which provide hands-on exploration of the wildlife and ecosystems along the S. Platte River. Combine classes on evenings and/or weekends to earn one semester credit hour. Visit our website at [www.sspr.org/nature](http://www.sspr.org/nature) for class descriptions.

Contact Skot Latona, South Suburban Park and Recreation District, at 303/730-1022 x14 or email [skotl@sspr.org](mailto:skotl@sspr.org) for details or to obtain the special tuition flat rate.

### **ROCKY MOUNTAIN FIELD SEMINARS**

Most field seminars are field-based, hands-on learning experiences in Rocky Mountain National Park. A wide range of topics are available. If you have any questions, including information on our refund policy, or would like to talk with a person at the Field Seminar Center, please call (970) 586-3262. Visit our website for a list of courses available for credit, [www.rmna.org](http://www.rmna.org). Many of our seminars fill up, so please register early. We look forward to seeing you in a field seminar this year. RMNA membership discounts are available.

## EcoAdventure Course Offerings

Note: Register for EcoAdventure courses through EcoAdventures. See box on next page.

### EARLY EXPLORERS OF THE ROCKY MOUNTAINS (K-12)

CT-0518-13D

1 semester credit hour

Dates & Times:

June 6 (9:00am-5:00pm)

June 7 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Instructor: Trey Corkern

Tuition Fee: \$140 (**\$160 after May 21<sup>st</sup>**)

Discover the history of soldiers, trappers, priests, and spies in the Rocky Mountains. Use botany, zoology, cartography, journaling, geometry, and celestial navigation to keep up with the likes of Zebulon Pike, Father Escalante, and Kit Carson. Go home with field specimens.

### WILDFLOWERS OF THE ROCKIES (K-12)

CT-9613-13D

1 semester credit hour

Dates & Times:

June 8 (9:00am-5:00pm)

June 9 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$145 (**\$165 after May 21<sup>st</sup>**)

Spend time in the wildflowers as you explore a variety of elevations and identify and discover interesting botanical facts, uses, myths and legends about wildflowers. Experience “botany in a bowl,” a creative activity to help kids understand the basics of botany.

### THE UTE - A NATIVE AMERICAN WAY OF LIFE IN THE ROCKIES (K-12)

CT-95106-13D

1 semester credit hour

Dates & Times:

June 11 (9:00am-5:00pm)

June 12 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$145 (**\$165 after May 23<sup>rd</sup>**)

Discover the history of the people of the shining mountains - Ute. Get a campsite up and running; learn the basics of ancient skills used in everyday life; try your hand at fire building, cooking, sewing, beading, twining, tanning and flint knapping.

### BEAVER ECOLOGY (K-12)

CT-95102-13D

1 semester credit hour

Dates & Times:

June 25 (1:00-9:00pm)

June 26 (2:00-9:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$140 (**\$160 after June 10<sup>th</sup>**)

Explore beaver ecology and learn about their natural history and role in cultural history. Discover activity ideas including the use of mini-experiments to highlight behavior and adaptations, and uncover management issues through a simulation project. Wander in a beaver habitat, and enjoy wildlife observations at an active beaver pond.

### SWEET WITH A STING: THE NATURAL HISTORY OF HONEYBEES (K-12)

CT-0519-13D

1 semester credit hour

Dates & Times:

June 27 (9:00am-5:00pm)

June 28 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$140 (**\$160 after June 10<sup>th</sup>**)

Peer into a glass hive and learn about the natural history of honeybees and their relatives. Examine the life cycle and jobs of a hive bee. Watch field bees in action as they pollinate flowers and do the “waggle dance.” Take a field trip to a bee yard to learn about a beekeeper’s daily activities.

### TAMING THE FRONTIER: COLORADO’S PIONEERS AND HOMESTEADERS (K-12)

CT-1125-13M

1 semester credit hour

Dates & Times:

July 8 (9:00am-5:00pm)

July 9 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Instructor: Trey Corkern

Tuition Fee: \$145 (**\$165 after June 20<sup>th</sup>**)

How did men, women, and children cross an ocean of prairie to build homes and communities? Make sausage, plant heirloom seeds, and make cheese. Learn how to shoe a horse, pack a wagon, and harness draft animals. Visit a working homestead.

### MOOSE IN COLORADO (K-12)

CT-0922-13M

1 semester credit hour

Dates & Times:

July 24 (1:00-9:00pm)

July 25 (7:00am-3:00pm)

Location: near Granby, Rand, Gould

Tuition Fee: \$140 (**\$160 after July 8<sup>th</sup>**)

Go to moose country for a wildlife watching opportunity with fun moose information and viewing equipment. Discover why an animal often described as a “conglomeration of parts” is so well suited to the wetland environments it inhabits. Moose also weave a unique wildlife management story. Camp or stay at a local hotel.

### BEAR ME IN MIND: NATURAL HISTORY OF THE BLACK BEAR (K-12)

CT-9737-13M

1 semester credit hour

Dates & Times:

July 27 (8:00am-5:00pm)

July 28 (2:00pm-8:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$155 (**\$175 after July 8<sup>th</sup>**)

The natural history of the black bear will unfold through hands-on activities and a field trip to a wildlife sanctuary. Discover unique adaptations and behaviors of this large omnivore. Supplement any animal study/ecology curriculum with topics such as habitat, predator/prey relationships, and human/bear relationships.

### **NATIVE AMERICAN GAMES AND TOYS (K-8)**

CT-0104-13M

1 semester credit hour

Dates & Times:

August 1 (9:00am-5:00pm)

August 2 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$155 (**\$175 after July 8<sup>th</sup>**)

Explore the games and toys of various Native American people in this hands-on history class. Discover that many of the toys and games also had other benefits, such as modeling of adult roles and physical conditioning. Make several toys and games to take back to your classroom. Great for indoor recess activities!

### **TEACHING COLORADO MINING HISTORY IN THE CLASSROOM (K-12)**

CT-1171-13M

1 semester credit hour

Dates & Times:

August 3 (9:00am-5:00pm)

August 4 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Instructor: Trey Corkern

Tuition Fee: \$140 (**\$160 after July 8<sup>th</sup>**)

From Spanish gold seekers to Greek coal miners, Colorado's history has centered on mineral wealth. Explore gold, silver, coal, and uranium mining, pan for gold, use a single jack to drill, tour a mining facility, and learn how to bring hands-on activities into your classroom.

### **EXPLORING THE PONDEROSA PINE FOREST (K-12)**

CT-0105-13M

1 semester credit hour

Dates & Times:

August 10 (9:00am-5:00pm)

August 11 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$140 (**\$160 after July 25<sup>th</sup>**)

Discover the ponderosa pine ecosystem as you spend two days immersed in the rich flora and diverse wildlife of the ponderosa pine forest. The porcupine and Albert's squirrel are two residents you will learn about. Explore the natural and cultural history of this massive pine's role in logging and homesteading in Colorado.

### **BACK IN BLACK - RAVENS, CROWS, AND MAGPIES (K-12)**

CT-0463-13F

1 semester credit hour

Dates & Times:

September 7 (12:00-7:00pm)

September 8 (8:00am-4:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$140 (**\$160 after August 22<sup>nd</sup>**)

Ravens, crows, magpies, and jays form the Corvid family. They are intelligent, social, curious, and one of the most adaptable bird species on earth. Their success is noted in cultural folklore and history. Discover the natural and cultural history of these remarkable birds through hands-on activities and outdoor treks.

**To register, mail the CSM enrollment form along with a check payable to EcoAdventures to:**

**Pam Batton**

**EcoAdventures**

**5894 South Meadow Drive**

**Morrison, CO 80465**

**303/697-0327, Fax 303/697-0329**

**[Pamsecoadventures.com](http://Pamsecoadventures.com)**

### **Registration/Cancellation/Refund Policy**

If payments have not been received by the registration deadline (2 ½ weeks before the class), EcoAdventures reserves the right to charge a late registration fee of \$10.00 or delete you from the class and allow a person from the waiting list to take your spot.

If you notify us of a cancellation before the registration deadline, we will refund your tuition less a \$25.00 cancellation fee. If you cancel after the registration deadline, we will refund your tuition less a cancellation fee of \$35.00. If you cancel 48 hours before a class begins, we will refund half of your tuition. If you cancel 24 hours before a class begins or on the day of class or are a no-show to class, no refund will be offered. These fees also apply to class transfers.

## Denver Botanic Gardens Course Offerings

**Note: Register for the DBG courses through the Gardens. See box below.**

### THE GROWING CLASSROOM (K-12)

CT-1221-13D  
0.5 semester credit hour  
Date: June 20  
Time: 8:30am-4:30pm  
Location: Denver Botanic Gardens  
Course Coordinator: Lisa Davis  
Tuition Fee: \$35 (**payable during workshop**)  
Registration Fee: \$50 DBG member, \$55 non-member

Classrooms are often hot, cold, or have little to no natural light – all conditions not suitable for growing plants. With a little know-how, your classroom can be green and lush year round. Learn techniques and tips for successfully growing plants in your classroom, and take home a variety of plants you planted yourself.

### TEACHING PLANTS FROM ROOT TO SEED (GR. 2-12)

CT-0646-13D  
0.5 semester credit hour  
Date: June 25  
Time: 8:30am-4:30pm  
Location: Denver Botanic Gardens  
Instructor: Lisa Davis  
Tuition Fee: \$35 (**payable during workshop**)  
Registration Fee: \$50 DBG member; \$55 non-member

Learn fun and unique ways to teach plant structure and function. Explore what each part of the plant does through hands-on activities that you can transfer easily to your classroom. Cover concepts such as photosynthesis, transpiration, and pollination.

### READING, WRITING & ARITHMETIC IN THE GARDEN (PREK-6)

CT-1220-13M  
0.5 semester credit hour  
Date: July 22  
Time: 8:30am-4:30pm  
Location: Denver Botanic Gardens  
Instructor: Lisa Davis  
Tuition Fee: \$35 (**payable during workshop**)  
Registration Fee: \$50 DBG member; \$55 non-member

Learn how to use your garden or classroom plants to teach a variety of subjects. Get easy-to-implement ideas on how to teach your content area requirements using plants and gardens. Explore a variety of activities that provide hands-on learning opportunities for your students in math, reading, writing, and social studies.

### BUILDING A SCHOOLYARD GARDEN (K-6)

CT-0812-13M  
0.5 semester credit hour  
Date: July 30  
Time: 8:30am-4:30pm  
Location: Denver Botanic Gardens  
Instructor: Lisa Davis  
Tuition Fee: \$35 (**payable during workshop**)  
Registration Fee: \$50 DBG member; \$55 non-member

Learn how to create a simple vegetable garden in your schoolyard (in the ground or in containers) and ways to incorporate the garden into your classroom curriculum. Learn tips on gardening, and discover plants that you can plant in spring or fall and harvest before it gets cold or school ends. Learn how your garden can be incorporated into your reading, writing, math, science, and social studies curriculum.

**To register or for more information, contact:  
Denver Botanic Gardens Registration  
720/865-3580  
[www.catalog.botanicgardens.org](http://www.catalog.botanicgardens.org)**

## Butterfly Pavilion Course Offering

**Note: Register for the Butterfly Pavilion course through the Pavilion. See box below.**

### **INSECT INVESTIGATIONS: SCIENCE NOTEBOOKS AND BUGS IN THE CLASSROOM (K-12)**

CT-0920-13M  
0.5 semester credit hour  
Date: July 9  
Time: 8:00am-5:00pm  
Location: Butterfly Pavilion, Westminster  
Instructor: Sarah Folzenlogen  
Tuition Fee: \$35 (**payable during workshop**)  
Registration Fee: \$45

Explore the amazing world of insects and their relatives as you investigate how inquiry-based learning can enhance discovery in your classroom. Exciting hands-on, take-home activities will show you how to successfully incorporate literacy and science notebooks into your classroom insect investigations.

### **WHO SWALLOWED A FLY? (K-5)**

CT-0532-13M  
0.5 semester credit hour  
Date: July 16  
Time: 8:00am-5:00pm  
Location: Butterfly Pavilion, Westminster  
Instructors: Sarah Folzenlogen, Deborah Brooks  
Tuition Fee: \$35 (**payable during workshop**)  
Registration Fee: \$45

Use a variety of children's literature that focuses on bugs and other invertebrates. Read and play with the language and unique art that make these books memorable. Explore Eric Carle's famous bug stories; find language and art in nature with the Butterfly Alphabet; and bring home lesson plans and ideas that integrate visual and language arts.

### **SECRETS OF THE RAINFOREST: FROM MORPHOS TO MALACHITES (K-5)**

CT-1108-13M  
0.5 semester credit hour  
Date: July 23  
Time: 8:00am-5:00pm  
Location: Butterfly Pavilion, Westminster  
Instructor: Debbie Brooks  
Tuition Fee: \$35 (**payable during workshop**)  
Registration Fee: \$45

Experience the Pavilion's tropical rainforest like never before. Discover the role butterflies and other invertebrates play in the diverse and disappearing rainforest ecosystem. Explore unique relationships between the forest and the animals that live there through a variety of hands-on, interdisciplinary activities that will serve as a great addition to any classroom life science unit.

### **ART AND SCIENCE SERIES (GR. 5-12)**

CT-0921  
0.5 semester credit hour  
Location: Butterfly Pavilion, Westminster  
Instructor: Deborah Brooks  
Course Coordinator: Marissa Copan, 720/974-1877  
Tuition Fee: \$35 (**payable during each workshop**)

### **GOURD BASKETS AND POLLINATORS/PAPERMAKING**

Date: July 18  
Time: 8:00am-5:00pm  
Registration Fee: \$45

Hardshell gourds are a popular crafter's medium, but what role do insects play? Learn more about pollinators as you transform a hardshell gourd into a lovely art object. According to French lore, paper was invented after a nobleman observed paper wasps creating their own hive. Learn a simple method of recycling paper to create handmade paper for stationery, scrapbooking, and cards.

### **BATIK & INSECTS/ DREAMCATCHERS AND SPIDERS**

Date: July 30  
Time: 8:00am-5:00pm  
Registration Fee: \$45

Discover the roles of insects used in an ancient form of fabric decoration: batik. Find out how bees make wax, how silk moths are used to create silk, and how scale insects can be turned into a spectacular scarlet dye. Then create a one-of-a-kind batik scarf. Explore the importance of arachnids in nature as well as in Native American culture. Discover the myth behind the dreamcatcher in Native American tales as you weave your own dreamcatcher.

**To register or for more information contact:  
Butterfly Pavilion Adult Education  
720/974-1877 or [mcopan@butterflies.org](mailto:mcopan@butterflies.org)**

## Project WILD - Project Learning Tree - Project WET

Projects WILD and Learning Tree are supplemental, interdisciplinary environmental education programs emphasizing wildlife, forest and water resources, and our interdependence with the natural world. Using hands-on activities that create awareness, appreciation, understanding, skills and commitment, you and your students learn to address environmental issues within the framework of your existing curriculum. You will receive activity guides, posters, prizes, and other supplemental materials.

All Project WILD and Learning Tree PreK-12 activities have been correlated to the Colorado Model Content Standards for Science, Math, Geography, History, Reading and Writing. Spanish translations of activities are available for Project Learning Tree and Project WILD. New PLT materials are available for integrated middle and high school curricula.

Following is a list of upcoming workshops. **Pre-register by calling the person listed and sending in the non-refundable registration fee at least 7 days prior to the first day of the workshop (unless otherwise noted). Tuition will be due on the first day of the workshop. Please register through the person listed, not through the Colorado School of Mines.** Workshops may be cancelled one week before the start date if minimum enrollment numbers have not been met. Other dates may have been added; call for updated workshop listings.

### BASIC PROJECT LEARNING TREE (K-8)

CT-0822-13D  
0.5 semester credit hour  
Date: June 5  
Time: 8:30am-4:30pm  
Location: Denver Botanic Gardens  
Tuition Fee: \$35 (**payable during workshop**)  
Registration Fee: \$30

Receive award winning and relevant grade activity guides. Learn how to apply them to classroom STEM, Common Core, and 21<sup>st</sup> century objectives. Participate in interdisciplinary, inquiry, and collaborative lessons that engage students in critical thinking about environmental and science topics that challenge us all.

**To register or for more information, contact:**  
Shawna Crocker  
303/278-8822 or [www.coloradoplnt.org](http://www.coloradoplnt.org)

### PROJECT LEARNING TREE – IN THE TREES (K-12)

CT-1329  
0.5 semester credit hour  
**Workshop I:**  
Date: June 8  
Time: 8:30am-4:30pm  
Location: Carson Nature Center, Littleton  
**Workshop II:**  
Date: August 6  
Time: 8:30am-4:30pm  
Location: Prospect Park, Wheat Ridge  
Registration Fee: \$60  
Tuition Fee: \$35 (**payable during workshop**)

Learn opportunities that build critical thinking skills, incorporate technology, and use differentiated instruction. We'll focus on those that teach about trees (biology, ecology, and even physics) as you try out a new person adventure sport – tree climbing, with ropes and saddles.

**To register or for more information, contact:**  
Shawna Crocker  
303/278-8822 or [www.coloradoplnt.org](http://www.coloradoplnt.org)

### FIRE ECOLOGY INSTITUTE FOR EDUCATORS (GR. 4-12)

CT-0720-13D  
2.5 semester credit hours  
Dates: 8am, June 24 through 3pm, June 28  
Location: The Nature Place, Florissant  
Tuition Fee: \$120 (**payable during institute**)  
Registration Fee: \$50 (includes meals, lodging & materials; other fees paid by a National Fire Plan Grant)

Explore and receive fire activities, kits, trunks, experiments, videos, cds, posters, and more. Experience field and research-based activities while learning about fire, insects, and drought from fire and natural resource professionals. Visit and study fire sites and mitigation efforts, and conduct inquiry experiments.

**To register or for more information, contact:**  
Shawna Crocker  
303/278-8822, [www.coloradoplnt.org](http://www.coloradoplnt.org)

### PROJECT WET: FORESTS TO FAUCETS (AURORA'S WATER RESOURCES) (K-12)

CT-0668-13D  
1.5 semester credit hours  
Dates: June 25-27  
Time: 9:00am-5:00pm  
Location: The Morrison Nature Center, Aurora  
Tuition Fee: \$80 (**payable during workshop**)  
Registration Fee: \$50 (checks returned upon successful course completion)

Learn where your drinking water comes from. Explore our mountain watersheds, conduct water quality studies, tour a xeriscape garden, and visit a drinking water treatment plant. Receive Project Learning Tree and WET curriculum guides and access to Aurora Water's innovative educational opportunities.

**To register or for more information, contact:**  
Natalie Brower-Kirton, 720/427-6029  
[nbrower@auroragov.org](mailto:nbrower@auroragov.org)

### ENVIRONMENTAL EXPERIENCES FOR EARLY CHILDHOOD (PREK-K)

CT-1208-13M  
0.5 semester credit  
**Workshop I:**  
Date: July 1  
Time: 8:30am-4:30pm  
Location: Denver Botanic Gardens  
Registration Fee: \$40 DBG members, \$45 non-members  
**Registration Contact:** Denver Botanic Gardens, 720/865-3580  
**Workshop II:**  
Date: July 25  
Time: 8:00am-5:00pm  
Location: Butterfly Pavilion, Westminster  
Registration Fee: \$35

**Registration Contact:** Marissa Copan, 720/974-1877  
Tuition Fee: \$35 (**payable during workshop**)

## AQUATIC PROJECT WILD (K-12)

CT-9684-13M  
0.5 semester credit hour

### Workshop I:

Date: July 10  
Time: 8:00am-5:00pm  
Location: Butterfly Pavilion, Westminster  
Registration Fee: \$45

**Registration Contact:** Butterfly Pavilion, 720/974-1877 or [mcopan@butterflies.org](mailto:mcopan@butterflies.org)

### Workshop II:

Date: July 18  
Time: 9:00am-5:00pm  
Location: Downtown Aquarium, Denver  
Registration Fee: \$25  
**Registration Contact:** Downtown Aquarium, 303/561-4444

Tuition Fee: \$35 (**payable during workshop**)

## PROJECT LEARNING TREE AND COMMON CORE (K-8)

CT-1333-13M  
0.5 semester credit hour  
Date: July 23  
Time: 9:30am-5:00pm  
Location: Castlewood Canyon State Park, Franktown  
Registration Fee: \$35 (plus \$7 for Park admission)  
Tuition Fee: \$35 (**payable during workshop**)

Project Learning Tree activities are now correlated to the Common Core. Explore interactive reading, writing, and math activities that are now grounded in engaging environmental concepts and issues. Spend part of the day on canyon trails, and leave with a book and personalized plans that you can use immediately.

### To register or for more information, contact:

Laura Arndt  
303/660-6925 or [laura.arndt1@gmail.com](mailto:laura.arndt1@gmail.com)

## PROJECT LEARNING TREE – FOCUS ON FIRE (GR. 1-12)

CT-03108-13M  
1 semester credit hour  
Dates: July 26-27  
Times: 8:30am-4:30pm  
Location: Starsmore Discovery Center, Colorado Springs  
Registration Fee: \$30  
Tuition Fee: \$50 (**payable during workshop**)

Using PLT activities and others from the National fire Lab, learn how to integrate fire science, literature, math, and social studies into your curriculum. Study fire suppression, mitigation, ecology, erosion while learning from experts. Take home dvds, posters, books, activities, and ideas to teach students about living in the Red Zone.

### To register or for more information, contact:

Shawna Crocker  
303/278-8822 or [www.coloradoplt.org](http://www.coloradoplt.org)

## GET TO KNOW YOUR H2O-PROJECT WET (K-12)

CT-0499-13M  
1 semester credit hour  
Dates: July 30-31  
Time: 8:30am-4:30pm  
Location: Izaak Walton Club House, Longmont  
Registration Fee: \$0 (you must pre-register by 7/15/13)  
Tuition Fee: \$50 (**payable during workshop**)

Learn where your water comes from, how to measure dissolved oxygen and other water quality parameters, where to find aquatic insects, and more. Cover water conservation, storm water pollution prevention, and service learning opportunities.

### To register or for more information, contact:

Steve Noud  
303/413-7386 [nouds@bouldercolorado.gov](mailto:nouds@bouldercolorado.gov)

## PROJECT WET (K-12)

CT-9629-13M  
0.5 semester credit hour  
Date: August 7  
Time: 9:00am-5:00pm  
Location: Downtown Aquarium, Denver  
Tuition Fee \$35 (**payable during workshop**)  
Registration Fee: \$35

Project WET is a collection of innovative and water-related K-12 activities that are interdisciplinary, hands-on, and easy to use. Focus on large and small group learning and laboratory investigations.

### To register or for more information, contact:

Downtown Aquarium Sales & Service Center  
303/561-4444

## BASIC PROJECT WILD (K-12)

CT-9598-13M  
0.5 semester credit hour  
Date: August 26  
Time: 8:00am-5:00pm  
Location: Butterfly Pavilion, Westminster  
Tuition Fee: \$35 (**payable during workshop**)  
Registration Fee: \$45

From the tiny mosquito to the giant squid, wildlife and humans are integrally connected. Learn how to introduce Project WILD concepts and activities into your curricula while aligning your lessons with state standards.

### For more information or to register, contact:

The Butterfly Pavilion  
720/974-1877, [mcopan@butterflies.org](mailto:mcopan@butterflies.org)

## GROWING UP WILD! - EARLY CHILDHOOD PROJECT WILD (PREK-K)

CT-0974-13F  
0.5 semester credit hour  
Date: September 21  
Time: 8:00am-5:00pm  
Location: Butterfly Pavilion, Westminster  
Tuition Fee: \$35 (**payable during workshop**)  
Registration Fee: \$45

Explore the early childhood curriculum from Project WILD that builds on children's sense of wonder about nature and invites them to explore wildlife and the world around them.

### To register or for more information, contact:

Marissa Copan, Butterfly Pavilion  
720/974-1877, [mcopan@butterflies.org](mailto:mcopan@butterflies.org)

### For updated information:

Project WILD, 303/291-7165  
Project Learning Tree, 303/278-8822  
[www.coloradoplt.org](http://www.coloradoplt.org)  
[www.wildlife.state.co.us/Education](http://www.wildlife.state.co.us/Education)

## Summer 2013 Canoe Trips

**Note: Register for canoe trips through Centennial Canoe Outfitters. See box below.**

### **GEOLOGY, ECOLOGY, AND ART OF THE GREEN RIVER BY CANOE, LEVELS I & II (K-12)**

CT-1209-13M

3 semester credit hours

Dates & Times:

Lecture: July 22 (9:00am-5:00pm)

Canoe Trip: July 24-28

Locations: The lecture will be held at CSM, Golden. The trip will begin and end in Moab, UT.

Instructors: Ed Adams, Karen Caddis

Tuition Fee: \$748 (**\$100 deposit required upon enrollment**)

Join a geologist and biologist to explore 60 miles of wilderness along Utah's peaceful Green River as it winds through the red-rock formations just north of Canyonlands National Park. The course will emphasize the unique geology and natural history of the area as we investigate its riparian ecosystem and the surrounding desert to learn how human, plant, and animal life has adapted. Study how people and the passage of time have changed the region. Create art and poetry, learn how to gather and prepare plants for food and utilitarian uses, and consider how the night sky has influenced various cultures.

**Centennial Canoe Outfitters will supply all canoes, group equipment, meals, and canoeing instruction prior to the trip. You are responsible for your transportation to the river and back. No previous canoeing experience is required.**

### **Level II Courses**

**Former participants in Level I classes can qualify for Level II credit by completing a special project to be conducted concurrently with the basic class offering.**

### **ASTRONOMY IN THE WILDERNESS/COLORADO RIVER, LEVELS I & II (K-12)**

CT-0262-13M

2 semester credit hours

Dates & Times:

Lecture: August 1 (1:00-8:30pm)

Canoe Trip: August 3-5

Locations: The lecture will be held at Fiske Planetarium, Boulder. The trip will begin and end near Grand Junction, CO.

Instructor: Sanlyn Buxner

Tuition Fee: \$469 (**\$100 deposit required upon enrollment**)

Get away from the city lights and view spectacular sights of the heavens along the Colorado River as you canoe through canyons of the Colorado Plateau. Learn about basic properties of stars and stellar evolution, constellations, properties of light, basic optics, deep sky objects, solar system dynamics, and new topics in astronomy. Course includes fun ways to teach astronomy in the classroom.

**To register, mail the CSM enrollment form along with the \$100 deposit (made payable to Centennial Canoe Outfitters) to:**

**Centennial Canoe Outfitters**

**P.O. Box 3365**

**Centennial, CO 80161-3365**

**720/283-0553 or toll-free 1/877/353-1850**

**E-mail: [info@centennialcanoe.com](mailto:info@centennialcanoe.com)**

**Register online: [www.centennialcanoe.com](http://www.centennialcanoe.com)**



## Fall 2013 Course Preview

### **THE SCIENCE OF WILDERNESS SURVIVAL (K-12)**

CT-1334-13F

1 semester credit hour

Dates: October 5-6

Time: 9:00am-5:00pm

Location: Calwood Outdoor Ed. Center, Jamestown

Instructor: Marty Colon

Tuition Fee: \$50 (**payable during workshop**)

Registration Fee: \$145

Learn a framework for understanding any kind of outdoor survival situation, as well as the science, skills, and “secrets” that will keep you alive – particularly in Colorado’s mountain environments, where conditions can change from benign to deadly in minutes..

**To register or for more information, contact:**

Mary Colon

303/447-1188, marcol1@earthlink.net

## Course Enrollment Form

**Please Print**

Full Name: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Social Security Number\*: \_\_\_\_\_ Date of Birth: \_\_\_\_\_  
 Telephone: (school) \_\_\_\_\_ (home) \_\_\_\_\_  
 School: \_\_\_\_\_ Grade Level: \_\_\_\_\_  
 Email: \_\_\_\_\_

**When CSM is the registration contact, I prefer to receive a confirmation letter by:**

**E-mail:** \_\_\_\_\_

**Fax; fax number:** ( ) \_\_\_\_\_

**oMail**

**\*required if taking course for credit**

Are you Hispanic/Latino? Yes/No

Select one or more:

\_\_\_\_\_ American Indian or Alaska Native

\_\_\_\_\_ Native Hawaiian or Other Pacific Islander

\_\_\_\_\_ Asian

\_\_\_\_\_ White

\_\_\_\_\_ Black or African American

### Indicate the course(s) for which you are registering

Course #	Course Title	Course Dates	Tuition
CT- _____	_____	_____	_____
CT- _____	_____	_____	_____
CT- _____	_____	_____	_____
CT- _____	_____	_____	_____
CT- _____	_____	_____	_____

**Total:** \_\_\_\_\_

*Please follow carefully the specific registration instructions which accompany each course listing in this catalog. When the Teacher Enhancement Program is the registration contact fill out the enrollment form and mail along with the tuition amount to the Colorado School of Mines Teacher Enhancement Program. Please send a separate check for each course, and for each participant. Do NOT mail this form to us unless we are listed as the registration contact!*

**Make checks payable to CSM Office of Continuing Education.**

**Mail check(s) and application form (unless otherwise noted in course listing) to:**

CSM Teacher Enhancement Program  
 1600 Jackson St., Ste. 160A  
 Golden, CO 80401  
 Phone: (303) 279-3855  
<http://te.csmspace.com>