

Teacher Enhancement Program for K-12 Educators

AT THE COLORADO SCHOOL OF MINES



SUMMER 2010

COLORADO SCHOOL OF MINES

Teacher Enhancement Program

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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 checks/credit card information should be mailed or faxed to:**

Teacher Enhancement Program
Office of Special Programs & Continuing Education
Colorado School of Mines
Golden, CO 80401-0028
(303) 273-3314 FAX
(303) 273-3303 or (800) 446-9488, Ext. 3303

Visit our home page at:
<http://te.csmospace.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. 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.csmospace.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 2010 Course Offerings

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

CT-0706-10D
4 semester credit hours
Dates: June 4-12
Location: Scottish Highlands
Instructor: Joyce Webb
Tuition Fee: \$2,500 plus airfare

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 Isle of Skye. Wander with us along the back lanes of Edinburgh, and scan Loch Ness for legendary monsters.

To register or for more information, contact:

Melanie Phelps, 719/440-7180
melaniephe@aol.com
www.coloradorivertrip.com

TEACHING RENEWABLE ENERGY IN THE CLASSROOM (GR. 3-8)

CT-0727-10D
2 semester credit hours
Dates: June 7-11
Time: 8:00am-4:00pm
Location: CSM campus, Golden
Instructor: Rick Shin
Tuition Fee: \$220

Investigate wind power, solar power, geothermal power, hydrogen power, energy efficiency, electricity, and general renewable energy education. Build and take home demonstration materials. Many of the ideas and activities can be modified for lower grade levels. Presented by the National Renewable Energy Laboratory.

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

NEW ENGINEERING AND APPLIED TECHNOLOGY (K-12)

CT-0162-10D
2 semester credit hours
Dates: June 7-11
Time: 9:00am-5:00pm
Location: CSM campus, Golden
Instructor: John Steele
Tuition Fee: \$90 (sponsored by the Mikkelson Foundation)

Learn about robots and how to apply them in your classroom as a tool for teaching STEM-related curricula. Receive your own Lego NXT robot kit and learn how to construct, program, and apply these exciting and productive tools. Develop a curriculum unit you can use in your classroom. Information and insights into the engineering discipline and profession are included.

To register or for more information, contact:

John Steele, 303/273-3663 or
jsteele@mines.edu

ROCKS AND MINERALS (K-12)

CT-9666-10D
1 semester credit hour
Dates: June 7-8
Time: 8:00am-5:00pm
Location: CSM campus, Golden
Instructors: Pete Modreski, Jane Dianich
Tuition Fee: \$90

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 3 complimentary field courses below.

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

MEXICO: MAYAN MYSTERIES AND CORAL ECOLOGY (K-12)

CT-0705-10D
4 semester credit hours
Dates: June 8-16
Location: Yucatan Peninsula, Mexico
Instructor: Melanie Phelps
Tuition Fee: \$1,820 plus airfare

Stand in awe at the power and demise of the Mayan culture, then slip beneath the crystal Caribbean seas as you snorkel or dive the Mexican coral reefs. Explore the mysteries, culture, and ecology of the Yucatan Peninsula, Mexico.

To register or for more information, contact:

Melanie Phelps, 719/440-7180
melaniephe@aol.com
www.coloradorivertrip.com

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

CT-04131-10D
0.5 semester credit hour
Date: June 9
Time: 8:00am-4:30pm
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 16th Street Mall. Receive a copy of a field guide written specifically for school groups. See the complimentary Rocks and Minerals class above.

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

TEACHING ENVIRONMENTAL ISSUES IN THE CLASSROOM (K-12)

CT-0858-10D
0.5 semester credit hour
Date: June 10
Time: 9:00am-5:00pm
Location: CAEE, Golden
Instructor: Katie Navin
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$30

Explore how to investigate and evaluate environmental issues with your students. Model a variety of effective strategies you can use to assist students in exploring and seeking responsible courses of action toward the resolution of environmental issues. Learn how to effectively teach about environmental issues and start to develop your own classroom plans and outlines.

To register or for more information, contact:

Kaytee Duskin, CAEE
303/273-9527 or outreach@caee.org

WALKING TOUR OF ROCKS ON THE CSM CAMPUS (K-12)

CT-1032-10D
0.5 semester credit hour
Date: June 10
Time: 8:00am-5:00pm
Location: CSM Campus, Golden
Instructors: Pete Modreski, Jane Dianich
Tuition Fee: \$75

Examine buildings and sculptures as well as natural rock exposures on and around the CSM campus in Golden. Examples of igneous, metamorphic, and sedimentary rocks (both natural and polished) make a good site for a school field trip. See the complimentary Rocks and Minerals class above.

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

GEOLOGIC TOUR OF NORTH TABLE MOUNTAIN (K-12)

CT-1033-10D
0.5 semester credit hour
Date: June 11
Time: 8:00am-5:00pm
Location: meet on the CSM Campus, Golden
Instructor: Pete Modreski
Tuition Fee: \$65

The lava-capped Table Mountains are a classic site to see igneous and sedimentary rocks, foothill ecosystems, and how a landscape has developed since the beginning of the Tertiary Period. You will hike approximately 4 miles round trip (some rough terrain) up to the top and across the mountain. See the complimentary Rocks and Minerals class above.

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

ECOLOGICAL CATTLE RANCHING (K-12)

CT-0300-10D
3 semester credit hours
Dates: June 12-19
Location: Dove Creek
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 canyons of southwest Colorado.

To register or for more information, contact:

Catherine Entihar
970/883-2548 or cjscolors@frontier.net

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

CT-0805-10D
5 semester credit hours
Dates: June 12-23
Location: Italy
Instructor: Joyce Webb
Tuition Fee: \$2,985 plus airfare

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:

Melanie Phelps, 719/440-7180
melaniephe@aol.com
www.coloradorivertrip.com

TEACHING COMPASSION AND RESPECT: HUMANE EDUCATION IN THE CLASSROOM (K-12)

CT-9157-10D
1 semester credit hour
Dates: June 15-16
Time: 8:30am-4:30pm
Location: Dumb Friends League, Denver
Instructor: Nicole Schimming
Tuition Fee: \$120

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.

DANCING WITH THE STARS... (GR. 1-7)

CT-0934-10D
1 semester credit hour
Dates: June 15-16
Time: 8:00am-4:00pm
Location: Steele Planetarium, Denver
Instructor: Ralph Sodano
Tuition Fee: \$130

...and rumba with the Earth and moon. Cover standards and content areas of the stars, sun, Earth, and moon. Obtain lots of insightful and hands-on activities that can be brought back into your classroom. Course will be supported by programs under the Steele Planetarium dome.

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

DINOSAUR RIDGE TEACHERS' WORKSHOP (K-12)

CT-9206-10D
1 semester credit hour
Dates: June 15-16
Time: 8:30am-5:00pm
Location: Dinosaur Ridge Visitors Center, Morrison
Instructors: Pete Modreski, Norb Cygan
Tuition Fee: \$115

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. There will be separate break-out sessions for activities keyed to primary and secondary grades, and visits to the new 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.

DO YOU KNOW YOUR 3 R's? RADIATION, RADIOACTIVITY & RADON (GR. 7- 12)

CT-9898-10D
1 semester credit hour
Dates: June 15-17
Location: CSM Campus, Golden
Time: 8:00am-4:30pm
Instructors: Peg Roding, Bob Beckman
Course Coordinator: Jim Proud, 303/273-3621
Tuition Fee: \$50

This module is an integrated science curriculum that addresses the **physical sciences**--what is radiation and radioactivity; the **earth sciences**--what earth materials are radioactive; and the **biological sciences**--what effect does radon gas have upon human health. Receive a curriculum notebook with background information and classroom activities and a kit of materials to teach Units 2 and 3 of the curriculum. Resource kits, which contain all the necessary materials to teach Unit 1, will be available on a "loan" basis for use in the classroom.

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

INTRODUCTION TO CLIMATE CHANGE ONLINE (GR. 6-12)

CT-0762-10M
2 semester credit hours
Dates: June 18- August 1
Instructors: Sandra Henderson, Dennis Ward
Tuition Fee: \$90 (**payable during workshop**)
Registration Fee: \$225

This facilitated online course is designed to guide you through the basics of climate science, integrating content, classroom activities, and community-building discussions to help you understand the answers to common questions about climate variability and change. Offered by the National Center for Atmospheric Research, <http://ecourses.ncar.ucar.edu>.

To register or for more information, contact:

Dennis Ward, 303/497-2599
dward@ucar.edu

EARTH SYSTEM SCIENCE: A CLIMATE CHANGE PERSPECTIVE ONLINE (GR. 6-12)

CT-0773-10M
2 semester credit hours
Dates: June 18-August 8
Instructors: Sandra Henderson, Dennis Ward
Tuition Fee: \$90 (**payable during workshop**)
Registration Fee: \$225

This facilitated online course is designed to guide you through the basics of understanding Earth as a system, integrating content, classroom activities, and community-building discussions to help you understand the answers to common questions about Earth system functions as related to climate change. Offered by the National Center for Atmospheric Research, <http://ecourses.ncar.ucar.edu>.

To register or for more information, contact:

Dennis Ward, 303/497-2599
dward@ucar.edu

UNDERSTANDING CLIMATE CHANGE TODAY ONLINE (GR. 6-12)

CT-0860-10M
2 semester credit hours
Dates: June 18- August 8
Instructors: Sandra Henderson, Dennis Ward
Tuition Fee: \$90 (**payable during workshop**)
Registration Fee: \$225

This facilitated online course is designed to guide you through the basics of understanding the impacts of climate change, integrating content, classroom activities, and community-building discussions to help you understand the answers to common questions about what the implications of climate change are today. Offered by the National Center for Atmospheric Research, <http://ecourses.ncar.ucar.edu>.

To register or for more information, contact:

Dennis Ward, 303/497-2599
dward@ucar.edu

GATES OF LODORE AND BROWNS PARK RIVER TRIP (K-12)

CT-1004-10D

5 semester credit hours

Dates: June 20-29

Location: Flaming Gorge Reservoir

Instructor: Melanie Phelps

Tuition Fee: \$2,000

Explore the wilds of the west along the beautiful Green River. Delve into the geology of the Uintah Mountains, explore petroglyphs and dinosaurs of Vernal, and canoe past river otters, moose, and birds of Brown's Park Wildlife Reserve. White-water-raft for 5 days through one of the most spectacular canyons of the west – the Gates of Lodore.

To register or for more information, contact:

Melanie Phelps, 719/440-7180

melaniephe@aol.com

www.coloradorivertrip.com

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

CT-0829-10D

2 semester credit hours

Dates: June 21-25

Time: 8:00am-5:00pm

Location: WarrenTech North, Arvada

Course Coordinator: Sue Berger

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

Materials & Supplies Fee: \$300 (must register/pay by May 10, 2010)

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

sberger@mines.edu

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

CT-5700-10M

6 semester credit hours

Dates: June 21-July 16

Time: 7:30am-early afternoon (except on all-day field trips)

Location: CSM campus, Golden

Instructors: Seventy-five authorities from industry, government, academia & private groups

Course Coordinator: Dan Witkowsky, 303/972-1814, DanielWitkowsky@aol.com

Tuition Fee: \$200

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, FAX 303/575-9194

<http://www.allaboutmining.org>

BLACK CANYON OF THE GUNNISON: SECRET GEM OF THE WEST (K-12)

CT-0557-10D

1 semester credit hour

Dates & Times:

June 22 (8:00am-5:00pm)

June 23 (7:30am-3:30pm)

Locations: Montrose to Delta

Instructor: Tonya Stites

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

Registration Fee: \$80 (meals, lodging, and transportation on your own)

Trace the importance of the Gunnison River as it carved the spectacular views and canyons of the Black Canyon of the Gunnison. Explore the living history of Fort Uncompahgre, followed by a breathtaking guided boat ride at Curecanti National Park on Morrow Point Dam. Class includes a 1 1/2 mile round trip hike and over 200 steps.

To register or for more information, contact:

Tonya Stites, 970/835-4155

TJS4294@aol.com

www.wcolohistoricadventures.web.officelive.com

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

CT-0964-10M

4 semester credit hours

Dates: June 23-July 3

Locations: Belgium & France

Instructor: Joyce Webb

Tuition Fee: \$2,450 plus airfare

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:

Melanie Phelps, 719/440-7180

melaniephe@aol.com

www.coloradorivertrip.com

OCEAN LITERACY (PREK-12)

CT-0710-10D

0.5 semester credit hour

Date: June 24

Time: 9:00am-5:00pm

Location: Downtown Aquarium, Denver

Course Coordinators: Alyce Todd, 303/561-4638 or

Colleen Shipley, 303/561-4565

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

Registration Fee: \$75

Even though Colorado is not near an ocean, we are tied to it in many ways. Ocean literacy is an understanding of the ocean's influence on you, and your influence on the ocean. Learn the 7 essential principles of ocean literacy through interactive lessons and visiting the Aquarium residents.

To register or for more information, contact:

Downtown Aquarium Sales & Service Center
303/561-4444

HIGH COUNTRY EQUESTRIAN ADVENTURE I (K-12)

CT-9667-10M

3 semester credit hours

Dates:

Session I: June 27-July 2

Session II: July 11-16

Session III: July 25-30

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 J. Entihar
970/883-2548 or cjscolors@frontier.net

DIGITAL PHOTOGRAPHY ONLINE (K-12)

CT-0562-10M

1.5 semester credit hours

Dates: June 28-July 19

Location: Online course

Instructor: John LaFerlita

Registration Fee: \$200

Learn how to take better photographs and to manipulate the images using the online version of Adobe Photoshop Elements. Topics will include light, composition, nature (landscape, close-ups, and wildlife), and flash. This class is for beginners using a PC or a Mac with a DVD player. You will need a basic understanding of computers, the Internet, and email attachments. Instruction is by 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-05120-10M

1.5 semester credit hours

Dates: June 28-July 19

Location: Online course

Instructor: John LaFerlita

Registration Fee: \$200

Learn how to take better photographs and transfer them into PowerPoint. You will need a basic understanding of computers, the Internet, and email attachments. This class is for beginners using a PC or a Mac with a DVD player. Instruction is by 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

ADOBE PHOTOSHOP ELEMENTS ONLINE (K-12)

CT-0737-10M

1.5 semester credit hours

Dates: June 28-July 19

Location: Online course

Instructor: John LaFerlita

Registration Fee: \$200

Learn to edit photographs and create slide shows that you can use in the classroom with the online version of Adobe Photoshop Elements. This class is for beginners using a PC or a Mac with a DVD player. You will need a basic understanding of computers, the Internet, and email attachments. Instruction is by 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

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

CT-0428-10M

3.5 semester credit hours

Dates: July 1-7

Location: Cliff Dweller's Lodge, AZ

Instructor: Melanie Phelps

Tuition Fee: \$2,890

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, 719/440-7180
melaniephe@aol.com
www.coloradorivertrip.com

MUSEUMS OF PARIS (K-12)

CT-04132-10M

4 semester credit hours

Dates: July 3-11

Location: Paris, France

Instructor: Joyce Webb

Tuition Fee: \$2,100 plus airfare

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:

Melanie Phelps, 719/440-7180
melaniephe@aol.com
www.coloradorivertrip.com

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

CT-1042-10M
1 semester credit hour
Dates & Times:
July 8 (8:00am-5:00pm)
July 9 (8:00am-4:00pm)
Locations: Glenwood Springs to Marble
Instructor: Tonya Stites
Tuition Fee: \$50 (**payable during workshop**)
Registration Fee: \$145 (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 Stites, 970/835-4155
TJS4294@aol.com
www.wcolohistoricadventures.web.officelive.com

CYCLES: PAST AND PRESENT (GR. 4-8)

CT-0949-10M
0.5 semester credit hour
Date: July 8
Time: 8:00am-4:30pm
Location: Plains Conservation Center, Aurora
Instructors: Barb Hamman, Kathy McClintock
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$70 (Register for this workshop and the one below for \$120)

Cycles can occur over a variety of time periods – from a few years to millennia. Experience change over time; see how dung beetle populations alter with the reintroduction of bison at the Plains Center’s West Bijou site; and examine a world famous exposure of the K-T boundary, and learn about the extinction of the dinosaurs and how mammals survived and flourished.

To register or for more information, contact:
Kathy McClintock, Plains Conservation Center
303/693-3621 or kmclintock@plainscenter.org

CONNECTING CHILDREN WITH NATURE (K-8)

CT-0948-10M
0.5 semester credit hour
Date: July 9
Time: 8:00am-4:30pm
Location: Plains Conservation Center, Aurora
Instructors: Karin Hostetter
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$70 (Register for this workshop and the one above for \$120)

Richard Louv’s book *Last Child in the Woods* propelled the “No Child Left Inside” movement. Understand the history of the movement and its relationship to education. Discover how to get students outside academically and physically while designing lessons to get your students outside on your school grounds.

To register or for more information, contact:
Kathy McClintock, Plains Conservation Center
303/693-3621 or kmclintock@plainscenter.org

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

CT-0841-10M
1 semester credit hour
Dates: July 13 & 15
Time: 8:00am-6:00pm
Locations: Aurora and Franktown
Instructor: Raylene Owen
Registration Fee: \$35

The Cherry Creek Stewardship Partners present hands-on, place-based workshops to encourage stewardship in the Cherry Creek watershed. Get a unique civics lesson while exploring varied aspects of ecology and environmental education. Obtain insight into the relationships among health, safety, and management of urban and rural open spaces.

To register or for more information, contact:
Cherry Creek Stewardship Partners
303/345-1675 or casey@cherry-creek.org

PEARL OF AFRICA – UGANDA (K-12)

CT-1007-10M
6 semester credit hours
Dates: July 13-27
Location: Uganda, Africa
Instructors: Joyce Webb, Melanie Phelps
Tuition Fee: \$3,720 plus airfare

Visit Africa’s Great Rift Valley while tracking mountain gorillas and rhinos. View elephants, lions, zebras, and a plethora of birds and other African animals in their natural habitat. Trip includes a boat ride and rafting trip on the Nile plus a visit to a pygmy village.

To register or for more information, contact:
Melanie Phelps, 719/440-7180
melaniephe@aol.com
www.coloradorivertrip.com

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

CT-0559-10M
1 semester credit hour
Dates & Times:
July 19 (8:00am-5:00pm)
July 20 (7:45am-3:30pm)
Location: Ouray
Instructor: Tonya Stites
Tuition Fee: \$50 (**payable during workshop**)
Registration Fee: \$145 (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 Stites, 970/835-4155, TJS4294@aol.com
www.wcolohistoricadventures.web.officelive.com

AQUARIUMS AND YOUR CLASSROOM (GR. 1-12)

CT-0259-10M
0.5 semester credit hour
Date: July 22
Time: 9:00am-5:00pm
Location: Downtown Aquarium, Denver
Course Coordinators: Colleen Shipley, 303/561-4565 or Alyce Todd, 303/561-4638
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

FORCE, MOTION AND ENERGY (GR. 7-10)

CT-0509-10M
2 semester credit hours
Dates: July 25-30
Times: 8:30am-4:00pm
Location: CSM campus, Golden
Instructor: Bob Stair
Tuition Fee: \$300

Cover all seven chapters of the Force, Motion, and Energy curriculum encompassing: 1) force and pressure in equilibrium, 2) motion of objects and waves, and 3) thermal, potential and kinetic energy. Perform 17 experiments. For each experiment you will discuss rationale for inclusion, teaching strategies, and the questions students pose.

To obtain an application, contact:

Bob Stair, Science Curriculum Inc.
303/988-5041 or rstair@sci-ips.com

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

CT-0786/CT-0845/CT-1039-10M
2 semester credit hours (each week)
Dates:
July 25-30 (chapters 1-5)
August 1-6 (chapters 6-10)
August 1-6 (chapters 11-16)
Time: 8:30am-4:00pm
Location: CSM campus, Golden
Instructors: Graden Kirksey, Peter Gendel, Bob Stair
Tuition Fee: \$300 (each week)

Cover parts of the new IPS text (9th edition) 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. The use of software in student experimentation and the evaluation of student work will be discussed.

To obtain an application, contact:

Bob Stair, Science Curriculum Inc.
303/988-5041 or rstair@sci-ips.com

LEARNING WITH LIGHT (GR. 9-12)

CT-1047-10M
1.5 semester credit hours
Dates: July 26-28
Time: 8:30am-4:30pm
Location: CSM campus, Golden
Instructors: Tom Furtak, Erin Furtak
Tuition Fee: \$150 (Sponsored by the National Science Foundation)

Collaborate to develop lesson plans for reform-based classroom activities motivated by everyday examples of optical devices and visual effects. Receive a kit of materials for classroom activities, and learn about waves and light while performing experiments. More information at: <http://physics.mines.edu/light>.

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

EXPLORE GERMANY'S MOSEL AND RHINE VALLEYS (K-12)

CT-1008-10M
3.5 semester credit hours
Dates: July 28-August 5
Location: Germany
Instructors: Joyce Webb, Melanie Phelps
Tuition Fee: \$2,240 plus airfare

Experience two of the most beautiful river valleys of Europe while exploring ancient Roman ruins and medieval castles by bike. This is storybook Germany, a fairy-tale world of legends and robber-baron castles. Trip includes side bike trips to romantic Rothenburg and The Baths of Caracalla in Black Forest's Baden-Baden.

To register or for more information, contact:

Melanie Phelps, 719/440-7180
melaniephe@aol.com
www.coloradorivertrip.com

EXPLORE ENVIRONMENTAL LITERACY (K-12)

CT-1043-10M
0.5 semester credit hour
Date: August 10
Time: 9:00am-5:00pm
Location: CAEE, Golden
Instructor: Katie Navin
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$30

Receive an introduction to the national environmental education guidelines for K-12 learning through a series of hands-on activities. Learn how these benchmarks can be used to develop an integrated curriculum aligned with new Colorado State Standards. Receive a copy of *Excellence in Environmental Education: Guidelines for Learning*.

To register or for more information, contact:

Kaytee Duskin, CAEE
303/273-9527 or outreach@caee.org

Additional Programs of Interest

SOUTH PLATTE EDUCATION SERIES

CT-9421; Build-Your-Own Natural History of Colorado

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 for class descriptions.

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

Denver Museum of Nature & Science Course Offerings

Note: Register for DMNS courses through the Museum. See the box below.

SIMPLY SCIENCE (PREK-1)

CT-1025-10D
1.5 semester credit hours
Dates: June 1-3
Time: 8:00am-4:30pm
Location: Denver Museum of Nature & Science
Instructor: Kate Geer
Tuition Fee: \$95 (Generous support provided by Delta Dental)

Build your science content knowledge while learning how to incorporate more science into your classroom. This is a science course designed specifically for teachers of young children.

GENETICS OF TASTE: A FLAVOR FOR HEALTH INSTITUTE (GR. 6-12)

CT-0927-10M
1 semester credit hour
Dates: July 13-14
Time: 8:00am-4:30pm
Instructor: Kate Geer
Location: Denver Museum of Nature & Science
Registration Fee: \$45 (Funded by a Science Education Partnership Award from NIH)

Examine the current genetic research on taste and how it relates to human health. Centered on the community health lab in *Expedition Health*, you will have the opportunity to participate in real research while learning about genetics, nutrition, and the health triad (how genetics, choices and environment affect the body's systems). You will receive a \$200 stipend for attending both days of the workshop.

**To register for any DMNS course, contact:
DMNS Reservations, 303/370-6000.**

**For more information on a specific course,
contact the instructor, Kate Geer, 303/370-6441.**

EcoAdventure Course Offerings

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

EARLY EXPLORERS OF THE ROCKY MOUNTAINS (K-12)

CT-0518-10D

1 semester credit hour

Dates & Times:

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

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

Location: EcoAdventures, Morrison

Instructor: Trey Corkern

Tuition Fee: \$130 (**\$140 after May 24th**)

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-9613-10D

1 semester credit hour

Dates & Times:

Session I:

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

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

Session II:

June 26 (9:00am-5:00pm)

June 27 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$135 (**\$145 after May 24th /June 10th**)

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.

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

CT-0519-10D

1 semester credit hour

Dates & Times:

June 22 (9:00am-5:00pm)

June 23 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$130 (**\$140 after June 7th**)

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.

NATIVE AMERICAN GAMES AND TOYS (K-8)

CT-0104-10D

1 semester credit hour

Dates & Times:

June 29 (9:00am-5:00pm)

June 30 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$145 (**\$155 after June 14th**)

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!

BEAVER ECOLOGY (K-12)

CT-95102-10M

1 semester credit hour

Dates & Times:

July 20 (1:00-9:00pm)

July 21 (2:00-9:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$125 (**\$135 after July 5th**)

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.

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

CT-95106-10M

1 semester credit hour

Dates & Times:

July 24 (9:00am-5:00pm)

July 25 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$135 (**\$145 after July 5th**)

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.

MOOSE IN COLORADO (K-12)

CT-0922-10M

1 semester credit hour

Dates & Times:

July 27 (1:00-9:00pm)

July 28 (7:00am-3:00pm)

Location: near Granby

Tuition Fee: \$130 (**\$140 after July 12th**)

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-9737-10M

1 semester credit hour

Dates & Times:

August 28 (8:00am-5:00pm)

August 29 (9:00am-3:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$140 (**\$150 after August 12th**)

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.

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

CT-0463-10F

1 semester credit hour

Dates & Times:

September 11 (12:00-7:00pm)

September 12 (8:00am-4:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$125 (**\$135 after August 26th**)

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.

ELK BUGLING (K-12)

CT-95105-10F

1 semester credit hour

Dates: September 25-26

Time: 12:00pm-7:30pm

Location: EcoAdventures, Morrison

Tuition Fee: \$130 (**\$140 after Sept. 9th**)

Observe and listen to the bull elk bugling during the mating season. Explore adaptations, behavior, and human/elk interactions through activities and observation. By the end of class, you'll be thinking like an elk and understand the important ecological role of this large herbivore.

FEASTS OF FALL (K-12)

CT-0756-10F

1 semester credit hour

Dates & Times:

October 2 (10:00am-6:00pm)

October 3 (9:00am-4:00pm)

Location: EcoAdventures, Morrison

Tuition Fee: \$135 (**\$145 after Sept. 16th**)

Taste a "true" Thanksgiving feast when you cook over an open fire using historic foods and methods of the Plymouth Colonists and the Wampanoag Natives. Bust the myths of the first Thanksgiving, visit a living history museum, and explore the natural history of the wild turkey, Canada goose, corn, beans, pumpkin, squash and gourds.

JUST BUTTING HEADS? BIGHORN SHEEP & MOUNTAIN GOATS (K-12)

CT-0757-10F

1 semester credit hour

Dates & Times:

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

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

Location: CSM campus, Golden

Tuition Fee: \$125 (**\$135 after October 21st**)

Discover why head butting is common among bighorn sheep and rare (but serious) among mountain goats. Learn about unique adaptations for survival in a rugged habitat. Hike into bighorn country as the mating season begins to observe their behavior. Learn why the mountain goat truly is a beast the color of winter.

PUTTING THE COLOR BACK INTO COLORADO – A HISTORY OF MINORITIES IN THE ROCKIES (K-12)

CT-0122-10F

1 semester credit hour

Dates & Times:

November 13 (9:00am-5:00pm)

November 14 (9:00am-4:00pm)

Location: CSM campus, Golden

Instructor: Trey Corkern

Tuition Fee: \$130 (**\$140 after October 28th**)

Examine the other histories that made Colorado: female doctors, African businessmen, Mexican buffalo hunters, Shoshone trappers, geriatric labor leaders, and Comanche traders. Make butter, throw a lariat, and try your hand at tin-smithing.

WILD ABOUT WILDLIFE CRAFTS & LITERATURE (K-6)

CT-9860-10F

1 semester credit hour

Dates & Times:

December 4 (9:00am-5:00pm)

December 5 (9:00am-4:00pm)

Location: CSM campus, Golden

Tuition Fee: \$125 (**\$135 after Nov. 18th**)

Discover some of Colorado's wildlife through crafts, activities, children's literature, and short field trips. Create a craft for each of these species and learn their natural history: cottontail rabbit, Canada goose, red-tailed hawk, porcupine, deer mouse, grasshopper, and spider. Bring a favorite wildlife craft to share.

To register for any EcoAdventures course, 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

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 Zoo Course Offerings

Note: Register for Denver Zoo courses through the Zoo. See box on the next page.

DISCOVER DESERTS (PREK-12)

CT-0942-10D
0.5 semester credit hour
Date: June 14
Time: 8:00am-4:00pm
Location: Denver Zoo
Instructor: Sarah Brenkert, Sarah Secor
Tuition Fee: \$90 (includes breakfast, snacks, & curriculum resource CD)

Discover the diversity of plant and animal life that call the desert home. Look at different types of desert biomes and meet animals with some incredible adaptations for survival in these extreme environments. Experience live animal demonstrations, guided tour of the zoo, and a wealth of hands-on activities to bring the drama of desert survival back to your classroom.

ANIMALS AND ART (PREK-12)

CT-1035-10D
1 semester credit hour
Dates: June 17-18
Time: 8:00am-4:00pm
Location: Denver Zoo
Instructors: Sarah Brenkert, Molly Maloy
Tuition Fee: \$ 150 (includes breakfast, snacks, materials, & curriculum resource CD)

See the animal world through new eyes as you explore shape, contour, and composition as they relate to portrayals of wildlife and nature. Learn art techniques that will bring animals to life; and add depth to your science and literacy units with 3-D stabile construction, torn paper collage, photography, and batik. No art experience necessary.

LIONS, WOLVES, AND BEARS (PREK-12)

CT-0939-10D
1 semester credit hour
Dates: June 21-22
Time: 8:00am-4:00pm
Location: Denver Zoo
Instructors: Sarah Brenkert, Marley Steele-Inama
Tuition Fee: \$140 (includes breakfast, snacks, & curriculum resource CD)

Discover what makes bears, felines, and canines such unique and impressive mammals. Through guided tours of the zoo, live animal demonstrations, expert talks, and hands-on activities, you'll be top of the food chain when it comes to understanding Order Carnivora and the world of tooth and claw.

LEARNING ABOUT LIFECYCLES (PREK-12)

CT-0937-10D
1 semester credit hour
Dates: June 24-25
Time: 8:00am-4:00pm
Location: Denver Zoo
Instructors: Sarah Brenkert, Sarah Metzger
Tuition Fee: \$140 (includes breakfast, snacks, & curriculum resource CD)

Discover the amazing ways animals survive, reproduce, and care for their young. Learn the lifecycles and family structures of mammals, birds, reptiles, amphibians, and insects. Explore each animal group in depth while taking time to tour the zoo and meet animal visitors. Receive classroom-ready activities and new insight to share the wonder of animal diversity with your students.

OCEANS ALIVE (PREK-12)

CT-0941-10D
0.5 semester credit hour
Date: June 30
Time: 8:00am-4:00pm
Location: Denver Zoo
Instructors: Sarah Brenkert, Karie Phillips
Tuition Fee: \$90 (includes breakfast, snacks, & curriculum resource CD)

From the ocean floor to the coral reef, discover the beauty and extraordinary biodiversity of our seas. Through guided tours, animal ambassadors, and hands-on activities, learn how to make conservation connections in your classroom that help fulfill the new Colorado Model Content Standards.

DISCOVERING POLAR ECOSYSTEMS (PREK-12)

CT-0832-10M
1 semester credit hour
Dates: July 8-9
Time: 8:00am-4:00pm
Location: Denver Zoo
Instructors: Sarah Brenkert, Rachel Anderson
Tuition Fee: \$140 (includes breakfast, snacks, & curriculum resource CD)

Learn how polar animals survive through unique physical and behavioral adaptations, and further your knowledge of polar biodiversity, factors impacting climate change, and our Colorado connections to polar ecosystems. Tour the zoo, meet live animals, and learn from experts.

CONSCIOUSNESS AND COGNITION: EXPLORING ANIMAL INTELLIGENCE (PREK-12)

CT-1003-10M
1 semester credit hour
Dates: July 12-13
Time: 8:00am-4:00pm
Location: Denver Zoo
Instructors: Sarah Brenkert, Rachel Anderson
Tuition Fee: \$140 (includes breakfast, snacks, & curriculum resource CD)

Go inside the animal mind to explore the fascinating question of animal intelligence. Can animals apply insight to problem solving? Do they reflect on the past and worry about the future? This workshop uses Zoo tours, live animal demonstrations, and the latest in scientific research to explore the intriguing subjects of animal memory, emotion, language, and self-awareness.

WORLD EXPEDITIONS I: NORTH & SOUTH AMERICA, ANTARCTICA (PREK-12)

CT-1037-10M
1 semester credit hour
Dates: July 15-16
Time: 8:00am-4:00pm
Location: Denver Zoo
Instructors: Sarah Brenkert, Sarah Secor
Tuition Fee: \$140 (includes breakfast, snacks, & curriculum resource CD)

This is the first course in a two-part series designed to bring you up close with the wildlife and culture from seven continents in all their beauty and biodiversity. Tour the zoo, meet live animal ambassadors from the Americas, and take home new ideas for bringing the world's wildlife to your classroom. Registration in part II is not required.

THE SCIENCE OF ANIMAL COMMUNICATION (PREK-12)

CT-1036-10M
1 semester credit hour
Dates: July 19-20
Time: 8:00am-4:00pm
Location: Denver Zoo
Instructors: Sarah Brenkert, Rachel Anderson
Tuition Fee: \$140 (includes breakfast, snacks, & curriculum resource CD)

The animal world is full of sounds – but are the chirps, howls, and grunts mere expressions of instinct or could some qualify as true communication? Immerse yourself in the sounds and sights of the natural world and decide for yourself. Tour the zoo and meet live animals as you explore the diverse and amazing ways animals get their message across.

WORLD EXPEDITIONS II: AFRICA, ASIA, EUROPE, AND AUSTRALIA (PREK-12)

CT-1038-10M
1 semester credit hour
Dates: July 29-30
Time: 8:00am-4:00pm
Location: Denver Zoo
Instructors: Sarah Brenkert, Sarah Secor
Tuition Fee: \$140 (includes breakfast, snacks, & curriculum resource CD)

This is the second course in a two-part series designed to bring you up close with the wildlife and culture from seven continents in all their beauty and biodiversity. Tour the zoo, meet live animal ambassadors from Africa, Asia, and beyond, and get a sneak peek at the Denver Zoo's groundbreaking new Asian Tropics exhibit now under construction. Registration in part I not required.

Register online for any Denver Zoo course at:
www.denverzoo.org/education/teacherWorkshops.asp
For questions, contact the Denver Zoo Education Department at 303/376-4808.

Butterfly Pavilion Course Offerings

Note: Register for Butterfly Pavilion courses through the Butterfly Pavilion. See box on next page.

ART AND SCIENCE SERIES (GR. 5-12)

CT-0921-10S

0.5 semester credit hour

Location: Butterfly Pavilion, Westminster

Instructors: Kris Pohl, Deborah Brooks

Course Coordinator: Kris Pohl, 720/974-1868

Tuition Fee: \$35 (**payable during workshop when two workshops have been completed in 2010**)

More courses in this series will take place during the fall 2010.

SCIENTIFIC ILLUSTRATION AND PLANTS

Date: June 24

Time: 8:00am-12:00pm

Registration Fee: \$30

Scientific illustrators revolutionized the scientific discovery and classification of plant and insect species with observational methods still in practice today. Learn to identify, observe, and draw simple versions of a variety of plants.

PRINTMAKING AND AQUATIC INVERTEBRATES

Date: June 24

Time: 1:00-5:00pm

Registrations Fee: \$40

INSECTS IN ART AND CULTURE (K-12)

CT-0321-10D

1 semester credit hour

Dates: June 22-23

Time: 8:00am-5:00pm

Location: Butterfly Pavilion, Westminster

Instructors: Nicole Bickford, Deborah Brooks

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

Registration Fee: \$85

Discover the symbolic meaning of insects in cultures of past and present as you explore human beliefs and environmental conditions through art and literature. Delve into myths and art activities as you explore the lives, history, and significance of honeybees, silk moths, dragonflies, and many more invertebrates.

GREEN SIDE UP: USING PLANTS TO TEACH THE BIG IDEAS (GR. 5-8)

CT-0755-10M

0.5 semester credit hour

Date: July 13

Time: 8:00am-5:00pm

Location: Butterfly Pavilion, Westminster

Instructor: Jo Smith

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

Registration Fee: \$40

Plants can easily be used in the classroom for teaching those big ideas in the life sciences. Discover classroom-tested, hands-on activities using plants to help students explore form, function, energy flow, growth, development, and continuity. Bring some green back to your classroom.

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

CT-0920-10M

0.5 semester credit hour

Date: July 22

Time: 8:00am-5:00pm

Location: Butterfly Pavilion, Westminster

Instructors: Marcos Stoltzfus, Patrick Tennyson

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

Registration Fee: \$40

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 in your classroom insect investigations.

WHO SWALLOWED A FLY? (K-6)

CT-0532-10M

0.5 semester credit hour

Date: July 29

Time: 8:00am-5:00pm

Location: Butterfly Pavilion, Westminster

Instructors: Nicole Bickford, 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.

FRIEND OR FOE: EXPLORE PLANT - ANIMAL INTERACTIONS (K-5)

CT-0820-10M

0.5 semester credit hour

Date: August 5

Time: 8:00am-5:00pm

Location: Butterfly Pavilion, Westminster

Instructor: Amy Yarger

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

Registration Fee: \$40

Survey a variety of plant-animal relationships including pollination, seed dispersal, plant defense mechanisms, and carnivorous plants. Observe plant-animal interactions in the garden, and then learn how to create a schoolyard habitat for beneficial insects. Learn through projects, outdoor observations, and stories and games that can be used back in the classroom.

DRAGONFLIES TALE (K-6)

CT-0713-10F
0.5 semester credit hour
Date: October 2
Time: 8:00am-5:00pm
Location: Butterfly Pavilion, Westminster
Instructors: Nicole Bickford, Deborah Brooks
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$45

Explore five different Native American cultures through their stories and their art. Create a dragonfly like the Zuni boy who saved his village; discover how Grandmother Spider inspired the Muskogee Indians to catch bad dreams; and create your own dream catcher. Integrate science, literacy, social studies, and visual art in this fun, standards-based workshop.

To register for any of the Butterfly Pavilion course offerings, mail the CSM enrollment form along with a check (payable to the Butterfly Pavilion) or credit card information for the Registration Fee to:

Butterfly Pavilion
Kris Pohl, Education
6252 W. 104th Ave.
Westminster, CO 80205
720/974-1868 Fax 303/657-5944
kpohl@butterflies.org

Cheyenne Mountain Zoo Course Offerings

Note: Register for Cheyenne Mtn. Zoo courses through the CM Zoo. See the box below.

GRAY WOLVES, GRAY MATTER: A WOLF WORKSHOP FOR EDUCATORS (GR. 6-12)

CT-04127-10D
0.5 semester credit hour
Date: June 12
Time: 9:00am-5:00pm
Location: Cheyenne Mtn. Zoo, Colorado Springs
Instructor: Joy Schkade
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$65.25

Why are wolves such a hot topic? What's the latest situation with the Mexican Gray wolf? Immerse yourself for a day learning about resources that you can use to engage your students in these topics.

ALIEN INVADERS (K-12)

CT-0946-10D
0.5 semester credit hour
Date: June 26
Time: 9:00am-5:00pm
Location: Cheyenne Mtn. Zoo, Colorado Springs
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$65.25

Zebra mussels, Cane toads, and Kudzu are all examples of invasive species that have had a large impact on the local environment. Learn to recognize them and the ways that you and your students can help native species.

PROJECT BUTTERFLY WINGS (K-5)

CT-1040-10M
0.5 semester credit hour
Date: July 17
Time: 9:00am-5:00pm
Location: Cheyenne Mtn. Zoo, Colorado Springs
Instructor: Joy Schkade
Tuition Fee \$35 (**payable during workshop**)
Registration Fee: \$65.25

Discover more about butterflies and how to attract them to your school. Learn about a local project that you can get involved in!

SAVING SPECIES (K-12)

CT-1041-10M
1 semester credit hour
Dates: July 30-31
Time: 9:00am-5:00pm
Location: Cheyenne Mtn. Zoo, Colorado Springs
Instructor: Joy Schkade
Tuition Fee: \$50 (**payable during workshop**)
Registration Fee: \$90.50

Find out what the zoo is doing to help species around the world and what you and your students can do to become more involved. Explore what your classroom can do to help endangered species.

ELEPHANTS IN DANGER (K-12)

CT-04121-10M
0.5 semester credit hour
Date: August 7
Time: 9:00am-5:00pm
Location: Cheyenne Mtn. Zoo, Colorado Springs
Instructor: Joy Schkade
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$75.25

Discover the amazing African elephant. Focus on the plight of the African elephant and the conservation efforts currently underway to save their declining population. A portion of your registration fee will go directly to the International Elephant Foundation.

To register or for more information, contact:

Erin Hobson, 719/633-9925 (x127) or
deprograms@cmzoo.org

To register online:

www.cmzoo.org/exploreLearn/adults/classes.asp

Project WILD - Project Learning Tree – Project WET

BASIC PROJECT LEARNING TREE (K-8)

CT-0822-10D
0.5 semester credit hour
Date: June 1
Time: 8:00am-4:00pm
Location: Rocky Mountain Bird Observatory, Brighton
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$35
Registration Contact: Kacie Ehrenberger, 303/659-4348 (x16), kacie.ehrenberger@rmbo.org

FLYING WILD WORKSHOP (K-12)

CT-0572-10D
0.5 semester credit hour
Date: June 2
Time: 8:00am-4:00pm
Location: Rocky Mountain Bird Observatory, Brighton
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$30
Registration Contact: Kacie Ehrenberger, 303/659-4348 (x16), kacie.ehrenberger@rmbo.org

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

CT-0668-10D
1.5 semester credit hours
Dates: June 22-24
Time: 9:00am-5:00pm
Location: Aurora Municipal Center
Tuition Fee: \$80 (**payable during workshop**)
Registration Fee: \$50 (checks returned upon 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

AQUATIC PROJECT WILD (PREK-12)

CT-9684-10D
0.5 semester credit hour
Date: June 23
Time: 9:00am-5:00pm
Location: Downtown Aquarium, Denver
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$25
Registration Contact: Downtown Aquarium, 303/561-4444

BASIC PROJECT WILD (K-12)

CT-9598
0.5 semester credit hour per workshop
Workshop I:
Date: June 24
Time: 8:00am-5:00pm
Location: Colorado Division of Wildlife, Denver
Registration Fee: \$20
Registration Contact: Tabbi Kinion, 303/291-7165 or tabbi.kinion@state.co.us

Workshop II:

Date: July 28
Time: 8:00am-5:00pm
Location: Butterfly Pavilion, Westminster
Registration Fee: \$25
Registration Contact: Kris Pohl, 720/974-1868
Tuition Fee: \$35 (**payable during each workshop**)

PROJECT WET (K-12)

CT-9629-10M
0.5 semester credit hour per workshop
Workshop I:
Date: July 21
Time: 9:00am-5:00pm
Location: Downtown Aquarium, Denver
Registration Fee: \$35
Registration Contact: Downtown Aquarium, 303/561-4444

Workshop II:

Date: July 27
Time: 8:00am-5:00pm
Location: Butterfly Pavilion, Westminster
Registration Fee: \$40
Registration Contact: Kris Pohl, 720/974-1868
Tuition Fee: \$35 (**payable during each workshop**)

PROJECT WILD II WORKSHOPS

Project WILD II workshops are advanced WILD classes. You will explore wildlife/nature related topics in greater depth, and broaden your skills and knowledge to better use Project WILD in the classroom or any other educational settings.

BATS (WILD II WORKSHOP) (GR. 4-12)

CT-00101-10F
0.5 semester credit hour
Date: October 30
Time: 8:30am-5:30pm
Location: Hyatt-Tech Center, Denver
Tuition Fee: \$35 (**payable during workshop**)
Registration Fee: \$25
Pre-requisite: Basic Project WILD/Learning Tree/WET workshop

Join the foremost bat experts in the world, in town for the North American Society for Bat Research annual gathering. Learn about these amazing creatures, get hands-on activities to use with your students, and meet live bats from the Organization for Bat Conservation.

To register or for more information, contact:

Tabbi Kinion, CDOW
303/291-7165 or tabbi.kinion@state.co.us

For updated information contact:

Project WILD, 303/291-7262
Project Learning Tree, 303/202-4662
Project WET, 303/355-4057

Check the following websites for full course descriptions or added workshops:

www.wildlife.state.co.us/education/teacherresources or
www.pltworkshops.blogspot.com/

Summer 2010 Canoe Trips

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

GEOLOGY OF THE GUNNISON RIVER BY CANOE, LEVELS I & II (K-12)

CT-9339-10D

2 semester credit hours

Dates & Times:

Lecture: June 23 (9:00am-4:30pm)

Canoe Trip: June 25-27

Locations: The lecture will be held at CSM, Golden.

The trip will begin and end near Grand Junction, CO.

Instructor: Bob Dickerson

Tuition Fee: \$424 (**\$100 deposit required upon enrollment**)

Canoe this breathtaking river through the canyons southeast of Grand Junction, including the spectacular Dominguez Canyon (Wilderness Study Area) with its cascading waterfalls, high elevation potholes, bighorn sheep, and Native American petroglyphs. One layover day is planned for hiking, exploring and gaining an understanding of basic geologic concepts by viewing them up close. No previous geology experience is necessary.

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

CT-0262-10M

2 semester credit hours

Dates & Times:

Lecture: July 7 (1:00-8:30pm)

Canoe Trip: July 9-11

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: \$434 (**\$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 spectacular canyons. Learn about constellations, galaxies, life cycles of stars, deep sky objects, and new topics in astronomy, including the mission to Mars. Course includes activities for the classroom.

COLORADO RIVER AND CANYONS: INTEGRATING ECOLOGY AND ART INTO THE CLASSROOM (K-12)

CT-1026-10M

2 semester credit hours

Dates & Times:

Lecture: July 14 (9:00am-5:00pm)

Canoe Trip: July 16-18

Locations: The lecture will be held at CSM, Golden.

The trip will begin and end near Fruita, CO.

Instructor: Karen Caddis

Tuition Fee: \$434 (**\$100 deposit required upon enrollment**)

Canoe through the stunning canyons of the Colorado River, and investigate the natural environment of the river and desert canyons. Learn how human, plant, and animal life in this special area has adapted to this unique environment. Study how people and the passage of time have changed the region. Be inspired by the natural surroundings to 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.

GEOLOGY OF THE GREEN RIVER BY CANOE, LEVELS I & II (K-12)

CT-9420-10M

3 semester credit hours

Dates & Times:

Lecture: July 26 (9:00am-4:30pm)

Canoe Trip: July 28-August 1

Locations: The lecture will be held at CSM, Golden.

The trip will begin and end in Moab, UT.

Instructor: Bob Dickerson

Tuition Fee: \$683 (**\$100 deposit required upon enrollment**)

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 moving panorama of this twisting river is incomparable. Explore vast canyon systems which branch out in all directions on daily excursions, including one full-day exploration. The course will emphasize the unique geology of Utah's canyons with some discussion of the impact of man from early explorers to uranium mining.

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

Register online: www.centennialcanoe.com

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.

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 class(es) 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 unless otherwise noted.

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

Teacher Enhancement Program
 Colorado School of Mines
 Golden, CO 80401-0028
 FAX: (303) 273-3314
 Phone: (303) 273-3303
<http://te.csmospace.com>

To pay by credit card:

VISA MC AMEX DC

Card # _____

Exp. Date: _____

Cardholder Name: _____

Signature: _____