

Lake George Gem and Mineral Club

Youth Program

2009 - 2010

YOUNG MEMBERS of the Lake George Gem and Mineral Club, generally under age 18, are invited to attend interesting workshops that teach about rocks, minerals, fossils, and related topics. These sessions run the second Tuesday of each month at the Lake George Community Center. The Juniors (age 12-18) and the Pebble Pups (age 7-11) meet from 7:30 to 8:15 pm.

Meeting Month	Subject Area	Topics
September	Asteroids, Meteors and Comets	How has the discovery of giant impact craters changed our understanding of Earth's history? We will look at evidence of repeated asteroid and comet collisions with the Earth. Igneous rocks will be the study specimen for this month. MB
October	The Dangerous Earth: Geologic Hazards	Students will explore the geologic processes behind major natural hazards: earthquakes, volcanoes, landslides, mudslides, floods, and hurricanes. During class there will be an exciting exploration of how Earth processes influence our lives on a daily basis. Metamorphic rocks will be the study specimen for this month. MB
November	Geological Time	We will review geologic time and discover the secrets of past life and events. Sedimentary rocks will be the study specimen for this month.
December	Ice Ages	Colorado's Ice Age will be studied. We will look at animals of the Ice Age and the Clovis people who swept across Colorado and North America. Fluorite will be the study specimen for this month. MB
February	Building a Rock Collection part 1	Pebble Pups and juniors will learn to be a "collector" -- not just an accumulator and learn how to get serious with their collection, the importance of labels, sizes of collectable minerals, trimming specimens, cleaning minerals, and displaying minerals. The mineral for February study is amethyst.
March	Building a Rock Collection part 2	Studies from February are continued on building a collection. Labeling and displaying a collection will be considered. Zircon will be the study specimen for this month.
April	Field Methods for Collecting Rocks, Minerals, and Fossils	We will study how to identify rocks, minerals, and fossils in the field and what equipment is needed. We will review the use of field equipment. Pyrite will be the study specimen April.

May	Fossils: Windows to the Past	Fossils reveal prehistoric worlds and the plants and animals from these lost worlds. How to hunt for fossils and the proper way to collect them in the field will be demonstrated. A fossil will be the study specimen for this month. MB
June	Florissant Fossil Beds	A virtual field trip to the Florissant Fossil Beds National Monument. We will learn about the fossilization of giant redwood trees, insects, flowers, and leaves. The unique processes that created these amazing fossils will be explored. Petrified wood will be the study specimen for this month.
July	Gemstones, Legends, and Lore	Gemstones are fascinating: their colors, properties, myths, and legends are diverse and amazing. Folklore about stones has been revered and honored for centuries in all cultures. The Pebble Pups will explore anniversary stones, birthstones, fabled gemstones, and gems in religion. Rubies will be the study specimen for July. MB

Field Trips 2009-2010	
Western Museum of Mining and Industry	Red Rock Canyon Open Space
Garden of the Gods	Florissant Fossil Beds National Monument



The LGGMC offers a total of 15 merit badges and several certificates of achievement for the Pebble Pup and Junior group. Each session where the merit badges are earned have "MB" in the topic discussion column. The merit badge program consists of a Future Rockhounds of America Membership badge, 15 merit badges (Rocks & Minerals, Earth Resources, Fossils, Lapidary Arts, Collecting, Showmanship, Communication, Field Trips, Leadership, Earth Processes, Earth in Space, Gemstone

Lore & Legend, Stone Age Tools & Art, Gold Panning & Prospecting, and Rocking on the Computer), and a "Rockhound Badge" for Pebble Pups who earn 6 of the 15 merit badges. There are 85 activities to choose from, or about a half dozen activities per badge, with Pebble Pups required to complete only 3 activities to earn any particular badge.

Pebble Pups and Juniors will work on individual rock, mineral, and fossil collections during each session for entry in the club's show in 2010. The group will also create related artwork and short articles for the newsletter. The scientific method will be covered, participation in science fairs is encouraged, laboratory methods will be demonstrated, and a variety of interesting topics will be covered. There will be at least 2 field trips scheduled during the year. The minimum age for the pebble pup program is 2nd grade. Pebble Pups and juniors must register with the youth program leader.



The youth programs meet the second Tuesday of each month except January and August.

The Juniors and the Pebble Pups (age 7-11) meet from 7:30 to 8:15 pm.

Place: Lake George Community Center

Call Steven Veatch for more information at 719-748-5010

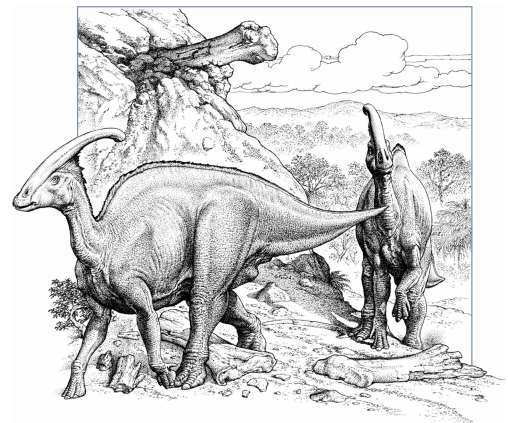
Biography of Junior and Pebble Pup leader:

STEVEN VEATCH conducts educational geoscience programs and research throughout the Pikes Peak region. Steve is an adjunct professor of earth science at Emporia State University where he received an MS in earth science. Steve studied oceanography and meteorology while serving in the U.S. Navy. Steve has coauthored 3 books: *Field Trips in the Southern Rocky Mountains, USA, Field Guide 5*, *The Paleontology of the Upper Eocene Florissant Formation, Colorado*, and *The World's Greatest Gold Camp: An Introduction to the History of the Cripple Creek & Victor Mining District*. Steve has also written numerous articles, essays, reviews, and monographs on geoscience topics. He has presented more than 15 papers at regional, national, and international meetings on climate change, paleoecology, dinosaurs, trace fossils, mammoths, and the Ice Age (Quaternary). As a result of his research interests, Steve has led numerous expeditions in western North America, particularly Colorado, Wyoming, and New Mexico. Steve teaches graduate classes on geoscience courses for the Colorado School of Mines in the Special Programs and Continuing Education (SPACE) department. He is also active in the Colorado Scientific Society, Colorado Archaeological Society, Western Interior Paleontological Society, Colorado Alliance for Environmental Education, the National Association of Geoscience Teachers, National Earth Science Teachers Association, and the Geological Society of America.



Youth program assistants

DAN ALFREY has been conducting outreach programs through the LGGMC study group that connect people with the Earth sciences. Dan has been coordinating field trips and serving as vice-president of the LGGMC.



Contact information:

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