

Westminster STEM ACADEMY Schedule

Sunday, July 8th

Check In at 11:30

Lunch at dining hall

David Schmidt 2 hr 1:00-2:50 Geology CSC 139
Rock stars of Science Learn about fossil organisms and how they are used to interpret past life.
Engage in a project to learn how paleontologists engage in scientific processes.

Rachel Barker & 1 hrs 3:00-5:00 Bridge Building CSC 204 -
Jim Concannon
Fact versus fiction: virus myths are going viral! In this session we will be exploring the characteristics of viruses and their relevance in today's society. What exactly is a virus and how can we as humans better understand and manipulate them?

Jane-Kenney Hunt 3 hrs 6:30-9:00 Genetics and Biochemistry CSC 239
Ever wonder how genetic diseases are diagnosed and passed along the family tree. In this session, students get an opportunity to explore genetic and biochemistry techniques such as DNA extraction and Polymerase Chain Reaction (PCR).

Monday, July 9th

Jane Kenney Hunt 3 hr 8:30-11:30 Genetics and Biochemistry Cont. CSC 239
Ever wonder how genetic diseases are diagnosed and passed along the family tree. In this session, students get an opportunity to explore genetic and biochemistry techniques such as DNA extraction and Polymerase Chain Reaction (PCR).

Alexandra Rauscher 2 hr 12:30-2:30 Genetics CSC 204
Having fun with Karyotyping. Students will use case studies to identify the certain symptoms, causes, treatments, history, etc. of chromosomal mutations.

Therese Miller 2 hr 3:00-5:00 STEAM Education Historic Gym 16
Get your groove on: Putting the "Arts" in STEM Education. Students make physical representations of science phenomena through dance!

Jim Concannon 3 hr 6:30-9:30 3D Printing CSC 126
Explore simple CAD design techniques and 3D printing. Students learn how to make 3D designs, transfer the designs to a 'slicer', and then 3D print. Students will be able to print their 3D design.

Tuesday, July 10th

Ryan Brunner 3 hr 8:30-11:20 Psychology CSC 110
What makes psychology a science? In this session, try out some real "Brain Games" and learn how psychological science works by running real experiments and collecting real data.

Ron Frederick 3 hrs 12:30-3:20 Electrochemistry CSC 329
Power Up with Electrochemistry!
How can we get electricity from chemical reactions?

Erikka Brown 2 hr 3:30-5:30 Problem-Based Engineering CSC 204
Students will use creativity and ingenuity to solve real-world problems through engineering. Groups will be presented with an issue and then use engineering concepts to develop and construct a resolution.

Bernie Hansert 3 hr 6:30-9:30 Chemistry CSC 340
Drugs: Discovery and Design; How to "kill" bacteria without harming the human.
We will use our ATR-Infrared spectrometer to identify an antibiotic drug.

Wednesday, July 11th

Amber Edwards 7 hr 9:00-4:00 pm Conservation Biology - Prairie Fork
Sack Lunch and Transportation Provided; Meet in front of the dining hall at 8:15 for bus transportation.

Ryan Smith and Matt Vore 3 hr 6:30-9:30 Coding CSC 116
Scratching the surface of code, learning basics and logic of code in modern programming languages.

Thursday, July 12th

Dawn Holliday 3 hr 8:30-11:30 Anatomy and the Cadaver Lab CSC 345
A rare opportunity to Exploring Cadavers! Student observe and examine male and female anatomical structures of cadavers. This session also provides aspects of physiological processes.

Jim McRae 2 hr 1:00-3:00 Medical Ethics CSC207
The purpose of this class is to provide future medical professionals with a foundational understanding of biomedical ethics. Case studies illustrate the major moral principles used solve problems in the practice of medicine and biomedical research.

Ashley Wallace & 1 hr 3:15-4:15 Bridge Testing Sloss Hall
Jim Concannon
Student compete in the bridge building competition. A prize is given to the group whose bridge can support the greatest amount of mass.

4:30 Check Out

Expectations

Expectations of all Academy participants are to:

- 1) Stay on campus except in an event of an emergency
- 2) Stay in same sex dorm rooms. Men stay in male suites; Women stay in female suites.
- 3) No alcohol or drugs.
- 4) Respecting campus facilities, faculty, and other students

Recommendations

It is highly recommended that each student:

- 1) Brings bug spray/tick repellent and sun block lotion for the Prairie Fork trip.
- 2) Brings long pants/jeans for the Prairie Fork trip.
- 3) An extra blanket or comforter
- 4) A pillow
- 5) Snacks
- 6) Electronic devices and board/card games

What is provided:

During the Academy, each camper will be provided:

- 1) Food – morning, noon, and evening (apart from one sack lunch).
- 2) A shared room with another camper.
- 3) Personal access to same sex bathrooms and showers.
- 4) All the Academy instructional sessions.
- 5) Television
- 6) Gym, including weights, basketball, ping pong, soccer, and pool tables.
- 7) Access to a full-time RA and Camp Director to respond to your concerns and needs.
- 8) High speed wireless access

Costs

\$550 per camper

\$150 for 1cr hour

Contacts

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