

# ASTROCAMP TRIP PLANNING

## Program Class Descriptions

Below you will find descriptions of all the classes offered at Astrocamp. If you have questions about the classes, please contact Astrocamp.

### Daytime Classes

- General Science and States of Matter
  - **Atmosphere & Gases:** Learn about planetary atmospheric conditions and states of matter in our most requested class. Hands-on experimentation allows students to learn about temperature, pressure, density, and other gas properties.
- Astronaut Training
  - **Microgravity:** Train in the water like Astronauts! Learn about buoyancy and experience the challenge of constructing a mock satellite in a near-weightless environment.
  - **Expedition Valles Marineris:** Simulate research on the surface of Mars with our interactive touch-screen computers and state-of-the-art rock wall. Learn about Mars and the largest canyon in the solar system.
- Electromagnetic Spectrum
  - **Electricity & Magnetism:** Explore the properties of electricity and magnetism by experimenting with magnets, static electricity, and electric current in a multitude of hands-on activities.
  - **Lights & Lasers:** Learn about the physical properties of light by experimenting with lasers, ultraviolet lights, spectrum glasses, an infrared camera, a phosphorescent wall, and more!
- Rocketry
  - **Building & Launching Rockets (2 class periods):** Learn about force and the laws of motion to design and build a model rocket. Launch your own rockets powered by water and pressurized air. *Each student needs to bring a 2-liter soda bottle with a standard size opening.*
- Daytime Astronomy
  - **Planetarium:** Enter our planetarium domes and learn about circumpolar rotation of the stars and constellation myths. Learn about the size and scale of the universe, life cycles of stars, and gravitational forces in our vortex room.
  - **Solar Studies:** Use solar telescopes and lenses to view sunspots, prominences, and solar flares. Learn about the properties of the sun, solar radiation, and solar energy. Bake your own cookies in our special solar oven!
- Space Exploration
  - **Cosmic Lander:** Learn about different types of space exploration vehicles and the challenges of space travel. Design and build your own "cosmic lander" and test its ability to land on simulated planetary surfaces.
  - **Remote Sensing:** Learn about how we acquire information about objects without actually making physical contact with them, and how we apply this information to our understanding of the universe. Use GPS units to experiment with remote sensing.
- Space Rocks
  - **Micrometeorites:** Learn about meteors, meteorites, asteroids, and comets. Use magnets and microscopes to collect and identify possible micrometeorites at Astrocamp. Simulate impacts with our crater maker.
  - **Planets:** Learn about the planets that make up our solar system and how scientists conduct research to gain information on them. Learn about other planets and galaxies being discovered.

# ASTROCAMP TRIP PLANNING

## Daytime Classes (cont.)

- Hiking
  - **Day Hike (1 class period):** Explore Astrocamp's forest trails and learn about local flora, fauna, and the history of the San Jacinto Mountains.
  - **Extended Day Hike (2 class periods):** Take a longer and more in-depth hike through Astrocamp's forest trails.
  - **Full Day Hike (4 class periods):** For 5-day groups only; A full day of hiking and exploration around Astrocamp's forest trails. Learn about geology, remote sensing, and the natural history of the Idyllwild area. Lunch on the trail will be included.
- Adventure Classes
  - **Initiatives:** A prerequisite for any ropes course activities; Build teamwork, trust, cooperation, and communication skills by participating in problem-solving activities as a group.
  - **Ropes Courses:** Challenge your fears in these five high ropes elements. These physically and mentally rigorous activities require trust, communication, teamwork, and willingness to face fears.
    - **Catwalk:** Balance across a horizontal log high in the trees.
    - **Vinewalk:** Balance on a tightrope while using hanging "vines" high in the trees.
    - **Powerpole:** Climb up a telephone pole and lunge for a hanging tetherball.
    - **Sky Coaster:** Swing through the air after classmates raise you up via a pulley system.
    - **Zipline:** Climb up a cargo net then zip 700 feet across a meadow.

## Evening Classes

- **Space Night:** Take a short night hike then head up to one of the Telescopes Viewing Areas in our signature evening program. Activities include sensory awareness games, stargazing, and constellation myth stories. Learn how to use binoculars and telescopes to view planets, stars, galaxies, and Messier objects. View images taken with our digital telescope cameras (CCDs).
- **Astro Olympics:** Compete in a series of carnival-type games in this fun and active program.
- **Free Swim:** An open swim time in our heated indoor pool. Lifeguards are provided at no additional cost for the evening program option.
- **Interstellar Auction:** Plan and bid for extrasolar planets and the materials needed to colonize them in an exciting auction. Group cooperation and compromise is required for this thought-provoking activity.
- **Messier Madness:** Discover and present information on deep space objects. A group scavenger hunt will take place. *Please bring one flashlight for each student.*
- **Space is Right:** Students participate in Astrocamp's version of the popular game show The Price is Right! Take your best guess at answering questions about the size and scale of the objects in our universe and our place in it. Points are earned based on the accuracy of each student's guess, and the best guesser will have the opportunity to receive a bonus. Space is Right will challenge the way you think about our universe and reveal how tiny we really are.
- **Mission to Mars:** Cooperate with your group to design a mission to the red planet. Agree upon mission goals, equipment to use, and target site to prepare a presentation for "NASA Scientists" (teachers and chaperones) to decide on awards. **(Note: this activity does not include the rock climbing wall).**
- **School Night:** If you have your own night program in mind we will provide audio/visual resources and facilities. Please let us know which resources you will need so we can reserve them for you.
- **Astro Jeopardy (5-day groups only):** Test your knowledge in this Astrocamp version of the popular game show. This activity is designed to be a cumulative experience for 5-day groups.