

# NYSF National Youth Science Camp®

*The National Youth Science Camp (NYSC) is an innovative and highly successful summer science honors program for two high-achieving high school students from each state in the nation and others from around the world. This residential experience is held in a rustic setting in West Virginia's eastern mountains and has honored and challenged approximately 5,000 participants since it started in 1963. The NYSC is operated by the National Youth Science Foundation®, a nonprofit 501(c)(3) corporation.*

## Goals

- **Honor** high-achieving science-oriented students
- **Introduce** new scientific topics, especially those not typically covered in traditional secondary curriculum
- **Encourage** lifelong learning in science, technology, engineering, and mathematics
- **Demonstrate** relationships among the sciences and between science and other disciplines
- **Prepare** students to face challenges of college, career, and life-long education
- **Develop** creativity, instill self-confidence, and foster camaraderie among future leaders



## Program Overview

**Lectures and Interactive Seminars:** Prominent speakers discuss current topics in science and other disciplines and have ample opportunity for informal interaction with students attending the NYSC.

**Directed Studies:** Visiting and resident professionals from diverse fields of study conduct three-day, in-depth research investigations in lab and field studies.

**Program Areas:** Visiting and resident experts lead hands-on experiences in the natural science, physical science, and computer science laboratories along with co-curricular activities in arts, music, wellness, and athletics. The surrounding million-acre Monongahela National Forest serves as a learning resource for field studies in wildlife ecology, botany, water chemistry, scientific illustration, and other areas. Delegates may also participate in activities at the nearby National Radio Astronomy Observatory and Canaan Valley Institute.

**Delegate Lectures and Seminars:** NYSC delegates are encouraged to share their own research with their peers and with visiting and resident experts who may be specialists in that field. Past delegate research topics have ranged from airplane wings based on dragonfly anatomy to DNA sequencing to antilock brakes for mountain bikes.

**Backcountry Adventure Program:** Resident specialists and practicing scientists lead small-group day trips and overnight excursions into the Monongahela National Forest, which foster an appreciation of nature and help develop leadership and teamwork skills. These adventures include backpacking, rock-climbing, mountain biking, and kayaking.

**Informal Activities:** Opportunities abound for participants to pursue personal interests on an informal basis. The Program Areas (labs, studios, athletic fields, and natural areas) are available most afternoons for individualized instruction or group projects involving fellow delegates, staff members, and visiting specialists.



## Program Features

### National Representation

Graduating high school seniors representing each state and several countries are selected through competitive processes to attend the NYSC. Selection is based on science achievement and participation in school and community activities. The Foundation practices nondiscrimination.

### Physical Environment

NYSC facilities include science laboratories, a computer center, and arts and music studios located in West Virginia's ecologically diverse, geologically complex eastern mountains. The area provides an outstanding natural laboratory for teaching and experimentation. Isolation from the usual distractions of cities or college campuses provides a nurturing atmosphere.

### Intensive and Non-Competitive Learning

The schedule offers several weeks of near "around-the-clock" learning opportunities in a challenging yet friendly setting. Noncompetitive learning encourages teamwork and cooperative skills, utilizing science as a common language to allow delegates to learn from peers, staff, and visiting experts.

### Broad Exposure to New Fields of Science

The NYSC program provides a broad spectrum of natural, physical, and applied sciences including biology, physics, chemistry, geology, astronomy, environmental science, engineering, medicine, space science and technology, with additional emphases on ethics, humanities, and the arts.

### Washington Visit and Senate Luncheon

Delegates travel to Washington, DC, for three days to study national science concerns in meetings with scientists and with behind-the-scenes visits to sites such as NASA's Goddard Space Flight Center, the American Association for the Advancement of Science, the National Academy of Sciences, and national museums. A highlight of this visit is a luncheon with members of the United States Senate traditionally hosted by West Virginia's delegation; all Senators are invited to attend. The luncheon features a presentation by a prominent national speaker. Recent keynote speakers have included Dr. Neil deGrasse Tyson, host of PBS's NOVA scienceNOW, and Mr. Aneesh Chopra, the Chief Technology Officer of the United States.

## NYSC Alumni

Many National Youth Science Camp alumni recognize the NYSC as one of their most valuable educational experiences:

- **Mr. Wesley Bush**, Chief Executive Officer of the **Northrop Grumman Corporation**, recently remarked, "The NYSC had a profound impact on my decision to pursue a technical profession. Not only did I find the interaction with the guest scientists and engineers to be inspiring, but I also really enjoyed the community of others my age who shared similar interests. As our nation seeks to extend our leadership in science and engineering, I see this program as a tremendous resource in encouraging young talent to enter these fields."
- **Ms. Marissa Mayer**, Vice President of Search Products and User Experience at **Google**, credits NYSC alumnus and presenter Dr. D.B. "Zoon" Nguyen with encouraging her to pursue the study of symbolic sciences in college.
- **Dr. Deda Gillespie**, who went on from the NYSC to earn a doctoral degree in neuroscience from the University of California at San Francisco credits her NYSC experience with providing the direction and encouragement that she needed to excel in her field.
- **Dr. David Hackleman**, is a Foundation Trustee and NYSC presenter who was an inventor on the **Hewlett-Packard** team that developed HP's Ink Jet technology, which now exceeds \$10 billion in sales annually.

### 2011 NYSC

**Application:** [www.nysc.org](http://www.nysc.org)

**Arrival:** Thursday, June 30, 2011

**Departure:** Sunday, July 24, 2011

**Cost:** Free to participants, air travel included

For more information about the NYSC or the National Youth Science Foundation, please visit our web site at [www.nysf.com](http://www.nysf.com), call us at (304) 205-9724, send an E-mail message to [office@nysf.com](mailto:office@nysf.com), or write us at the National Youth Science Foundation, Post Office Box 3387, Charleston, WV 25333-3387.