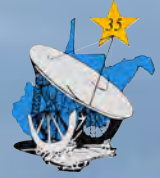


# NATIONAL YOUTH SCIENCE FOUNDATION®

## *Davis-WV Campus*



P.O. Box 3387 \* Charleston, WV 25333-3387 \* [www.nysf.com](http://www.nysf.com) \* (304) 205-9724

Cover Photos	Description
<b>Top</b>	Exterior, front view of the Research and Education Center, a Silver LEED-certified building constructed with funds from the National Oceanic and Atmospheric Administration.
<b>Middle Left</b>	Youth Science Discovery Experience (YSDE) students work on a stream restoration project in the teaching laboratory in the Research and Education Center.
<b>Bottom Left</b>	A YSDE student works on the design of a wind turbine as part of their project.
<b>Bottom</b>	YSDE students launch a rocket they constructed during a seminar.



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## Introduction

On June 9, 2015, the National Youth Science Foundation® (NYSF) finalized the transaction to acquire ownership of the Research and Education Center (REC) and Research Support Building (RSB) and associated property and appurtenances constructed by the Canaan Valley Institute (CVI). Located near Davis, West Virginia in Tucker County, this 39-acre campus is adjacent to 111 acres held by the NYSF that will serve as the future site of the National Center for Youth Science Education (NCYSE).

The NYSF intends to conduct programs at this Davis-WV Campus that are consistent with its mission and the mission of the National Oceanic and Atmospheric Administration (NOAA). An outline of the NYSF's planned programmatic activities and development of the Davis-WV Campus is presented later in this document.

### **Mission Statement**

*The mission of the National Youth Science Foundation is to inspire lifelong engagement and ethical leadership in science, technology, engineering, mathematics, and related professions through its proven educational model for mentoring, challenging, and motivating students. By building communities among students, teachers, and professionals, NYSF programs complement, broaden, and enhance the traditional school curriculum leading to careers in science, technology, engineering, mathematics, and related professions.*



## History of the NYSF

The National Youth Science Foundation (NYSF) is a non-profit 501 (c)(3) corporation established in 1983 to support and sustain one of the nation's longest running STEM enrichment activities - the National Youth Science Camp® (NYSC). Through the NYSC and other STEM education experiences, the NYSF has served approximately 6,000 of the nation's best and brightest science and mathematics students. Based on this experience the NYSF charted a path to forward its mission.

Major steps along this path include:

### ☑ **Step One - Create a Vision**

In the 1980s, the NYSF committed to a bold plan to construct a permanent campus that would enable the expansion and improvement of its programs. This future campus will become a focal point that encourages and inspires youth to pursue education and careers in STEM.

### ☑ **Step Two - Establish a Partnership with the Canaan Valley Institute**

In 2004, the NYSF and CVI began discussions about possible collaboration and co-location of facilities. In 2006, the organizations executed an agreement detailing important synergies between the two organizations. The organizations' shared interests provided a natural sequel into the joint use of important site facilities that would benefit the programs, resources, and public funds utilization of each organization.

### ☑ **Step Three - Acquire Real Property**

In 2009, after a decade-long search, the NYSF purchased 111 acres alongside the Blackwater River near Davis, WV, to serve as its future home. Located adjacent to CVI, this purchase was completed to further the organizations' shared commitment to complementary educational and scientific goals and research activities. The property's



isolation, proximity to public transportation corridors, outdoor recreation and adventure opportunities, and connection to utilities were critical characteristics. The NYSF's property is located within the State of West Virginia's 2,500 acre *Little Canaan Wildlife Management Area* and near the *Canaan Valley National Wildlife Refuge* and proximate to the Research and Education Center and Research Support Building.

**☑ Step Four - Develop the Davis-WV Campus Master Plan**

In 2010, the NYSF published its Master Plan that called for the construction of critical spaces in support of the NYSF's flagship program and other, new STEM-focused programs. See <http://masterplan.nysf.com>.



Artist's Rendering of the Commons Area of the NCYSE

**☑ Step Five - Develop New STEM Programs**

Since 1963, the NYSC has served as the flagship program of the NYSF. Building on its success, the NYSF has developed and operated other important STEM education programs, including:

- WV Governor's School for Math & Science (2005 through 2014)
  - *Sponsored by the WV Department of Education and the Arts*
- WV Youth Science Camp (1994 and 1995; 2011 to 2014)
  - *Sponsored by the WV Department of Education*
- Youth Science Discovery Experience (2010 through 2014)<sup>1</sup>
  - *Sponsored by NASA and the WV Department of Education and the Arts*
- Youth Science Leadership Institute (2002 and 2006)
  - *Sponsored by the United States Department of State*

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<sup>1</sup> Held at the Canaan Valley Institute and the National Radio Astronomy Observatory.

Through these existing and new programs and partnerships with STEM professionals and organizations, the NYSF has the ability to reach future generations of science and mathematics students. The appendix includes brief descriptions of the NYSC and the Youth Science Discovery Experience (YSDE).



Consistent with the organization's mission, NYSF education programs inspire lifelong engagement and ethical leadership in science, technology, engineering, mathematics, and related professions. Academic activities from disciplines across the STEM spectrum are complemented with outdoor recreation opportunities and the creative and performing arts. Traditional NYSF programs include a residential component;

NYSC delegates are in residence for nearly four weeks while YSDE students are in residence for 10 to 14 days. Structured in this fashion, NYSF programs build communities among students, teachers, and professionals and bridge the gap between the traditional school curriculum and careers in STEM and related professions.

### **☑ *Step Six - Renew the NYSF's Strategic Plan***

In 2012, the NYSF Board of Trustees committed to reviewing and revising the organization's *Strategic Plan*. Following an inclusive process that developed consensus from valued stakeholders, the NYSF Board of Trustees adopted a ten-year strategic plan in May 2014. With overarching goals, the strategic plan identifies measurable objectives for the short-term (two years), medium-term (five years), and long-term (ten years).

Central to the Strategic Plan are efforts to sustain and expand the NYSC and establish the Davis-WV Campus. Acquiring ownership of the CVI facilities allows the NYSF to meet its goals and objectives as described in the Strategic Plan.



### **Step Seven - Transfer the CVI Facilities to the NYSF**

The NYSF acquired ownership of CVI's facilities through a transaction on June 9, 2015, in Parsons, West Virginia. Substantial elements of the NYSF's administrative functions will be transferred from the West Virginia Regional Technology Park in South Charleston, West Virginia to the Davis-WV Campus and the NYSF will immediately begin to leverage the facilities to support and enrich STEM education. Additionally, the NYSF will conduct STEM education activities including elements of the NYSC and the YSDE at the Davis-WV Campus beginning in late 2015 or 2016.

## **A Path Forward**

### **Step Eight - Connect The NYSF's Property**

A bridge spanning the Blackwater River connecting the NYSF's property is currently under construction and is expected to be complete by the end of 2015. This bridge will provide important access from Camp 70 Road to the NYSF's property on the South side of the Blackwater River as well as the Splash Dam South Trail of the Heart of the Highlands Trail System.



### **□ Step Nine - Reimagine the Master Plan**

The NYSF will engage an architectural and engineering firm to reimagine the current Master Plan of its Davis-WV Campus. With access to and control of the Research and Education Center and the Research Support Building, construction costs of the full Davis-WV Campus will be reduced as duplicative facilities are eliminated.

### **□ Step Ten - Commission the NYSF's Davis-WV Campus**

Consistent with the NYSF's long-term objective to develop its facilities in Tucker County, the NYSF plans to commission the recently acquired property and facilities as the cornerstone of the NYSF's **Davis-WV Campus**. The acquisition of the Research and Education Center and Research Support Building will accelerate the NYSF's move to Tucker County and permit the NYSF to operate STEM education programs there as soon as late 2015 or 2016.



### **□ Step Eleven - Obtain Designation as a WV STEM Network Hub**

The NYSF intends to request that the Davis-WV Campus be recognized as a Regional Network Hub in the West Virginia STEM Network as proposed by the Governor's STEM Council. This designation has been endorsed by West Virginia's State Superintendent of Schools, Dr. Michael Martirano. Designation as a Hub provides annual funding part of which would be

dedicated to the Hub's operation while other funds would support programs and partnerships with STEM-related organizations.

According to the Governor's STEM Council Report, "The goal of a HUB is to amplify and accelerate the impact of existing STEM programs within a particular region. It is designed to support STEM programs and schools, increase the ability of existing STEM assets to generate regional impact, grow linkages between and support of existing STEM assets in a region, identify gaps in the system, and connect other STEM initiatives to that region's STEM efforts."



As part of the state's Network, the host organization and its Hub are expected to:

- Provide adequate space for administration and programs.
- Conduct activities in support of STEM that might include professional development courses in STEM education, STEM camps, outreach programs, and dual-credit courses for K-12 students.
- Meet a standard metric of outcomes that might include increasing the number of students that participate in meaningful STEM activities and expanding the number of STEM internships provided by businesses.
- Establish partnerships with STEM-related businesses that can provide important funding and work-based learning experiences for students and teachers.
- Collaborate with other members of the WV STEM Network and organizations that can provide critical support for the development of STEM in West Virginia.



### **□ Step Twelve - Youth Science Discovery Experience**

The NYSF is working closely with the WV State Superintendent of Schools, the WV Board of Education, and executive and legislative leaders to secure funding to support the operation of the YSDE at the Davis-WV Campus. A budget allocation of \$500,000 in FY 2016 and \$1,500,000 in FY 2017 can allow the NYSF to serve as many as 1,600 West Virginia students per year.

**☐ *Step Thirteen - Develop other facilities of the Davis-WV Campus***

The NYSF must initiate a major capital campaign to develop the financial resources necessary to develop the remaining facilities of the Davis-WV Campus. A total campaign goal will be established and NYSF development staff will immediately work to secure initial gifts in support of the project.

**☐ *Step Fourteen - Relocate the NYSC to the Davis-WV Campus***

The NYSF will move its flagship program, the National Youth Science Camp, to Tucker County as soon as adequate housing and food service facilities are developed there. It is possible that semi-permanent facilities would be secured to allow the NYSC to be moved within the next few years.



**☐ *Step Fifteen - Youth Science Leadership Institute***

The NYSF held sessions of the internationally-focused Youth Science Leadership Institute in 2002 and 2006 and has developed a conceptual plan for an expanded program. The NYSF seeks partners to enable this program to be resumed..

## **Conceptual Overview Calendar**

<b>January through May</b>	Youth Science Discovery Experience
<b>June</b>	STEM Outreach Programs
<b>July</b>	National Youth Science Camp
<b>August</b>	Youth Science Leadership Institute
<b>September through December</b>	Youth Science Discovery Experience

**Sponsorship Opportunities: See <http://center.nysf.com>**

Level Name	Annual Pledge	Five-Year Total
STEM Advocate	\$25	\$125
STEM Supporter	\$100	\$500
Franklin Fellow	\$250	\$1,250
Curie Fellow	\$500	\$2,500
Turing Fellow	\$1,000	\$5,000
Galileo Fellow	\$5,000	\$25,000
Einstein Fellow	\$10,000	\$50,000

**Naming Opportunities: See <http://center.nysf.com>**

Space	Annual Pledge	Five-Year Total
<b>TUCKER COUNTY CAMPUS</b>	\$500,000	\$2,500,000
<b>Research and Education Center</b>	\$250,000	\$1,250,000
Conference Hall	\$100,000	\$500,000
Interactive Lecture Hall	\$75,000	\$375,000
Conference Room	\$50,000	\$250,000
Research Laboratory	\$50,000	\$250,000
Teaching Laboratory	\$50,000	\$250,000
Living Machine - Waste Water Treatment	\$10,000	\$50,000
Clivus Multrum Composting Toilet	<b>Kiona Meade, AZ 2008</b>	<b>\$25,000</b>
Bicycle Rack - Main Entrance	<b>Blackwood Family</b>	<b>\$5,000</b>
Bicycle Rack - North Entrance	<b>Dr. Wilson Liao, OH 1994</b>	<b>\$3,750</b>
Bicycle Rack - South Entrance	<b>Dr. Mike Elsbury, ID 1999</b>	<b>\$3,750</b>
<b>Research Support Building</b>	\$100,000	\$500,000
Conference Room	\$25,000	\$125,000
Drive Through Bay	\$20,000	\$100,000
Pull In Bay	\$15,000	\$75,000
Bicycle Rack	\$750	\$3,750

## **Contact Information**

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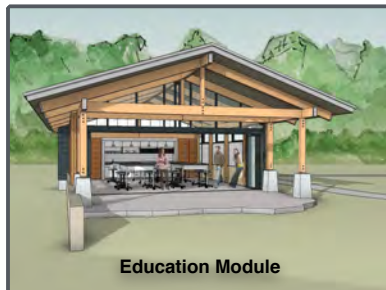
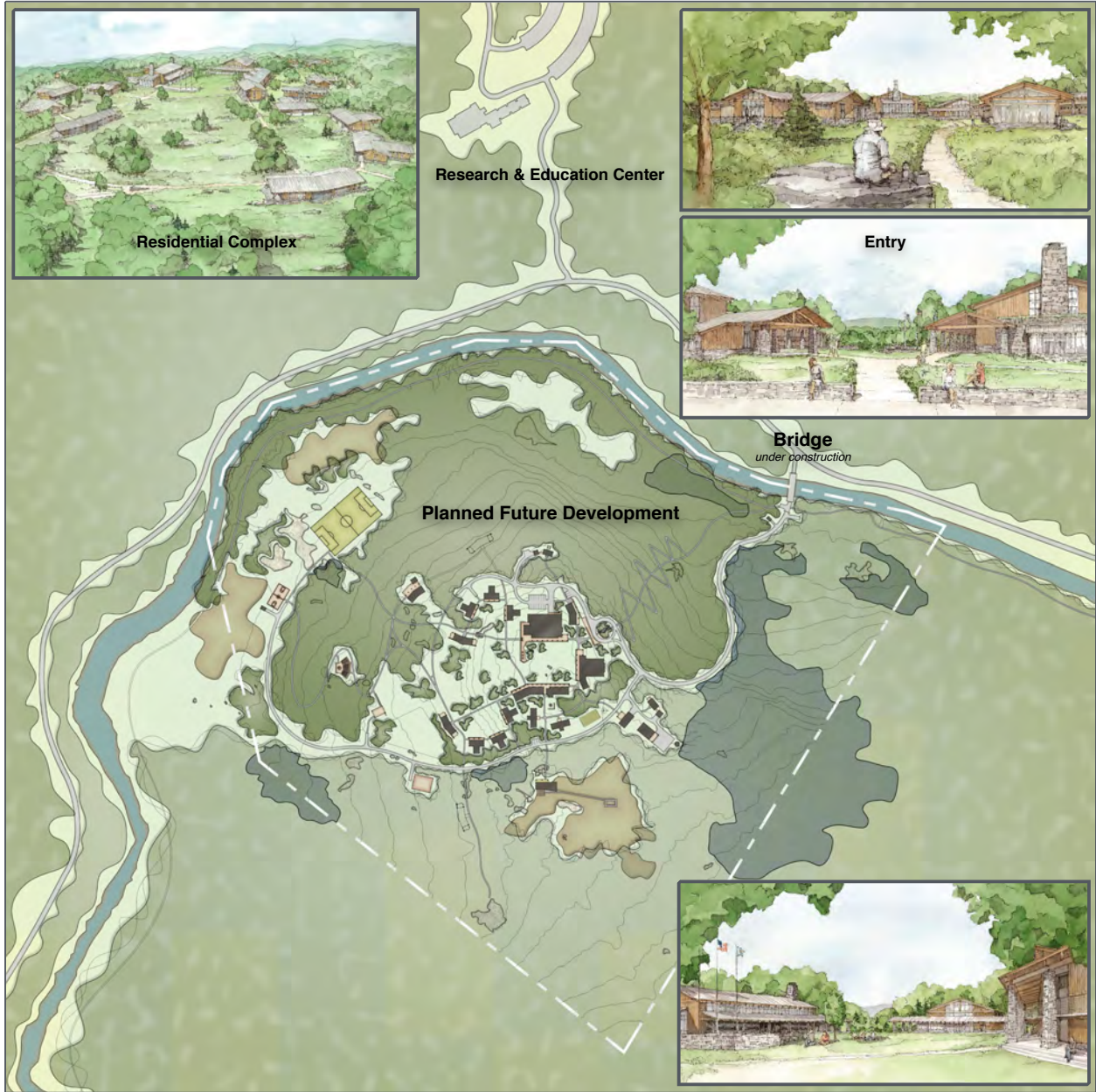
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# Appendices

*Davis-WV Campus Overview (<http://masterplan.nysf.com>)*



**Research and Education Center - Overview**











# NATIONAL YOUTH SCIENCE FOUNDATION



## Why Support the NYSF?

### MISSION STATEMENT

To inspire lifelong engagement and ethical leadership in science, technology, engineering, mathematics, and related professions through its proven educational model for mentoring, challenging, and motivating students. By building communities among students, teachers, and professionals, NYSF programs bridge the gap between the traditional school curriculum and careers in science, technology, engineering, mathematics, and related professions.

### PROGRAM SUMMARY

Since 1963, the **NATIONAL YOUTH SCIENCE CAMP**<sup>®</sup> has been held in West Virginia as a service to the nation. Building on its unique and successful experience producing the NYSC, the NYSF greatly expanded its impact on West Virginia students in 2005, by conducting the **WEST VIRGINIA GOVERNOR'S SCHOOL FOR MATHEMATICS AND SCIENCE** in partnership with the National Radio Astronomy Observatory. With support from NASA, the NYSF developed and began offering the STEM research project based **YOUTH SCIENCE DISCOVERY EXPERIENCE** in 2009, which could be expanded to immediately serve 760 students per year. With support and encouragement from the West Virginia Department of Education, the NYSF revived the **WEST VIRGINIA YOUTH SCIENCE CAMP** program (dormant since 1995), which now serves 60 students each summer. The nearly 6,000 alumni of NYSF programs are leaders in STEM; more than 99% receive a bachelor's degree, more than 85% are working in a STEM field, and about 50% receive a doctoral degree.

### HISTORICAL IMPACT

<i>Program</i>	<i>Duration</i>	<i>Students</i>	<i>Total</i>
National Youth Science Camp	51 years	100	5,100
WV Governor's School for Mathematics and Science	10 years	60	600
WV Youth Science Camp	6 years	70	420
Youth Science Leadership Institute (US + International)	2 years	75	150
Youth Science Discovery Experience (WV students)	5 cohorts	30	150



## Build the Future



# NATIONAL YOUTH SCIENCE FOUNDATION



## Critical Need and Current Opportunity

### MATHEMATICS AND SCIENCE EDUCATION ACHIEVEMENT IN WEST VIRGINIA

According to data from the *National Center for Education Statistics* and the *National Assessment of Educational Progress*, mathematics and science education achievement in West Virginia continues to lag far behind that of the nation as a whole. In grade 8, students in West Virginia scored lower than those in 44 states in mathematics and lower than 29 states in science. According to *Change the Equation*, a nonprofit organization dedicated to improving teaching and learning in STEM, West Virginia must raise the acceptable achievement standards in mathematics and science, improve teacher preparation and support, and expand participation in rigorous courses in mathematics and science.

### NATIONAL CENTER FOR YOUTH SCIENCE EDUCATION

The NYSF has historically operated its unique STEM programs in leased facilities, including the 80-year-old Camp Pocahontas that was constructed as temporary housing with no permanency in mind. Constrained by the nature of the facilities in which it operates as well as their availability, the NYSF has embarked on a plan to develop the *NATIONAL CENTER FOR YOUTH SCIENCE EDUCATION* and has secured property on which it plans to establish the facility. Upon completion, the NYSF will be able to relocate its flagship program, the NYSC, and greatly expand STEM programs to serve many more students. Establishing the *CENTER* in West Virginia will demonstrate the state's leadership in science and mathematics education and commitment to innovative programs.

### IMPACT WHEN THE NATIONAL CENTER IS COMPLETED

<b>Program</b>	<b>Annual Impact</b>
National Youth Science Camp	150 students
WV Governor's School for Mathematics and Science	60 students
WV Youth Science Camp	110 students
Youth Science Leadership Institute (US + International)	150 students
Youth Science Discovery Experience (WV + Regional)	2,850 students

### IMPORTANCE OF EXPANDING THE YOUTH SCIENCE DISCOVERY EXPERIENCE

- Immediately engage 800 West Virginia students each year in a real-world STEM experience that teaches critical 21<sup>st</sup> Century skills.
- Allows the NYSF to capture substantial use of the Canaan Valley Institute for West Virginia STEM education programs.
- Builds a network of students, teachers, and STEM professionals in West Virginia.
- Provides professional development to West Virginia mathematics and science teachers.
- Encourages national investment to develop the National Center for Youth Science Education.



## Address a Critical Need



National Youth Science Camp®

*The NATIONAL YOUTH SCIENCE CAMP is an honors program for two high-achieving high school students from each state in the nation and others from around the world. This residential summer experience is held in a rustic setting in West Virginia's eastern mountains and has honored and challenged more than 5,000 participants since it began in 1963.*



**PROGRAM SUMMARY**

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

**Informal Activities:** Opportunities abound for students 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.





## Honoring the Nation's Top STEM Students

**N**<sup>1</sup>  
National

**Y**<sup>9</sup>  
Youth

**S**<sup>6</sup>  
Science

**C**<sup>3</sup>  
Camp

### PROGRAM FEATURES

#### **National Representation**

Graduating high school seniors representing each state and several countries are selected to attend the NYSC through state- and country-based competitions. Selection criteria include demonstrated achievement in science, technology, engineering, and mathematics and participation in school and community activities.

#### **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; science is the common language that allows 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, mathematics, geology, astronomy, environmental science, engineering, medicine, space science, and technology. Additional emphasis is placed on ethics, humanities, and the arts.

#### **Washington Visit and U. S. 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 US.

### 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

The NYSC is operated by the National Youth Science Foundation® a nonprofit organization. For more information please visit [www.nysf.com](http://www.nysf.com), call (304) 205-9724, send an E-mail message to [office@nysf.com](mailto:office@nysf.com), or write National Youth Science Foundation, Post Office Box 3387, Charleston, WV 25333-3387.



To apply, go to <http://apply.nysc.org>

**Y**

Youth

**S**

Science

**D**

Discovery

**E**

Experience



## Youth Science Discovery Experience *Project Based Learning*

*The YOUTH SCIENCE DISCOVERY EXPERIENCE is an enrichment program for high school students from around the state of West Virginia. This residential program is held during the traditional school year at the NYSF's Davis-WV Campus and supports student STEM research with mentorship from professional scientists.*

### **PROGRAM SUMMARY**

**Research Projects:** Student research projects are the focal point of the Youth Science Discovery Experience. Each eight-student research team works with a teacher and a scientist throughout the program. Scientists provide research prompts and some technical guidance, but students develop their own strategies and experiments, collect and interpret original data, present their results in a colloquium at the end of the program, and create research posters to be presented on the YSDE website.

**Science and Career Talks:** Prominent speakers discuss current science topics and highlight career possibilities. These guests are encouraged to stay as long as they are able, so students can ask post-lecture questions or speak informally with scientists at meals and between events.

**Outdoor Adventure Program:** Staff and scientists lead small-group adventures into the surrounding forests for fieldwork and recreation, fostering an appreciation of nature and developing leadership and teamwork skills. Depending on the season, these adventures may include backpacking, hiking, snowshoeing, and mountain biking.

**Seminars and Inquiry Activities:** Opportunities abound for students to pursue personal interests on an informal basis. Two seminar blocks each afternoon offer options for academic, cultural, and outdoor exploration in small groups. A daily whole-group meeting brings everyone together again before dinner for an inquiry-based activity to stimulate creative problem solving skills and critical thinking.



## Student Scientists In Action

# Y

Youth

# S

Science

# D

Discovery

# E

Experience



## Serving WV's Dedicated STEM Students

### PROGRAM FEATURES

#### **State-wide Representation**

Students in the 7<sup>th</sup> through 12<sup>th</sup> grade and teachers participate in the YSDE.

#### **Physical Environment**

The NYSF's Davis-WV Campus includes a maker space, a research laboratory, a tiered, electronic classroom, and small group workrooms. It is located in the rich natural environs of West Virginia's eastern mountains. The region provides an outstanding natural laboratory for teaching and exploration. Removal from the usual distractions of cities or college campuses provides a nurturing atmosphere.

#### **Intensive and Non-Competitive Learning**

YSDE involves five days of science immersion in a challenging but friendly setting. Noncompetitive learning encourages teamwork and cooperative skills. Science and mathematics are the common languages that allow students, teachers, and scientists to learn from one another.

#### **Broad Exposure to New Fields of Science, Technology, Engineering, and Math**

The YSDE program presents a broad spectrum of natural, physical, and applied STEM fields including biology, physics, chemistry, mathematics, geology, astronomy, environmental science, engineering, medicine, space science, and technology. Additional emphasis is placed on ethics, humanities, and the arts.

#### **Next Generation Science Standards**

YSDE addresses elements of the West Virginia Next Generation Standards. The nature of science and inquiry forms the basis for the program. Students learn and apply scientific principles and methods to test hypotheses and develop new knowledge. Research topics are based on real-world questions and are often interdisciplinary. YSDE's first-hand application of STEM research in direct collaboration with STEM professionals goes beyond traditional classroom learning and prepares students for inquiry-based, cross-cutting problem solving.

### GOALS

**Honor** dedicated science students

**Introduce** scientific topics beyond the traditional classroom 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 learning

**Develop** creativity, self-confidence, and cooperation among students



The Youth Science Discovery Experience is operated by the National Youth Science Foundation®, a nonprofit organization. For more information please visit [www.ysde.org](http://www.ysde.org), call (304) 205-9724, send an E-mail message to [office@nysf.com](mailto:office@nysf.com), or write National Youth Science Foundation, P.O. Box 3387, Charleston, WV 25333-3387.

For information: <http://www.ysde.org>



# Y

Youth

# S

Science

# D

Discovery

# E

Experience



## Youth Science Discovery Experience *Field Trip*

### PROGRAM OVERVIEW

*Teachers:* Have your students ever asked, “Why do I need to know this?”

*Students:* Have you ever wondered, “Why do I need to take science & math?”

The **Youth Science Discovery Experience – Field Trip** is a new program designed to provide relevant, real-world exposure to the application of science, technology, engineering, and mathematics (STEM) through a weekend excursion to a STEM destination. Through immersive partnerships with STEM organizations, YSDE Field Trips are designed to inspire students to enter STEM careers and emphasize the importance of science and mathematics education. YSDE Field Trips are fun, engaging, and content-based experiences; activities are mapped to state and national science standards and can be designed to meet specific classroom goals.

YSDE Field Trips are offered free of charge to groups of 12 students who are currently enrolled in the 7<sup>th</sup> through 12<sup>th</sup> grade in a West Virginia school; teachers or parents accompany student groups (a stipend is provided to participating teachers). Round-trip transportation from the student’s school, meals, lodging, and program materials are all included.

### STEM DESTINATIONS

#### ***Destination***

- National Radio Astronomy Observatory – Green Bank, WV
- Clay Center for the Arts and Sciences – Charleston, WV
- Canaan Valley Institute – Davis, WV
- Orbital-ATK – Keyser, WV
- Prototype Productions – Washington, DC
- West Virginia University – Morgantown, WV
- Mountain Institute – Spruce Knob, WV
- WV GIS Technical Center – Morgantown, WV
- Cranberry Glades Botanical Area – Richwood, WV
- National Conservation Training Center – Shepherdstown, WV

#### ***Dates***

- Month DD - DD, 2015
- Month DD - DD, 2015
- Month DD - DD, 2015
- Month DD - DD, 2015
- Month DD - DD, 2016
- Month DD - DD, 2016
- Month DD - DD, 2016
- Month DD - DD, 2016
- Month DD - DD, 2016
- Month DD - DD, 2016



Fun, engaging, content-based experiences

# Y

Youth

# S

Science

# D

Discovery

# E

Experience



## Relevant, Real-World STEM Activities

### SAMPLE YSDE FIELD TRIP SCHEDULE

*(VARIES BY SCHOOL AND DESTINATION)*

<b>Day</b>	<b>Time</b>	<b>Activity</b>
Saturday	7:00 AM	Depart from School
	8:00 AM	Snack en Route
	8:45 AM	Arrive at Destination
	9:00 AM	Welcome Program
	12:30 PM	Lunch
	1:30 PM	Afternoon Program
	4:30 PM	Outdoor / Recreation Activity
	6:00 PM	Dinner
	7:30 PM	Evening Activities / Free Time / Homework
	9:30 PM	Snack
	11:00 PM	Lights Out
Sunday	7:00 AM	Wake Up
	8:00 AM	Breakfast
	9:00 AM	Morning Program
	10:30 AM	Snack
	11:00 AM	Packing / Check-out
	12:30 PM	Lunch
	1:30 PM	Afternoon Program
	5:00 PM	Dinner
	6:00 PM	Depart
	7:45 PM	Arrive at School



### DETAILS

- Each YSDE Field Trip consists of 12 students from a single school.
- Two teachers or parents will serve as chaperones.
- A trip leader selected by the National Youth Science Foundation will coordinate YSDE Field Trip arrangements and activities and will lead the field trip.
- Student participants must be currently enrolled in the 7<sup>th</sup> to 12<sup>th</sup> grade at a West Virginia school and not on academic or behavioral suspension or subject to any other disciplinary action.
- To apply, please send E-mail to [fieldtrip@ysde.org](mailto:fieldtrip@ysde.org).
- For more information, please visit <http://fieldtrip.ysde.org>.