



COLLEGE READINESS PROGRAM

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Chief Academic Officer

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NATIONAL
MATH + SCIENCE
INITIATIVE

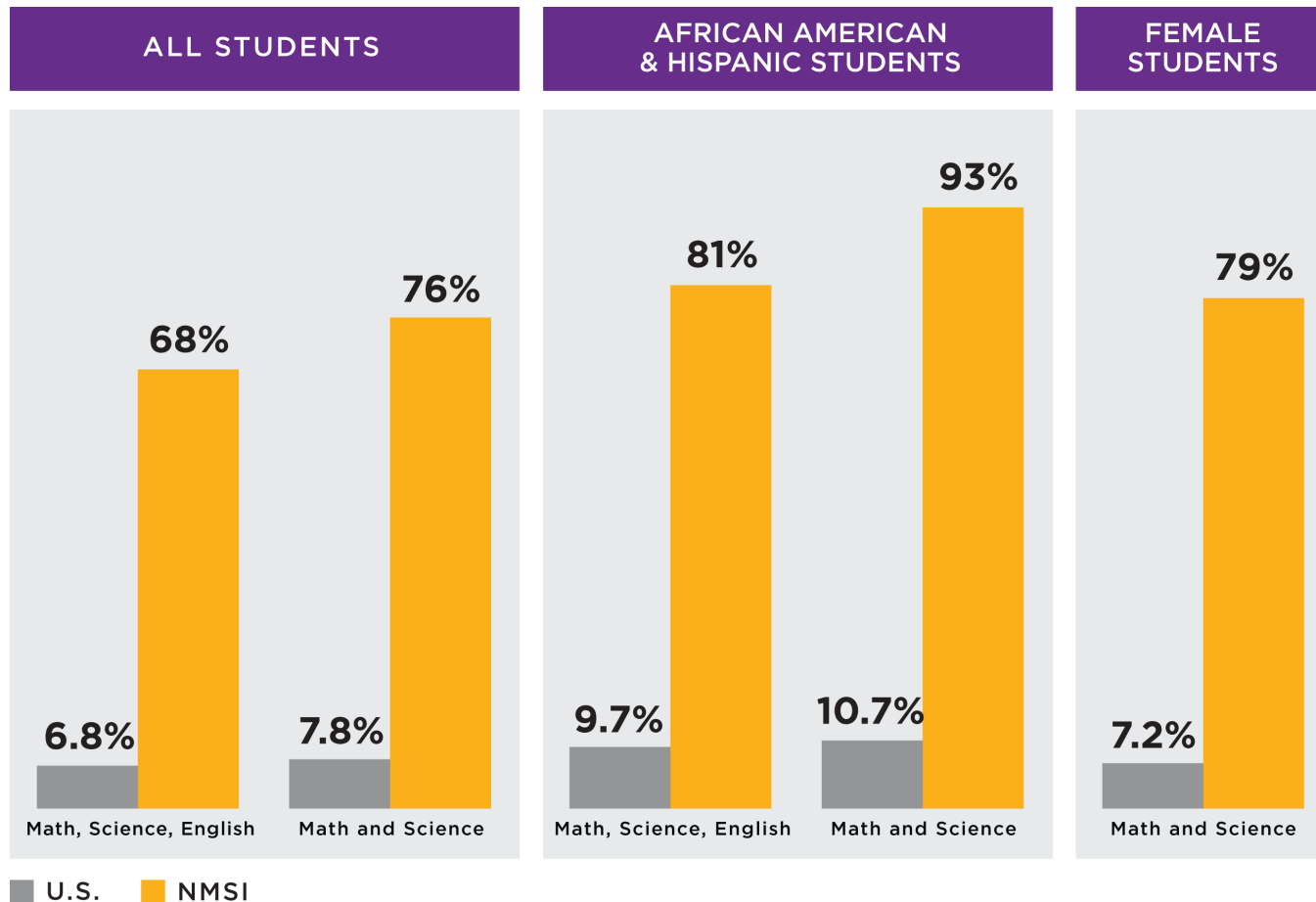
Who We Are, What We Do & How We Do It

- **NMSI** is a nonprofit organization, launched in 2007 by top leaders in business, education, and science to transform education in the United States.
- **Our Mission:** Improve teacher effectiveness and student performance in the critical subjects of science, technology, engineering, and math (STEM)
- **Our Approach:** Identify effective, efficient programs; create replication protocols to ensure fidelity; then take them to scale
 - **College Readiness Program (CRP)**
 - **Laying the Foundation (LTF) Teacher Training Program**
 - **UTeach Expansion Program**



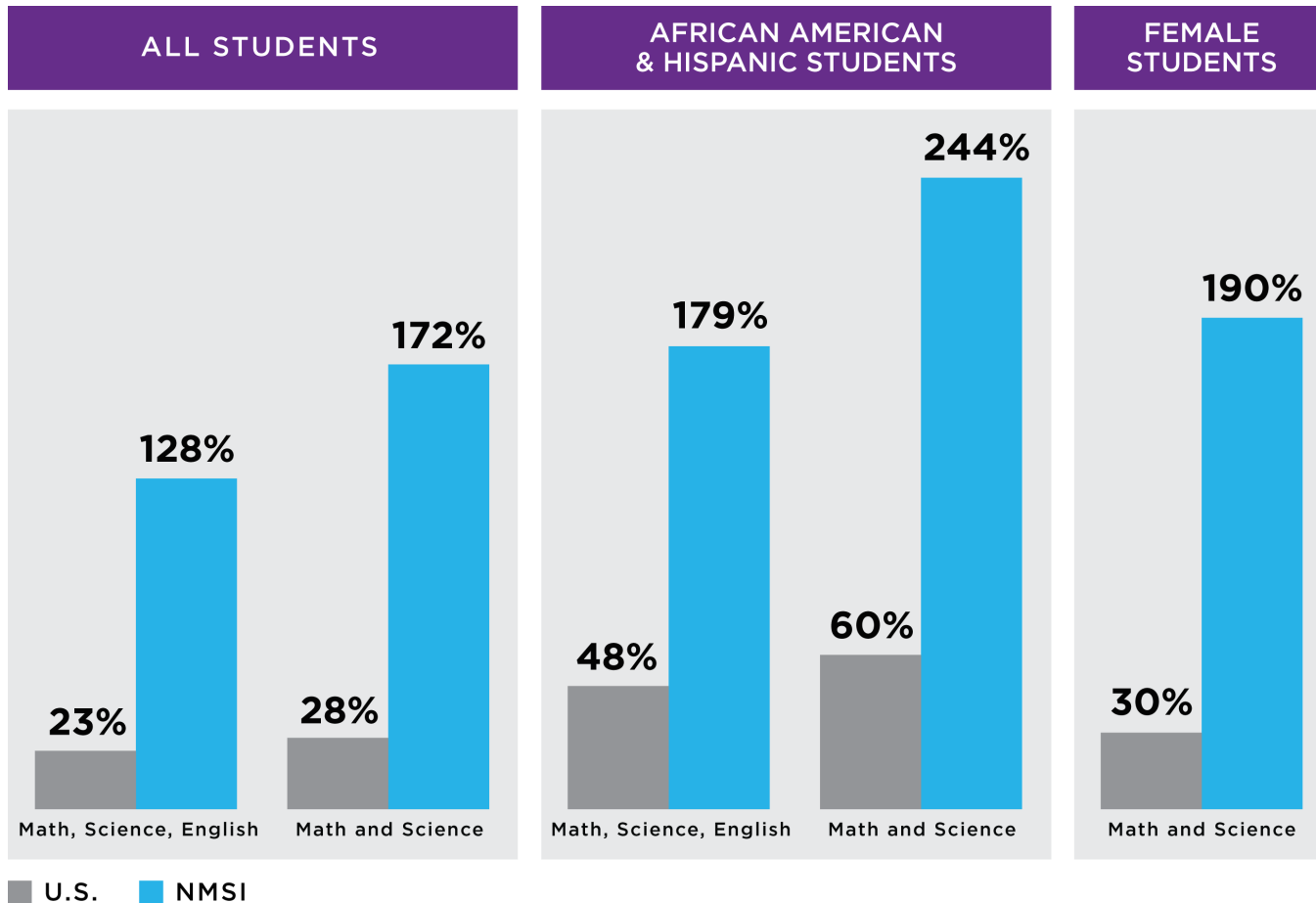
CRP: Dramatic Impact in One Year

First-Year Increase in Qualifying AP Scores for U.S. and NMSI Schools



CRP: Sustained Improvement

Three-Year Increase in Qualifying AP scores for U.S. and NMSI Schools



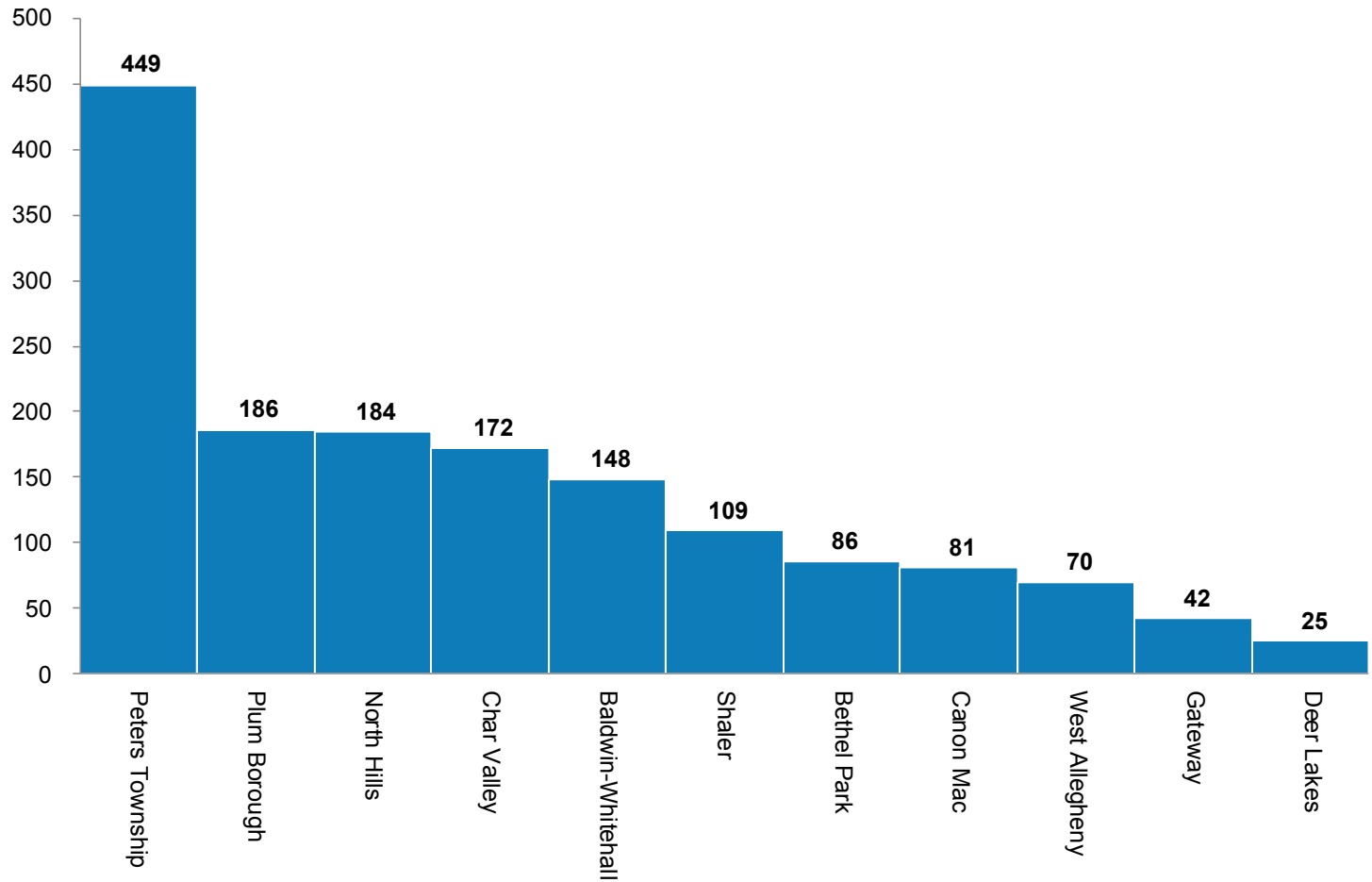
NMSI Impact on States

- In 2012, our two schools in Oklahoma accounted for 35% of the state's increase in qualifying math, science and English (MSE) scores.
- In 2012, our four schools in Hawaii accounted for 89% of the state's increase in qualifying MSE scores.
- In 2013, our three schools in Colorado accounted for 19% of the state's increase in qualifying MSE scores.
- In 2013, our nine schools in Indiana accounted for 33% of the state's increase in qualifying MSE scores.
- In 2014, our two schools in Mississippi accounted for 14% of all the qualifying MSE scores in the state, and accounted for 54% of the state's gains in qualifying MSE scores.
- In 2014, our one school in San Diego led California in percentage increase in qualifying math and science scores and our two schools in Pittsburgh led Pennsylvania in the same category.



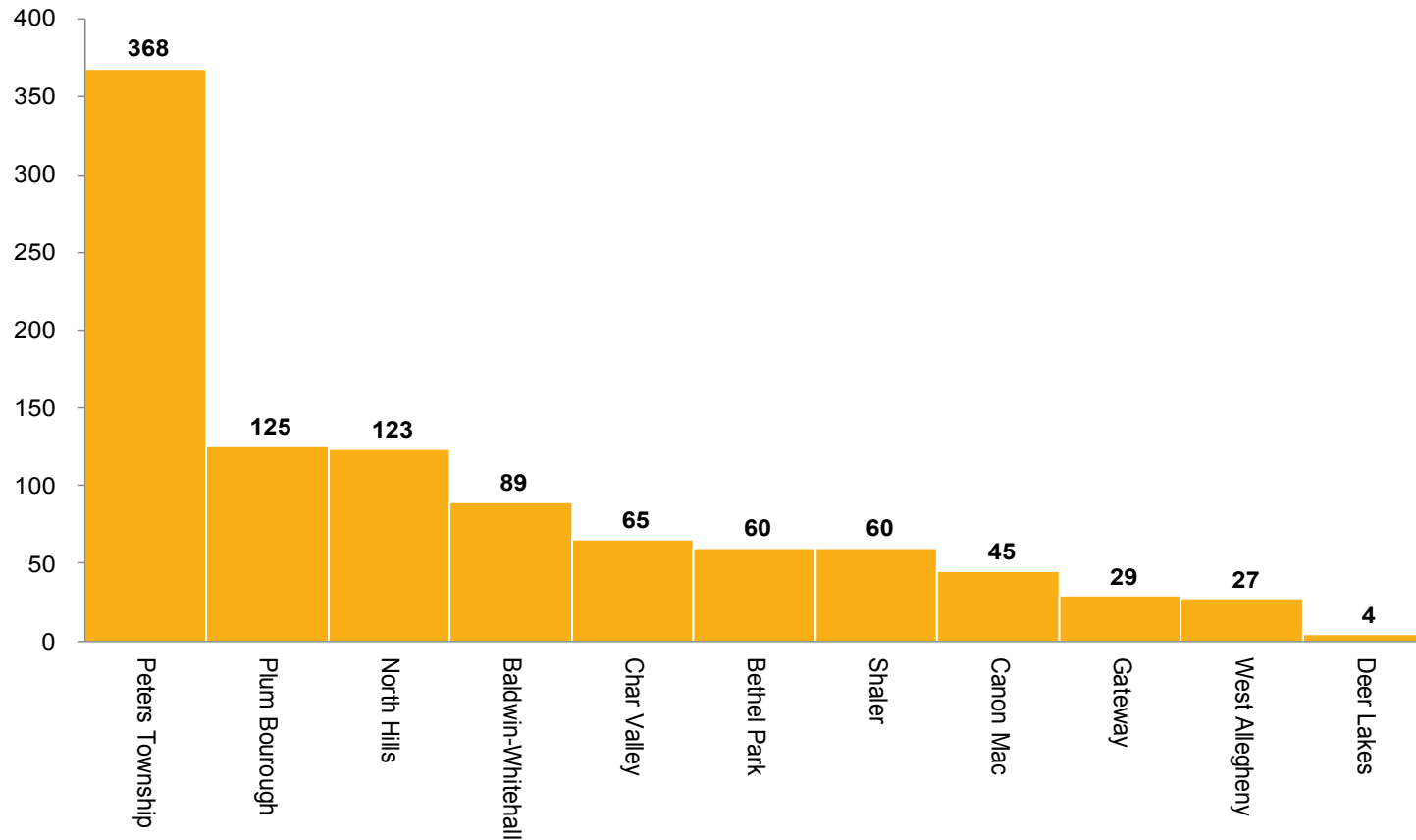
AP Performance in Western PA

Qualifying Scores on Math, Science, and English AP exams



AP Performance in Western PA

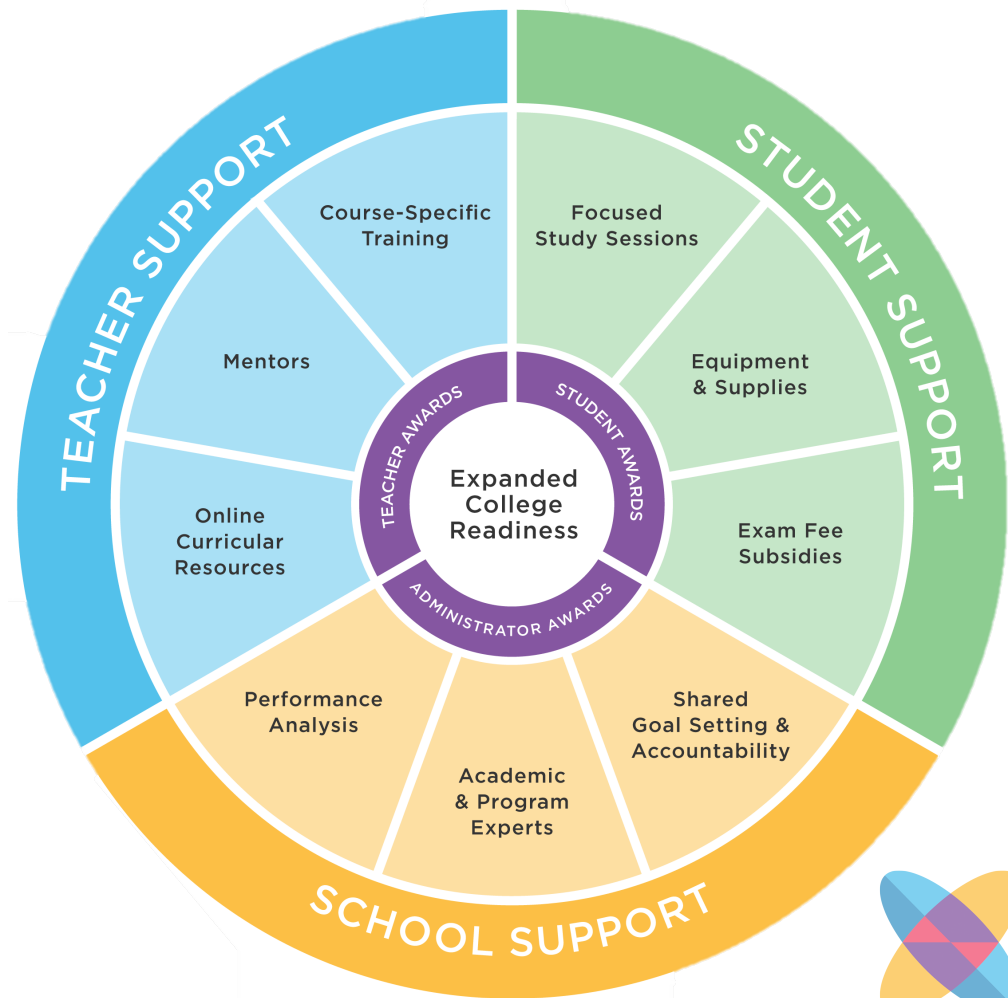
Qualifying Scores on Math and Science AP exams



College Readiness Program: Elements of Success

NMSI's College Readiness Program:

- Dramatically increases the number of students taking and earning qualifying scores on AP math, science, and English exams
- Expands access to traditionally underrepresented students



Elements of Success: Support for Teachers

- **AP Teacher Summer Institute (APSI)** - AP Teachers attend four-day training sessions prior to the first year of the program and in subsequent summers during the program years.
- **Two-Day Workshops** - AP Teachers attend two-day teacher workshops during the fall to reinforce summer training.
- **Mock Exam/Reading Training** - AP Teachers attend one-day teacher trainings to learn how the exam is graded in sessions led by NMSI “readers”.
- **Training for non-AP teachers** - NMSI provides its Laying the Foundation Teacher Training for teachers in grades 3-12 for four days during the summer for three consecutive years to increase rigor in their classrooms to build the pipeline of students ready for AP.
- **Support of AP teachers** - AP Teachers receive support provided by NMSI mentors – AP teachers who have achieved excellent AP results.



Elements of Success: NMSI Teacher Mentors

- **NMSI mentors** available for all/selected teachers in each school to provide one-on-one support throughout the school year.
- NMSI mentors are subject area AP teachers/consultants with a proven record of success in AP exam score results.
- A **collaborative relationship** between the teacher and his/her mentor based on a shared vision of strengthening AP results through the resources and training provided by the NMSI College Readiness Program.
- The NMSI mentor will provide weekly communication via email, phone call, Skype, etc., for curricular support, pacing guidance, and resources.



Elements of Success: Online Resources

Access to the most current and effective materials:

Instructive materials include AP course information, AP exam information, teaching resource materials, curriculum modules, articles, and monographs.

The NMSI Teacher Portal:

Each subject has a separate section for teachers with details regarding successful implementation of AP programs, targeted toward the most important information for increased achievement on AP exams.

The Quest Homework System:

An extensive knowledge bank of over 60,000 questions and answers covering Math, Biology, Chemistry, Computer Science, and Physics that provides a user-friendly, formative assessment system that allows teachers to customize their instruction and homework assignments toward a student's individual learning needs.



Elements of Success: Student Support

Student Study Sessions:

The College Readiness Program includes at least three AP extracurricular study sessions per subject, which are typically held on Saturdays and are led by state and national AP experts while the students' classroom teachers observe.

Equipment and Supplies:

Each school receives \$35,000 for equipment and supplies over a three-year period.

Examination Fee Subsidy:

Students typically receive half the cost of the exam fee from NMSI or the school district (the College Board fee for one exam in 2015 is \$91.00).

Extra Tutoring Sessions:

Students may receive after-school tutoring conducted by their teachers, at a minimum of 40 hours per teacher per year.



Student Study Sessions (SSS)

- 6.5 hours with registration
 - 8:30 am to 2:30 pm, but can be adjusted
- Four 75-minute topic sessions
- AP teacher(s) expected to attend all sessions with their students
- NMSI-provided presenters
- Snack/lunch for the students
- Raffle prize(s) to encourage students to attend
- Printing and shipping of NMSI study session materials
- Logistical planning and organization for the day



Sample Study Session

SSS #1 Science					
Presenter	AP Course	Session I 8:30-9:45	Session II 9:55-11:10	Session III 11:50-1:05	Session IV 1:15-2:30
Margarita P.	Biology	Bacterial & Viral Genetics	Cell Respiration	Cell Membranes & Transport	Protein Synthesis
Susan H.	Chemistry	Equilibrium General KSP	Thermodynamics- Enthalpy, Entropy, etc.	Kinetic-Rate Mechanisms	Kinetic- Integrated Rate
Norm L.	Physics 1	Newton's Forces & Laws	Circular Motion, Gravity, Orbits	Work & Energy	Momentum & Energy
Philip B.	Environmental Science	Overview of Multiple Choice	Nonrenewable Energy	Renewable Energy	Geological Resources & Soils



Elements of Success: Financial Support

Teacher Support

- \$500 stipend for participation in NMSI training and related activities
- \$100 for each qualifying score earned by a student who appears on their AP class roster
- \$1,000 bonus based on a qualifying score threshold set for their course

Student Support

- \$100 for each qualifying AP exam score
- Exam fees – typically 50% of the cost of the exam

Administrator Stipends and Awards

- \$2,000 bonus $\frac{1}{2}$ based on the school meeting pre-determined AP exam qualifying score thresholds



Designated Administrator

School Designated Administrator (DA) –

- Responsible for implementing and monitoring all components of the program in his/her school
- Direct contact for the NMSI Program Manager
- Should be selected no later than March
- Staff member selected as the DA should hold a position of leadership in the school and have knowledge of the AP program
- *Suggestion for DA: Assistant Principal over curriculum*



School Site Coordinator

Site Coordinator (SC) –

- Responsible for managing the Saturday **Student Study Sessions (SSS)** and will work in collaboration with the DA
- May be an administrator or AP teacher; **or** position might be split between three AP teachers – one math, one science, one English
- Expected to publicize and remind students and parents of SSS dates
- Provides NMSI the number of students expected to attend each Saturday SSS from their campus two weeks prior to each Saturday and follows up by completing an attendance template after each SSS
- Attends and helps facilitate the SSS, including set-up, student check-in and attendance collection, lunch flow, and student prize distribution



AP Teacher Expectations

- Increase number of students receiving qualifying scores of 3 or greater on AP math, science and English (MSE) examinations
- Attend a week-long (four- or five-day) College Board-endorsed summer institute or NMSI-approved equivalent
- Attend the NMSI Two-Day Workshop
- Attend the NMSI AP Mock Exam Reading (one day)
- Conduct structured tutorials for AP MSE students for a minimum of four hours/month outside of normal class time



AP Teacher Expectations

- Observe and assist with three Student Study Sessions and encourage all AP MSE students to attend
- Teach the AP MSE curriculum as outlined in the College Board guidelines
- Complete the College Board's AP audit protocol
- Support the School Designated Administrator and the NMSI Program Manager



College Readiness Program: Timeline

Plan

October – January

- Secure funding
- Complete application
- Schedule site visit
- Host site visit
- Complete NMSI growth scenario

Prepare

February – April

- Negotiate and finalize MOU
- Equipment inventory
- Conduct parent outreach
- Recruit students
- Teachers hold summer training dates

Execute

May – August

- Recruit students
- Public announcement
- Teachers register and attend APSI
- Master schedule
- Secure funding



Contact Information

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