Puerto Rico Math and Science Partnership (AIACiMa)

Presentation to the PRMSP National Advisory Board
Overview of Year One

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Core Partners

- UPR-Río Piedras
- UPR-Mayagüez
- UPR-Cayey
- UPR Humacao
- PR Department of Education
Our vision and values

- Students Learn
  - Teacher quality
  - Rich learning environment
  - Continuous assessment

- Values
  - Professional Development and support

- Collective Responsibility
  - Administrators, Supporting personnel and parents
  - Higher Education and Industry

- High standards

Learning Communities
Students learn M&S with understanding

Teachers use teaching methods and assessment that promote learning M&S with understanding

Continuous professional development for teachers to foster learning with understanding

School environment that supports teachers to teach for understanding
PRDE

Educational Region staff

Classroom

Students

Teacher

School, Principal, other teachers, counselor, parents
Classroom
Students
Teacher
School, Principal, other teachers, counselor, parents
Educational Region staff
PRDE
Continuous Professional Development Program
Establishment as communities of learners
PRDE

Educational Region staff

Classroom

Students

Teacher

School, Principal, other teachers, counselor, parents

- Participation in all working groups
- Articulation with the M&S reform
- Policies
Mentoring during the first two years
Classroom
Students
Teacher
School, Principal, other teachers, counselor, parents

Educational Region staff

PRDE

Practicum
Classroom
Students
Teacher
School, Principal, other teachers, counselor, parents
Educational Region staff
PRDE
Certification
Classroom

Students

Teacher

School, Principal, other teachers, counselor, parents

Educational Region staff

PRDE

Involvement in action research
PRMSP Goal #1

Higher Student Achievement Through Challenging Curricula and Teacher Empowerment
PRMSP Goal #2

Increase and Sustain K-12 Math and Science Teachers Through a Professional Education Continuum
PRMSP Goal #3

Improve Knowledge Base on M&S Teaching and Learning by Means of Assessment, Evaluation, and Research
PRMSP Goal #4

Create Sustainable K-20 Partnerships that Leverage Maximum Support for K-12 M&S Education
How are we achieving these goals?
During Year One we concentrated our efforts mainly on:

- preparing the physical facilities that are housing the offices of PRMSP at each one of the five Core Institutions,
- identifying the specific human resources to carry out the proposed activities and hiring them,
During Year One we concentrated our efforts mainly on:

- creating all the working teams,
- establishing PRMSP as a learning organization,
- selecting the first cohort of schools,
During Year One we concentrated our efforts mainly on:

- starting the formation of the schools as communities of learners,
- selecting and training the trainers for the PRMSP teachers’ Professional Development Program,
During Year One we concentrated our efforts mainly on:

- implementing the Summer Professional Development program for the first cohort of PRMSP M&S teachers,
During Year One we concentrated our efforts mainly on:

- Coordinate with supporting partners and offer the first Summer M&S Camps for 6-12 grade students
- Offer the first Summer Research Program for preservice teachers
Leadership Team

Josefina Arce, PI, Professor of Chemistry, UPR-Rio Piedras
Brunilda Martinez, CoPI, Undersecretary of Education for Academic Affairs
Moisés Orenge, CoPI, Dean of Arts and Sciences at UPR-Mayagüez
Edwin Vázquez, CoPI, Associate Professor of Biology, UPR-Cayey
Ana M. del Llano, CoPI, Professor of Biology, UPR-Humacao,
Keith Wayland, CoPI, Professor of Mathematics, UPR-Mayagüez
Lucy Gaspar, PD, former science teacher and Principal
Marta Fortis, Teams Director, Professor of Education, UPR-RP
Milagros Bravo, Coordinator of Evaluation, Professor of the Graduate School of Education, UPR-RP
José Altieri, former PRDE Assistant Secretary for Academic Affairs, now Superintendent
Teresa Vega, Assistant Secretary for Academic Affairs
Myrna Fúster, PRDE Director of the Institute of Professional Development for Teachers
Raúl Marrero, Math Teacher, Pablo Colón Berdecia School
Empowering Schools

- Evaluation, Assessment, and Educational Research
- Preservice, Induction, Certification
To provide authentic professional development

M&S
Assessment
Communities of learners
Action Research

Trainers of Trainers

M&S Faculty and Exemplary Teacher Trainers

Resource Teachers (60)

LEAD TEACHERS
ALL M&S TEACHERS
Educational Regions and Core Higher Education Institutions

- UPR-M 45 Schools
- UPR-RP 45 Schools
- UPR-C 35 Schools
- UPR-H 36 Schools
To improve communication and for follow up of Professional Development Program

All PRMSP Schools will receive:

- Desktop Computer with webconference software
- Printer/fax/photocopier/scanner
- Web camera
PRMSP activities impact students directly and indirectly

- Improving the M&S content they receive in their schools in a learning-centered environment
- Participating in M&S summer camps giving context to what they are learning in their classes
Summer camps for 6-12 students

- Inter American University-Bayamón
  *Water Quality Assessment and Ecosystem Health* for junior and senior students.

- UPR- Río Piedras
  *Nanotechnology Research Camp* for junior and senior students

- Hacienda Buena Vista in Ponce- the Conservation Trust of Puerto Rico
  *Science and Natural History at Hacienda Buena Vista* for six grade students

- Pontifical Catholic University :
  *Strengthening Knowledge and Skills in Science, Mathematics and oral communication through Environmental Science Experiences* for junior students.

- La Cabezas de San Juan Natural Reserve- the Conservation Trust
  *Math and Sciences in Ecology* for six graders.