

The Boston Science Partnership

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Doing the Impossible: AP Science Success in an Urban Setting

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Boston Science Partnership

- National Science Foundation
- Mission: Increase science student achievement in Boston Public Schools by increasing the quality of teachers
- Core Partners
- Supplemental Partners

Presentation Overview

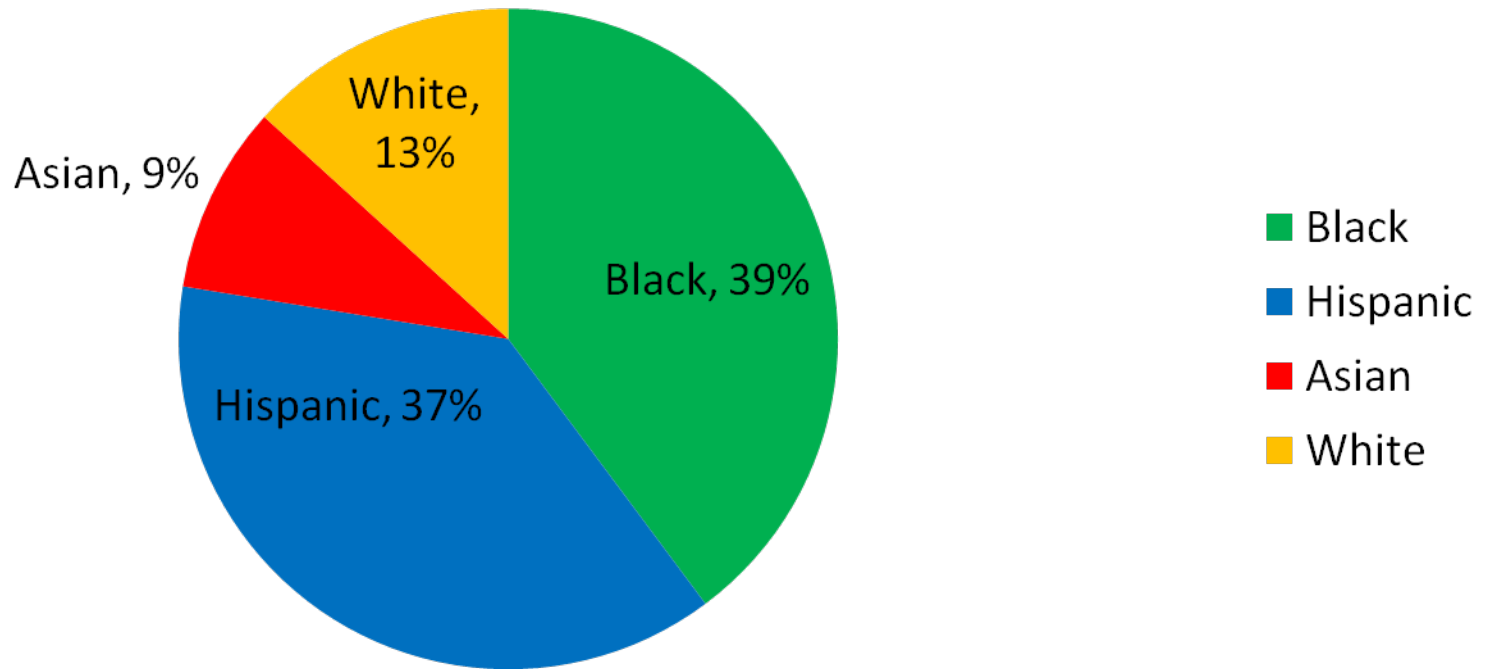
- Context of BPS science
- The core parts of AP Support
- Planning Session 1
- Considerations
- Planning Session 2
- Q & A

Context and History

- Boston Public Schools (BPS) overview
 - Student population: High minority population, 71% eligible for free or reduced lunch
 - Two high school types
 - Small schools
 - School assignment system
- Science in BPS
 - District-wide curricula
 - AP before 2004
 - The Boston Science Partnership (BSP)
 - AP Enrollment Patterns

BPS District Demographic Data

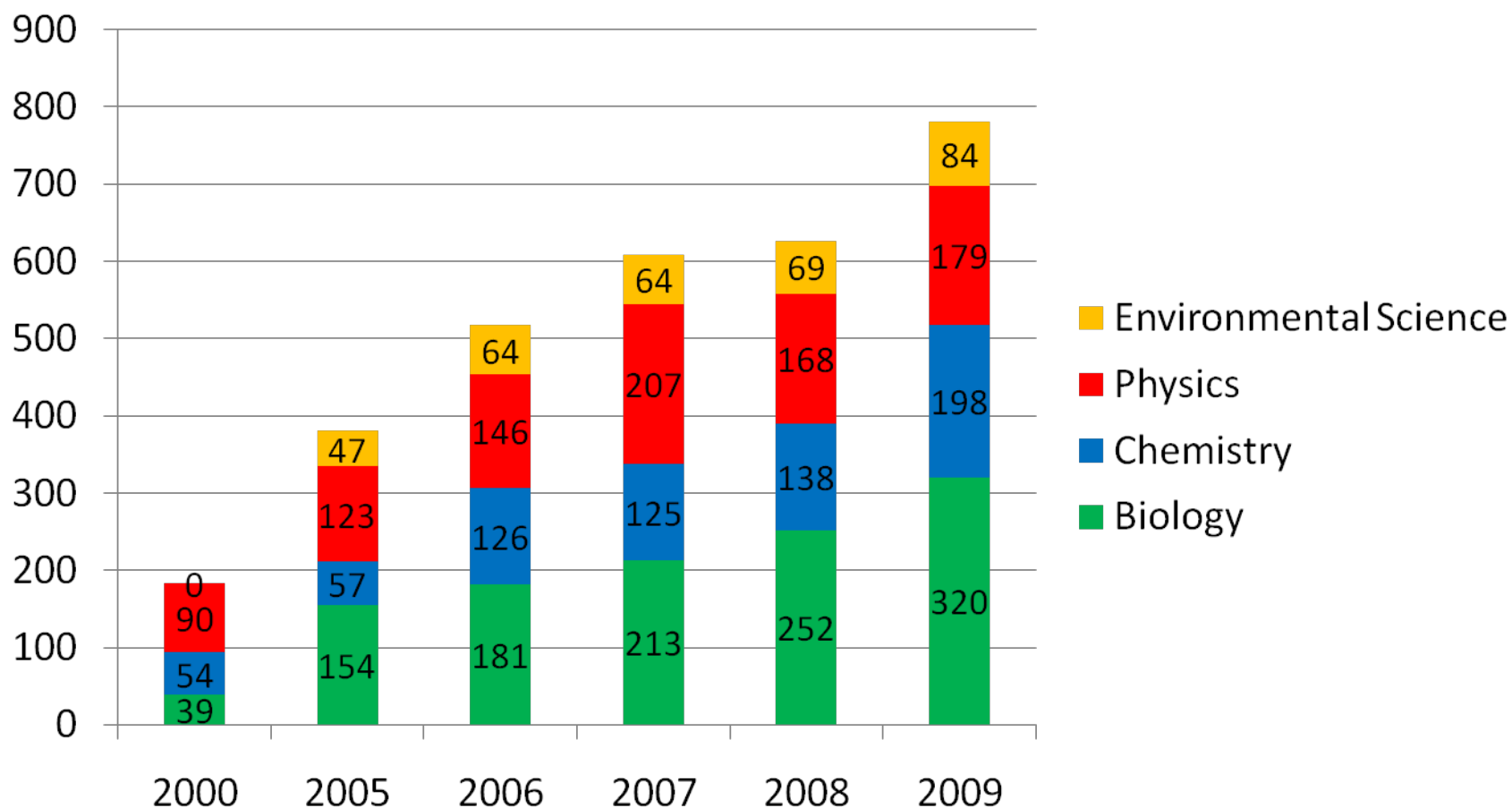
2008-2009



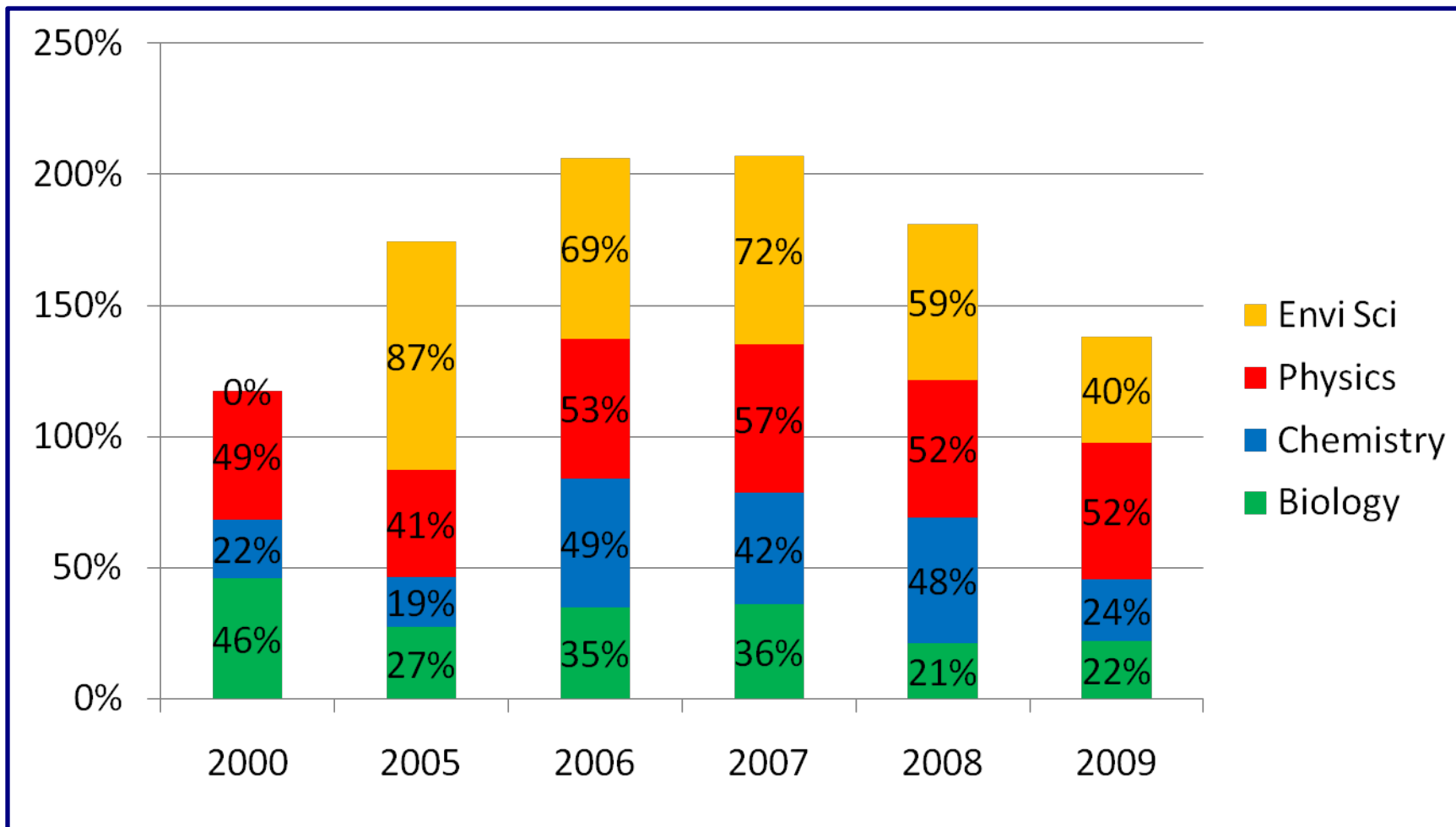
BPS AP Demographics

Race	2001-2002	2005-2006	2008-2009
Black	22%	27%	31%
Hispanic	8%	14%	20%
Asian	47%	40%	31%
White	23%	19%	15%

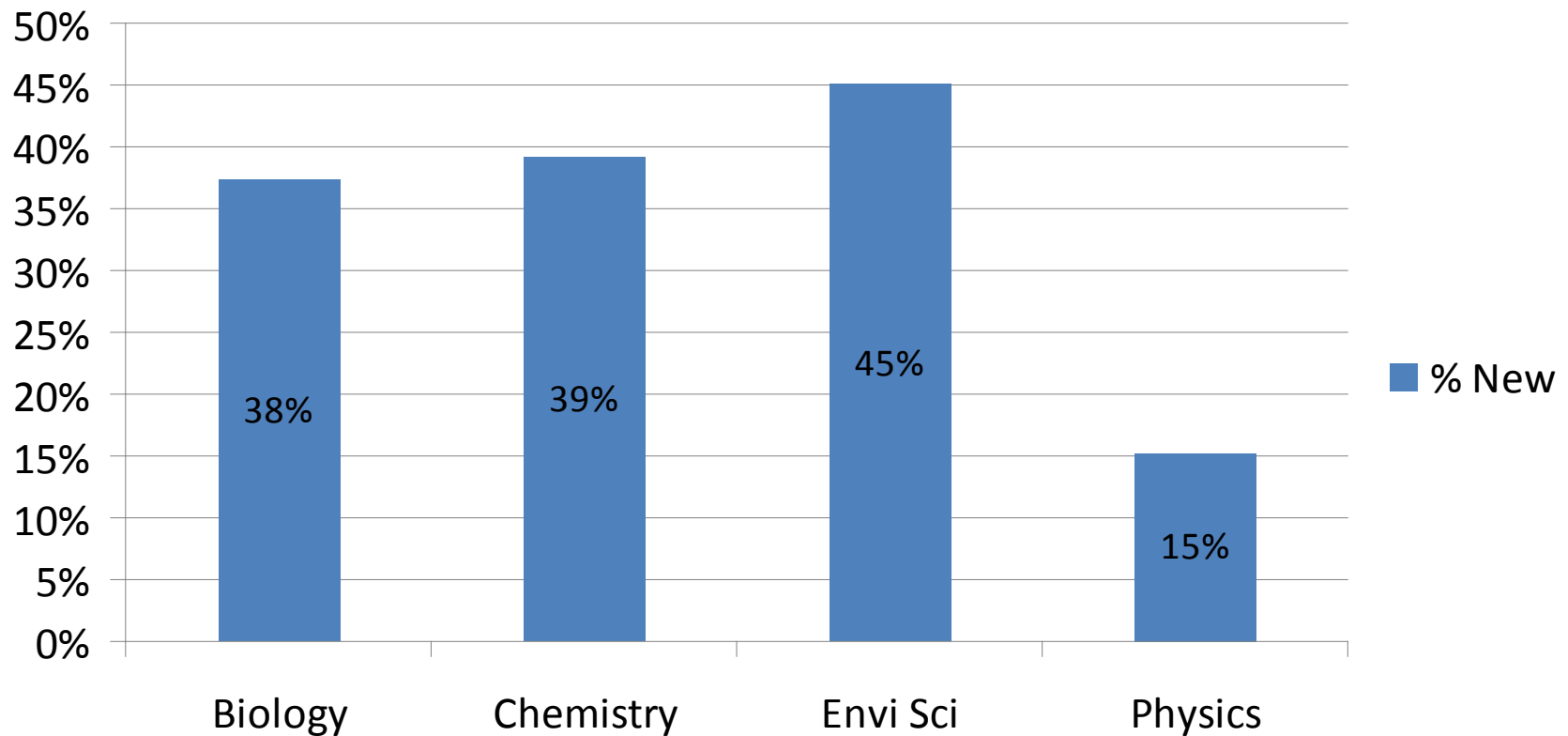
AP Science Enrollment 2000-2009



AP Passing Rates 2000-2009



% of Students with New AP Teachers 2008-2009



Seeds of the AP Program

- Individual teachers partnered with universities to enhance their AP classes
 - AP Physics labs and support
 - Biology enrichment programs
 - Pre-AP Chemistry summer program
- Initial BSP programs -- labs, practice exam, summer
 - Based on earlier teacher-based efforts
 - Focused on scaling up and expanding access
 - Components separate and somewhat disconnected

Drivers for a Support Program

- Students are on a college campus
- Class culture
- More time spent on material
- More support for teacher
- Teacher community building
- Accessibility to materials and equipment
- Increased number of students in AP
- Increased number of AP classes
- Increased number of students passing
- Commitment
- Different support approaches
- Year Long

Complementary Core Pieces

- AP Bridge
 - Foundational Skills, Selection, and Class Culture
- AP ULS
 - Lab part of the exam and some content
- AP Practice Exam
 - Student test prep, formative assessment, and teacher PD
- APSI
 - Urban focused teacher PD and content
- AP Callbacks
 - Community building and Teacher PD

Planning Your AP Program

1. What is the goal of your support program?
 - Increase enrollment?
 - Increase AP scores?
 - Improved pre-AP preparation?
2. Who are you targeting?
 - District or select schools?
 - Teachers or students?
 - A particular subject area?

Consider the following...

Student motivation

- How are you going to get your students interested?
 - Mandatory vs. Elective participation
 - Program linked to grades
 - Participation reward
- How are you going to keep the students committed?
 - Sports, jobs, family commitments, transportation
- How are you going to get parental involvement?

Consider the following...

Teacher motivation

- How are you going to get your teachers interested?
 - Mandatory vs. Elective participation
 - Stipend
- How are you going to prepare the teachers?
 - When will meetings/planning sessions be held
 - Who will be in charge of curriculum development

Planning Session 2

- Reduced funding
- Priorities
- Make it work for you!

Lessons Learned

- Need an on-site coordinator
- Teachers need to be with their students
- Teachers need to drive the curriculum
- Balance rigor and engagement
- Start recruitment early for teachers and students
- Equity
- Scores will dip as you add new teachers, sections, and students
- Roll it out thoughtfully and gradually

Keys to a Unified Program

- Stakeholder buy-in
 - Students, Teachers, Parents, Principals, District
- Making commitment real
 - Stakeholders
 - Program
- Finding the “right” students and teachers

Presentation Links

- Boston Science Partnership:
www.bostonscience.org
- COSMIC site: www.cosmic.umb.edu (recent publications of interest tab)
- Research links available upon request
- Email: allison.scheff@umb.edu
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