



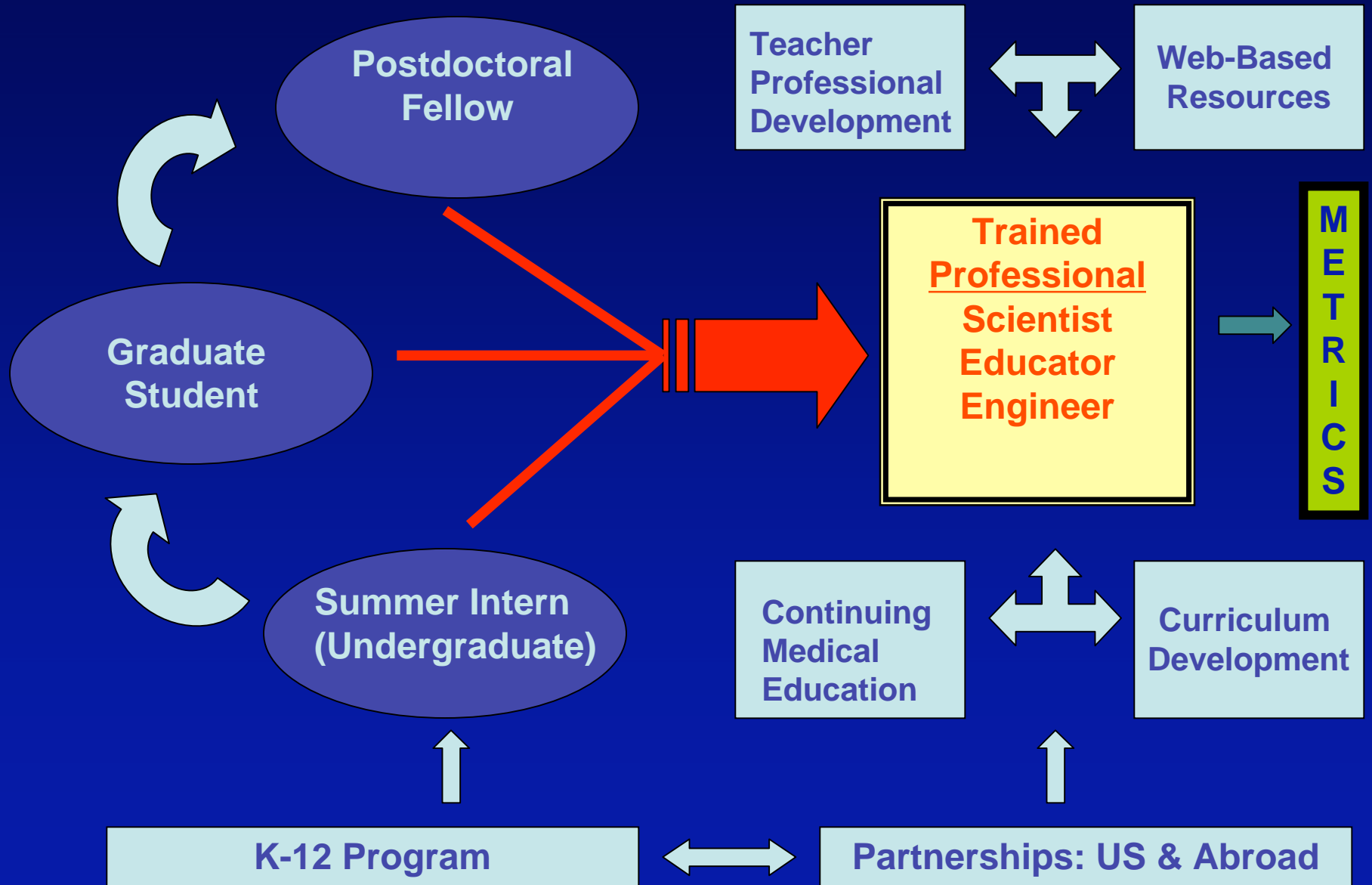
## **TAMEST Panel**

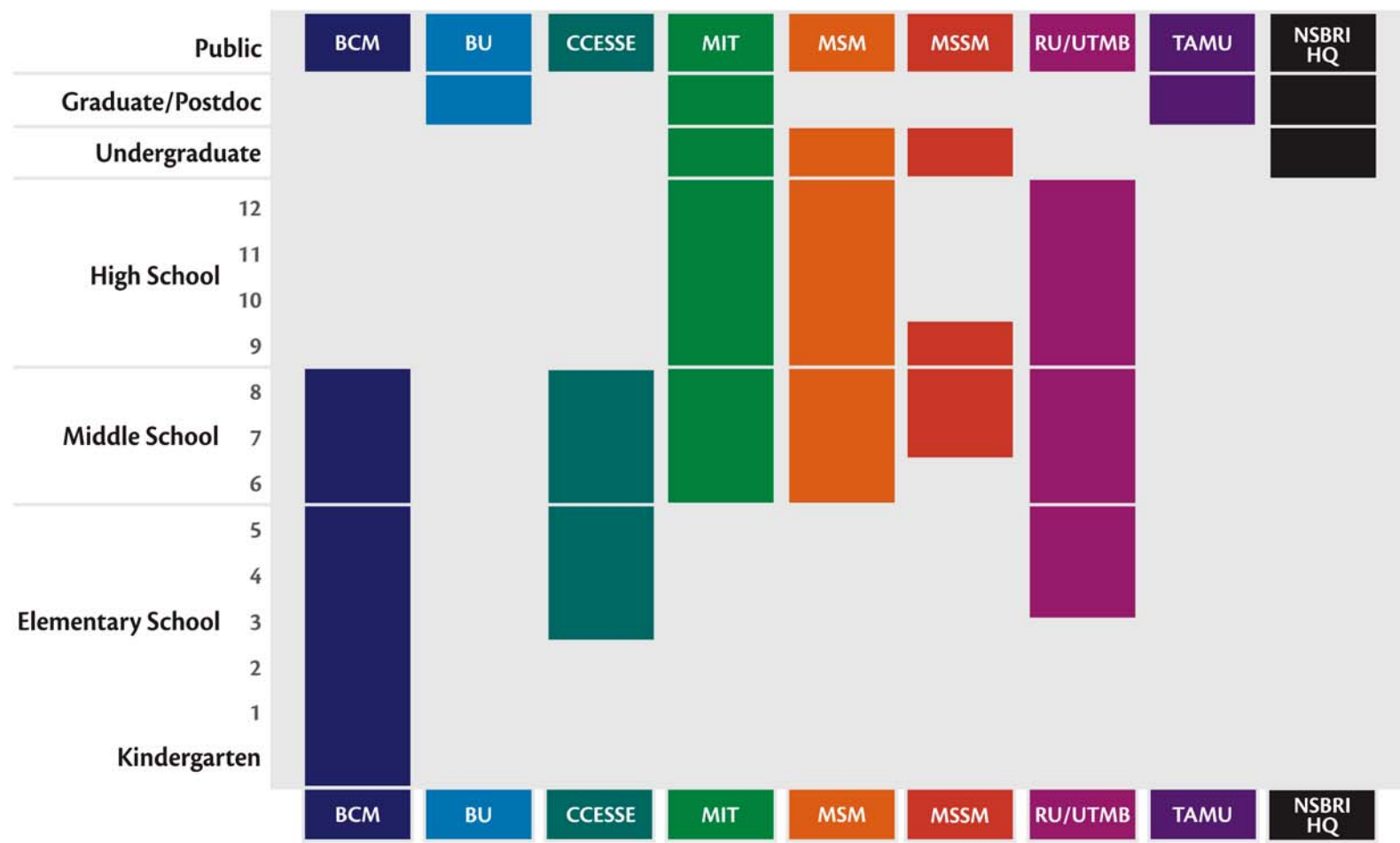
# **Closing the Gap Between Texas Schools, Higher Education and the Workforce**

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# NSBRI EDUCATION PROGRAM





Baylor College of Medicine (BCM) | K-16 Team

Binghamton University (BU) | Postdoctoral Fellowship Program

Colorado Consortium for Earth and Space Science Education (CCESE) | K-16 Team

Massachusetts Institute of Technology (MIT) | K-16 Team, Graduate Education Program

Morehouse School of Medicine (MSM) | K-16 Team

Mount Sinai School of Medicine (MSSM) | K-16 Team

Rice University/The University of Texas Medical Branch (RU/UTMB) | K-16 Team

Texas A&M University (TAMU) | Graduate Education Program

**National Space Biomedical Research Institute  
Headquarters (NSBRI HQ)**

| CME for Flight Surgeons - Continuing Medical Education Program

| Irish Internship Program

| Johnson Space Center Summer Internship Program

**Portfolio of Approaches**



**Tangible Products**



**Measurable Outcomes**

**Curriculum Development: Teacher Activity Guides**

- 32,000 teachers; 1,160,000 students

**Teacher Workshops: Instructional and Classroom Lab Experiences**

- 15,000 teachers

**Web-based Technologies: BioEd Online ([www.bioedonline.org](http://www.bioedonline.org))**

- 1,200,000 unique visitors (2006)

**Contribute to STEM in accordance with National Education Standards**

## Enhancing Career Pathways

- Summer Internship Program at Johnson Space Center (75 interns)
- Irish Intern Program (10 interns)
- Graduate Program in Space Life Sciences (4 students)
- Postdoctoral Fellowship Program (11 fellows)
- Space Medicine Grand Rounds CME (>1,000 participants)



Inspiring the next generation of space explorers



Stimulating excellence in science, math and engineering



Creating a new model for doctoral education

# Workforce Considerations

**Competitiveness is a global challenge**

**US must nurture an educated workforce**

- **to foster advancements in science and technology**
- **to create new industry**
- **to support economic development**

**Diversity is key to adding depth to America's workforce**

# Beyond Bias and Barriers

Report released by the National Academy of Sciences

- Women and minority group members make up increasing proportions of the workforce, US and world-wide.
- In academia, productivity of male and female faculty in science and engineering is equal (publication record).
- Women's representation decreases with each step up the academic tenure track and in organizational leadership positions.
- Academic and organizational structures and rules contribute to the underuse of women and minorities in science and engineering

**Transformation of institutional and educational approaches towards eliminating bias begins at all levels with encouragement to excel in science and engineering.**

## Going Forward

- Enlarge the educational pipeline via development of novel partnerships – enhances recruitment and retention of teachers and educated workforce
- Support for R&D – drives advancement of existing knowledge base and resources, and supports the creation of new innovations
- Leverage strengths of existing educational programs and initiatives in new ways – facilitates development of unique approaches to teaching and learning

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