

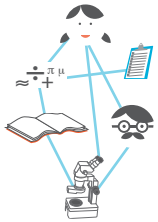
STEM EDUCATION PARTNERSHIP

Case Study



The Institute for Systems Biology (ISB) is a **non-profit** center for biomedical research located in the South Lake Union neighborhood of Seattle. Comprised of **250** faculty and staff, ISB is pioneering new approaches of **cross-disciplinary science**. ISB also has a core commitment to supporting K-12 science education: By **applying a systems approach to education**, ISB's partnerships include all teachers and, as a result, all students across a school system

FOUNDATIONS OF THE PARTNERSHIP



ISB established **dedicated staff** to facilitate its partnerships with school systems. The **Center for Inquiry Science** is a group of science educators that function akin to a lab group, but rather than engaging in scientific research, establish and maintain ISB's education partnerships.

ISB recognizes there are **no quick fixes in education** and invests in its partnerships as a **long-term commitment**. ★

ROLES



STEM Expert

Scientists have been key to ISB's partnership with Seattle Public Schools. As the district adopted new science instructional materials, **scientists partnered with teacher leaders** to facilitate professional development. The teacher leaders contributed expertise as related to instructional strategies, and the scientists as related to science content.



Resource

Despite being a non-profit, ISB has supported the funding of districts' science education programs, mainly by way of **collaborative grant writing**. For the featured partnership, ISB President, Dr. Leroy Hood led the development of National Science Foundation grants amounting **\$7.9 million**. Dr. Hood and his wife, Valerie Logan led **community fundraising** efforts to match the NSF grants at an amount upwards of **\$4.5 million**.



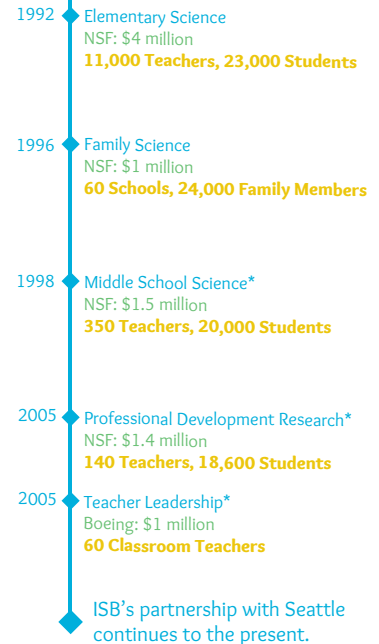
Advocate

As part of its systems approach to education, ISB not only addresses teachers, but also **district leadership**. Since he moved to Seattle in 1992, Dr. Hood has met with **the past 7 superintendents** of Seattle Public Schools. In each case, Dr. Hood conveyed ISB's commitment to the partnership.

ISB recognizes that changes in education impact the community.

The **Family Science** program (see [Timeline](#)) introduced families to both contemporary science and contemporary science education.

TIMELINE OF MAJOR GRANTS

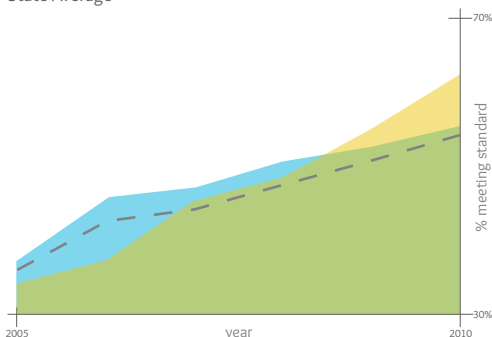


* Partnership extended to districts beyond Seattle Public Schools.

RESULTS

All Schools

Seattle Public Schools ■
Comparison Schools ■
State Average - - - - -



ISB includes **evaluation and research** as a component to all its education partnerships. These graphs depict results of a 5-year NSF-funded research project of one of ISB's professional development models. Middle school science achievement in Seattle Public Schools made significant advancements in relation to the state average and comparison schools in Washington State.

Most excitingly, Seattle's **high poverty schools made the greatest gains**, >36% over 5 years, **closing the achievement gap** to the state average.

High Poverty Schools

Seattle Public Schools ■
Comparison Schools ■
State Average - - - - -

