

**Connecticut Science Center**  
GE/CSC Introduction to Inquiry Professional Development Program  
2008 Plan and Commitments

Research shows that the following four factors are most important in teacher professional development in order to significantly impact student achievement in science:

1. Increased content knowledge
2. Increased repertoire of teaching strategies
3. Knowledge of how learners learn
4. Ability to create classroom environments that facilitate learning

Research also tells us that teachers require three years of ongoing support after receiving training in order to fully incorporate the new learning into current teaching methods. Since the Connecticut Science Center's goal is to create long-lasting improvements in science learning for Connecticut students, the Center is focusing on depth and sustainability, rather than mere exposure to new teaching strategies. Ultimately, professional development achievement will be measured by student performance on the new mastery tests.

Commitment on behalf of the school board, superintendent, and school administration is imperative to the success of your teachers' professional development, which is why the Center asks for a 3-year commitment to the program. Both release time and funding will be necessary on behalf of the district in order to implement this paradigm-shifting program.

CSC believes that quality, inquiry-based professional development can achieve the factors listed above.

In **Year One**, the Center will provide the five-day Introduction to Inquiry, which is based upon the Exploratorium's 10 years of professional development experience. The Institute will introduce participants to the inquiry process of teaching and learning, guide participants in strategic planning for incorporating inquiry into the classroom, and assist participants in building capacity to incorporate inquiry in the entire school or district. Institutes will be offered in the summer or during the school year. At the end of the school year, there will be two days of follow up sessions for all previous participants. The days will focus on participants' meeting to share their successes and identifying areas of improvement. Participants will bring samples of lessons/units (written and videotaped) and samples of student work. In addition, these teachers and administrators will begin to plan how to provide inquiry-based professional development for teachers in their school(s) or district.

In **Year Two**, participants from the previous year's Introduction to Inquiry Institute will be eligible to attend the second workshop in the series; the Classroom Applications Institute. This workshop will deepen participants' understanding of inquiry, provide an opportunity to further develop an inquiry-based lesson, as well as provide more training in the instructional coaching model. At the end of the school year, there will be another two days of follow up sessions. The days will be spent sharing all of the inquiry-based revisions included in the district curriculum, as well as again looking at samples of student work. Participant teachers and administrators will be planning to provide inquiry-based professional development for teachers in their schools(s) or district.

In **Year Three**, those participants who previously attended both the Introduction to Inquiry and the Classroom Applications Institutes will be eligible to participate in the next workshop in the series; Formative Assessment. This workshop provides practice in creating and using assessments in the science classroom, as well as further understanding and practice of instructional coaching methods.

The following commitments are asked of the districts and of the teachers in order to participate:

Year One:

- A minimum of three to five teacher leaders, and one school or district administrator, and a science leader to attend the 5-day Introduction to Inquiry workshop. Special requests for Institute training may be accommodated throughout the school year.
- Ongoing district and Center support throughout the school year will enable participants to participate in one of the following:
  - Observe a master teacher facilitating inquiry-based instruction at least once during the school year
  - Receive coaching from a master teacher for an agreed upon inquiry-based lesson
  - Have school administrator and teachers collaborate on at least one inquiry-based unit
  - Observe and collaborate with fellow trainees delivering inquiry-based instruction at least twice during the school year in order to plan and deliver inquiry-based lessons and units
- Two days of follow up and discussion and analysis of student work and teaching experiences

Year Two:

- Ongoing support throughout the school year as stated in Year One
- Participate in groups that will meet and begin discussing rewriting lessons/units to be more inquiry-based
- Lead inquiry-based professional development for fellow colleagues in their schools
- Two days of follow up and discussion and analysis of student work and teaching experiences

Year Three:

- Ongoing support throughout the school year as stated above in Year One
- Continuation of revisions for inquiry-based lessons/units
- Provide inquiry-based professional development to fellow colleagues in their schools
- Two days of discussion and analysis of student work and unit/lesson modifications to reflect inquiry-based instruction

Participants

- 3 - 5 teacher leaders from one grade level or building
- 1 school-level administrator or 1 district-wide administrator
- 1 local scientist per small group of teachers or district. The scientist can either be a university professor, or corporate scientist. He/she must provide content knowledge that is beneficial to the school.
- Districts may also invite a museum educator or science center educator to participate with the team.

District Commitment

Send teams of teachers and administrators to the Institutes

Provide teacher stipends if necessary

Provide release time for appropriate follow-up

Provide/pay for substitutes for appropriate release time

Participants must be willing to participate in student and teacher assessment activities

The Connecticut Science Center Commitment

Provide highly trained professionals to deliver inquiry-based training

Provide Institute for Inquiry training manual to each participant

Provide support and follow-up for each participant for three years

Administer student and teacher assessments for participants and control groups

Provide continental breakfast and lunch for participants during day-long workshops