



# INQUIRY APPROACHES TO MATH AND SCIENCE

A PROFESSIONAL DEVELOPMENT PROGRAM FOR  
CENTRAL VIRGINIA TEACHERS OF GRADES 3-8

HELD AT  
SWEET BRIAR COLLEGE

JULY 11 - JULY 15, 2005

[WWW.SXI.SBC.EDU](http://WWW.SXI.SBC.EDU)

SPONSORED BY THE STATE COUNCIL OF HIGHER  
EDUCATION FOR VIRGINIA (SCHEV) THROUGH THE  
FEDERAL NO CHILD LEFT BEHIND, TITLE IIA, IMPROVING  
TEACHER QUALITY INITIATIVE

## *Program Details*

Summer Workshop: Participating Teachers will attend 10 academic sessions during the five-day summer program. Topics cover the range of the Virginia Standards of Learning in the areas of science and math for grades 3-8. Teachers will learn to connect math and science together, and to connect math and science to the world around them. Instructional time will be 30 hours for the five-day summer workshop.

### Daily Schedule

First session: 9:00 a.m. to 12 noon

Lunch provided: 12 noon – 1:00 p.m.

Second session: 1:00 p.m. to 4:00 p.m.

Academic Year Follow-Up: Participating teachers will be invited to attend topical workshops in science and math by inquiry held on Saturdays throughout the 2005-2006 school year. Academic Year workshops will consist of five instructional hours (which will include teacher presentations) and a lunch hour. Typically the Academic Year workshops will begin at 9:00 am and will end at 3:00 pm.

During the Academic Year workshops, teacher participants will be giving 10-minute presentations on how they have used the workshop materials in their classrooms. Each participating teacher must make one of these presentations during the year. More information about the nature of the presentation (which will depend on the teachers' participation status) will be given at the end of the summer workshop.

For scheduling flexibility, nine workshops will be scheduled throughout the year, approximately one per month. Participants in the Continuing Education Option earn an additional 5 hours toward continuing education for each workshop attended.

Classroom Support: Participating teachers in this program are eligible to receive:

- Materials and Supplies for conducting math and science in their classrooms.
- The in-class assistance of an Instructional Support Specialist.

The materials and supplies will be provided to teachers by their participating school system as matching funds to the grant. Collaborating schools have pledged \$150 per teacher in supplies and materials. Materials and supplies will be provided to supplement existing budgets in order to implement the new classroom inquiry lessons presented in the summer workshop.



*Andrea Orvos, Instructional Support Specialist*, will continue to support participating teachers in their efforts to implement inquiry lessons presented in the summer and Academic Year workshops. Priority for scheduling among the teacher participants will be at the discretion of the school administrators. Andrea will have additional classroom supplies and materials, including equipment, to bring to the schools for student use.

## Who is Eligible?

All Central Virginia grade 3-8 teachers. 50 teachers will be accepted into the program.

## What does the program entail?

A one-week (Mon-Fri) summer workshop with additional sessions offered throughout the academic year.

## What do participants get?

Teachers who participate in the "Inquiry Approaches to Math and Science" program get *ideas* for doing inquiry-based and hands-on science and math in the classroom based on best practices in reaching diverse learners... **Plus...**



- Participating teachers may earn graduate level credit –or– continuing education points. Tuition is paid by the grant. There is **no cost** to the teacher or school in order to participate.



- Participating teachers get a stipend for completion of the 2005-06 program.



- Participating teachers from collaborating school systems may also get materials and supplies for doing hands-on science and math in their classrooms.



- Participating teachers may request in-class assistance in implementing inquiry-based instruction in their classroom. An Instructional Support Specialist will travel to schools to provide this assistance.



- During the program, lunch is provided each day in the Sweet Briar College cafeteria.

A detailed description of the project and specifics about the academic program can be found on our web site:  
[www.sxi.sbc.edu](http://www.sxi.sbc.edu)

## How to Register

Mail the completed registration form to:  
Pam Simpson, SCHEV-NCLB Project Assistant  
206 Guion Science Center, Sweet Briar College  
Sweet Briar, VA 24595

**E-mail registrations must be complete!**

Name: \_\_\_\_\_

School: \_\_\_\_\_

Grade/Grades you will be teaching in 2005-2006: \_\_\_\_\_

I teach all subjects

I specialize in teaching math

I specialize in teaching science

School Address: \_\_\_\_\_

School Phone: \_\_\_\_\_

Home Address: \_\_\_\_\_

Home Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

I am interested in the  
Graduate Credit Option

I am interested in the  
Continuing Ed Option

Along with this registration form also include, on a separate page, your responses to the following:

- Describe a hands-on or inquiry-based science/math lesson that you have used in your classroom.**
- Describe barriers to inquiry-based teaching in today's classrooms.**

The program will be filled on a first come first served basis – with the approval of the teacher's school administration. Only 50 applicants will be accepted from the seven area public school divisions and private schools.

Questions about the program can be addressed to: Jill Granger, Project Co-Director at 434-381-6166, [granger@sbc.edu](mailto:granger@sbc.edu); Hank Yochum, Project Co-Director at 434-381-6357 [hyochum@sbc.edu](mailto:hyochum@sbc.edu), or Pam Simpson, Project Assistant at 381-6443.

## *Program Options*

Teachers may choose to enroll in the project in one of two options:

*Graduate Credit Option* – The summer workshop will constitute the major component of a graduate course in science education (EDUC 656); in addition, participants will attend a minimum of 3 additional Saturday workshops during the 2005-2006 academic year, and will have other course assignments including a final project. These teachers will receive 3 credits at the 600 level in science education. Teachers completing the graduate course will receive a \$400 stipend and tuition waiver (\$1,200 value).

The course syllabus is posted on the project website at [www.sxi.sbc.edu](http://www.sxi.sbc.edu)

The course assignments are paced throughout the academic year from September through April. The final project involves development, implementation, and assessment of an inquiry-based unit in science and/or math. The three Saturday workshops include a mid-year course meeting; an end-of-year course meeting (both of these are scheduled well in advance); and a content-based workshop of the teachers' choosing scheduled individually. During the end-of-year course meeting each participant will give a short oral presentation about his/her final project. Participants who enroll in the Graduate Credit Option and decide not to complete the graduate course may switch into the Continuing Education Option.

*Continuing Education Option* – The summer workshop (30 recertification points) will be supplemented with a minimum of 2 additional Saturday workshops during the 2005-2006 academic year (10 recertification points). Nine academic year workshops will be offered throughout the academic year. Participants are to attend a minimum of two. Workshops are offered approximately once per month from September through May. The schedule for fall workshops will be posted in early September. The schedule for spring workshops will be posted in January. Each participating teacher will be required to give a 10-15 minute presentation describing the classroom implementation, including assessment of student learning outcomes, of an inquiry lesson at one Saturday workshop. Teachers completing the Continuing Education Option will receive a \$350 stipend and a tuition waiver (\$700 value).

Teachers in either Option will forfeit their stipend should they not fulfill their programmatic obligations. Stipends will not be pro-rated.