

FURMAN UNIVERSITY SCIENCE EDUCATION INSTITUTE: AN OVERVIEW

by Merrie Southgate

Rationale and Goals

Furman University has a longstanding tradition of community service, outreach, engaged learning, and excellence in the sciences. In the spring of 2006, they will break ground for a new science complex, which promises to promote even greater collaborative learning, teaching, and science education outreach. Among the best liberal arts universities in America, Furman is a natural setting for this symposium on linking science, literature, and the arts.

As a science graduate of Furman, I have made a career of creating and implementing professional development seminars and workshops that bring teachers at all levels of experience together. **This conference, however, will focus on the middle grade science teacher – that individual who works with students in grades 4-8, a critical time during which students often decide whether they enjoy science enough to pursue higher levels of science education.**

The middle grade science teacher faces several obstacles:

- 1) In this age of inspired technology, we have ironically become a nation of poor readers. **Poor readers are more often than not decidedly uncomfortable with the language of science, which they deem to be “too difficult.”**
- 2) In mixed gender classes, many **middle school girls** who may have excelled academically before adolescence, suddenly begin to defer to boys during science classes in particular, an area of academia which is still male dominated. In general, **girls have been found to drop out of science sooner and in greater numbers than boys after middle school.**
- 3) **American society has failed miserably in adopting metrics as the standard of measurement**, even though metrics is the language of all science and technology. Many math and science teachers, and thus their students, lack a facility with metrics due to lack of daily practice in using it.
- 4) **Many teachers have had little if no training in the arts**, even though study after study has shown that students learn best when their creativity – especially in the area of visual thinking - is tapped.

The goals of this symposium are to provide middle grade science teachers a set of tools to:

(1) MOTIVATE their students to WANT to read about science.

(2) STRENGTHEN their teaching and acceptance of metrics as the standard of measurement in science.

(3) UNDERSTAND the vital connection between science and art as twin reflections of the human imagination and creative potential. In particular, teachers will be given instruction on how to integrate drawing, field study guides, and journaling into their science curricula.

AGENDA

Agenda

All teachers will participate and sign in for 2 general morning and afternoon sessions, and rotate as two groups through 4 two-hour workshops with a lunch break in between on each day.

Friday, March 3

SIGN-IN AND REGISTRATION: 8:00 – 8:30 am – University Center, second floor, outside Burgess

Theater

GENERAL MORNING SESSION – 8:30 – 9:30 am – Burgess Theater

LINKING SCIENCE, LITERATURE AND THE ARTS: BRINGING STUDENTS TO READING THROUGH SCIENCE, by Merrie Southgate

WORKSHOPS 9:45 – 11:15 am and 12:05-1:50 pm – Herman N. Hipp Hall

11:15-12:00 pm : Meet for brown bag lunch and discussion in the Watkins Room (upstairs, University Center)

TEACHING ASTRONOMY THROUGH LITERATURE, by Dr. Mike Svec – Hipp Hall, Room 205

MAKING THE SCIENCE AND ART CONNECTION, by Merrie Southgate – Hipp Hall, Room 106

AFTERNOON SESSION - 2:00 – 2:45 pm

HOW THE TOOLS OF SCIENCE CAN EXTEND YOUR PERCEPTUAL AWARENESS, , by Dr. Mike Farmer

Saturday, March 4

SIGN-IN AND REGISTRATION: 8:15-8:30 am Burgess Theater, University Center

GENERAL MORNING SESSION: 8:30 – 9:30 am Burgess Theater

GIRLS IN SCIENCE, by Cindy Bullard and Sonja Fischer

WORKSHOPS

NATURE WALK ON THE FURMAN CAMPUS, by Dr. Joe Pollard and Dr. Wade Worthen

ZOOM IN, ZOOM OUT ON THE NATURAL WORLD – A NEW PERSPECTIVE ON METRICS, by Cindy Bullard and Sonja Fischer / with Dr. Don Jordan as guest facilitator

AFTERNOON SESSION –2:00 – 3:00 pm – Watkins Hall, University Center
Slide show of the Furman University Science Education Leadership Institute

Collaborative or individual work on a Lesson Plan for Teaching Science through Art or Literature in your classroom.

Friday Workshops

Workshop Title	9:30-11:15 am	12:05-1:50 pm
Teaching Science through Art – Merrie Southgate – Hipp 106	A	B
Teaching Astronomy through Literature – Dr. Mike Svec – Hipp 205	B	A

Saturday Workshops

Workshop Title	9:30 – 11:15 am	12:05-1:50 pm
ZOOM IN, ZOOM OUT – Cindy Bullard and Sonja Fischer -Hipp 106	A	B
Nature Walk on the Furman Campus – Drs. Pollard and Worthen Meet in the Watkins Room in the University Center	B	A