



Registration: March 2–April 3, 2009



# Morehead Planetarium and Science Center's

## Summer 2009 Teacher Workshops

GlaxoSmithKline's *Science in the Summer* program in North Carolina is holding **eight free workshops** for middle school and high school teachers in partnership with libraries in Alamance, Caswell, Chatham, Durham, Franklin, Harnett, Orange and Wake counties during summer 2009.



### What is it?

GlaxoSmithKline's *Science in the Summer* program in North Carolina is a science education initiative that targets science education through summer camps for second- through eighth-grade students and teacher workshops in partnership with libraries in Alamance, Caswell, Chatham, Durham, Franklin, Harnett, Orange and Wake counties.

GlaxoSmithKline's *Science in the Summer* program in North Carolina is sponsored by GlaxoSmithKline and administered by UNC-Chapel Hill's Morehead Planetarium and Science Center.

The DESTINY Traveling Science Learning Program and its DREAMS initiative are science education outreach initiatives of Morehead Planetarium and Science Center at UNC-Chapel Hill that serve pre-college teachers and students across North Carolina. The DREAMS initiative is DESTINY's Role in Engaging and Advancing Middle School Science.



Morehead Planetarium and Science Center's DESTINY Traveling Science Learning Program is holding **five additional free workshops** for middle school and high school teachers across North Carolina. Participating teachers will learn how to incorporate science curriculum modules from Morehead Planetarium and Science Center's DESTINY Traveling Science Learning Program and its DREAMS initiative into their classrooms. All of DESTINY's modules are aligned with the N.C. Standard Course of Study. Please see attached workshop descriptions.

Each teacher who completes a workshop will receive a free classroom materials kit with a curriculum guide notebook. A certificate for one (1) CEU credit, lunch and snacks will also be provided.

Each teacher who completes a workshop will also be eligible to request a school visit from one of DESTINY's traveling science laboratories during the 2009–2010 academic year. Priority for a visit will be given to teachers in the eight *Science in the Summer* counties.

The high school teacher workshops start at 9 a.m. and end at 2 p.m.; the middle school teacher workshops start at 9 a.m. and end at 4 p.m.

Confirmations for these workshops will be sent by e-mail, which will be the primary communication form, in late April.

Please complete the attached workshop application form and fax to Crystal Harden at **(919) 962-1284** by **April 3**.

**LUNCH  
FOR WORKSHOP PARTICIPANTS  
PROVIDED BY MOREHEAD**

# Teacher Workshop Application Form



## Morehead Planetarium and Science Center's

### Summer 2009 Teacher Workshops

Name: \_\_\_\_\_ Current Certification: \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Home/Cellular Phone: \_\_\_\_\_

E-mail Address (print neatly): \_\_\_\_\_

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

School Phone: \_\_\_\_\_ School System / County: \_\_\_\_\_

Please indicate your workshop preference by indicating your first choice with the number "1", number "2" for your second choice, etc. Applications will be accepted until each workshop is filled. **Space is limited to 20 participants per workshop. If you would like to attend more than one workshop (space permitting), please submit a separate teacher workshop application form for each workshop.**

*\* PLEASE NOTE: Priority will be given to teachers from Alamance, Caswell, Chatham, Durham, Franklin, Harnett, Orange and Wake counties. Brunswick County teachers have priority for their county workshop.*

	<b>June 17, Crucial Concentration*</b>	Louisburg High School, Louisburg (Franklin)
	<b>June 23, Crucial Concentration*</b>	North Regional Library, Raleigh (Wake)
	<b>June 24, DREAMS (MS)</b>	Fayetteville State University, Fayetteville
	<b>June 25, DREAMS (MS)*</b>	N.L. Dillard Middle School, Yanceyville (Caswell)
	<b>July 8, Power Within</b>	Fayetteville State University
	<b>July 14, Brand Name Genes*</b>	North Brunswick High School (Brunswick)
	<b>July 15, Power Within</b>	UNC Marine Sciences, Morehead City
	<b>July 22, Crucial Concentration*</b>	Carolina Center for Educational Excellence, Chapel Hill
	<b>July 29, Brand Name Genes</b>	Asheville-Buncombe Technical Community College
	<b>August 5, DREAMS (MS)*</b>	May Memorial Library, Burlington (Alamance)
	<b>August 11, Crucial Concentration*</b>	Harnett County Public Library, Lillington (Harnett)
	<b>August 13, DREAMS (MS)*</b>	North Regional Library, Durham (Durham)
	<b>August 17, DREAMS (MS)*</b>	Horton Middle School, Pittsboro (Chatham)



**Registration is open March 2–April 3, 2009.  
Please FAX your completed application and  
reference letter by April 3, 2009,  
to Crystal Harden at (919) 962-1284.**



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#### **Crucial Concentration (HS):**

Students assume the role of laboratory investigators for a court case to determine the amount of protein found in three sports drinks. Using the general concept of the Lowry assay and microanalysis skills, students learn how to use a spectrophotometer, measure absorbencies, collect quantitative data and produce a standard curve to find the protein content in each sample.

#### **Power Within (HS):**

Students learn fundamental concepts of evolutionary biology, leading them to understand the theory of endosymbiosis and origin of eukaryotes. Activities help students learn about types of biological relationships, the structure and function of prokaryotic and eukaryotic cells, classification of organisms, development of cladograms using DNA sequences and scientists who pioneered our understanding of genetic evolution. An interactive computer animation introduces students to the role of bioinformatics in scientific research and enables them to use molecular data to reconstruct phylogenetic trees.

#### **Brand Name Genes (HS):**

This module focuses on the biotechnology process, Polymerase Chain Reaction (PCR), and how it is used to detect the genetic defect that can lead to breast cancer. Students learn how the PCR process works with the assistance of a thermal cycler, study family genetic history and have an opportunity to view a real-life breast cancer tumor removal surgery filmed at UNC Hospitals.

#### **DREAMS Initiative — Code Red and So Fresh, So Clean (MS):**

In "Code Red," students will learn about circulatory systems incorporating blood typing activities, aligned with 7th-grade standards from the North Carolina Standard Course of Study. In "So Fresh, So Clean," students will learn about water quality and water quality testing, incorporating pH activities and measurements, aligned with 8th-grade standards from the North Carolina Standard Course of Study.

