

ASM Materials CampSM 2007

Chicago Regional Chapter, ASM International



It's amazing what can be accomplished in one week

Since 2000, ASM International Foundation has sponsored a program called Materials CampSM for high school students who are interested in pursuing engineering as a profession. This free program has attracted many outstanding students and has continued to grow every year. The "ASM Materials Camp" is now operating in over 40 locations worldwide.

In 2003, the first local Materials Camp was held in the Chicago area. By utilizing a forensic investigation of failed components as a vehicle to gain hands-on experience, the students are introduced to Materials Science and Engineering. They are given the opportunity to use state-of-the-art equipment and techniques such as scanning electron microscopy, mechanical testing, finite element analysis, metallography, fractography, and image analysis.

This year students were investigating turbine blades, fast food steamers, and the diamond plate on the rear bumper of a semi-truck. The College of DuPage hosted the program introduction and closing ceremonies. Throughout the week, students worked at one of several local laboratories to analyze their components including Bodycote Materials Testing Lab, Engineering Systems Inc., and IIT.

In order to provide a broader view of the materials field, the students participate in mini-labs on the first day. They heat treat steel, witness the effects of liquid nitrogen and manufacture a small concrete canoe. Several teams were able to keep their boats afloat at Saturday's presentations. Industrial applications and research opportunities for materials were shown to the students on Thursday as they toured DS Containers in Batavia and McCrone College of Microscopy in Westmont.



Edible experiments
Liquid nitrogen ice cream



Searching for answers



Taking a look at industry

Laboratory Teams Ready to Present Their Findings



Team - Neal Ansani, Lisa Dohn and Eric Jacobson with Mentor Ted Wilken
Host – Bodycote Materials Testing Lab
Failure – Cracked diamond plate



Team- Emerson Lee, Robert Pino, Ben Knierim, Chris Blount, Alex Bubulka and John Michel with Mentor Lyle Jacobs
Host - Engineering Systems Inc
Failure – Fast food steamer



Team - Hajira Dogar, Ismail Dogar and Aslan Burnley with Mentors Sammy Tin and Dajun Chen (not pictured)
Host – Thermal Processing Technology Center at IIT
Failure – Turbine blade

Local students participating included:

Benet Academy - Ben Knierim
Deerfield High School - Eric Jacobson
Home School - Aslan Burnley
IMSA - Neal Ansani
Islamic Foundation School - Hajira Dogar, Ismail Dogar
Neuqua Valley High School - Alex Bubulka, Emerson Lee, Robert Pino
Rolling Meadows High School - Lisa Dohn
Waubonsie Valley High School - Chris Blount, John Michel

Thanks

An endeavor of this magnitude requires the time, talents and efforts of countless individuals and organizations, too many to list here. Any effort to acknowledge some will inevitably omit others who are very important and key to our success. If we somehow missed you, please know it was unintentional, and your volunteer efforts are very important to us.

- ASM International - Chicago Regional Chapter
- ASM Materials Education Foundation
- Volunteer Organizations:
 - Aston Metallurgical
 - Bodycote Materials Testing Lab
 - College of DuPage
 - Engineering Systems Inc.
 - McCrone College of Microscopy
 - Thermal Processing Technology Center at IIT

- Faculty Volunteers:

Alan Stone, Aston Metallurgical	Ted Wilken, Bodycote Materials Testing
Bill Michaud, Scott Forge	Mark Hineman, Engineering Systems Inc.
Dale Alexander, Engineering System Inc.	Lyle Jacobs, Engineering System Inc
Mike Connelly, Casey Products	Dr. Dajun Chen, TPTC at IIT
Russ Janata, IIT	Dr. Norman Breyer, IIT
Jan Edwards, J.E. Consulting	

Looking Ahead to 2008

The Chicago Regional ASM Materials Camp will be held in June with the College of Dupage as the primary host site. The camp is FREE; the students only need to provide their own transportation. Please promote this opportunity within your local schools, corporations and communities. More information about our local ASM Materials Camp is available online at www.asmchicago.org.