

2008 NIST Summer Institute for Middle School Teachers

date	Monday, June 16	Tuesday, June 17	Wednesday, June 18	Thursday, June 19	Friday, June 20	Monday, June 23	Tuesday, June 24	Wednesday, June 25	Thursday, June 26	Friday, June 27
9-10	Introduction: Overview of NIST (9-10) Goals and Overview of Institute -Who we are as a group - Safety (10-11) NIST in Your Community/ Museum Tour (11-12N, alternating)	Metrology 2: Mechanical Metrology Metrics Jeopardy lecture/activity (9:00-10:15) Weights and Measures Overview and Activities (10:30-11:45)	LabQuest Trials Try out LabQuests and probes using Middle School Lab Manual (9-12N)	Separations 1: Chromatography lecture (9-9:45) -Separations using Solid Phase Extraction (SPE) activity (10-11) Implementation into curriculum (11-12N)	Separations 2: The NIST Center for Neutron Research (NCNR) Small-angle Neutron Scattering (SANS) Demonstrations and Instrument Tour Grow a crystal!	Separations 3: Genomics/DNA lecture (9:00-9:45) Forensic Science: Blood and Fingerprints activity (9:45-10:30) -Gel Electrophoresis Demo / Human ID Group Tour Becky Hill (10:45 - 12N alternating)	The Earth 1 con't: Building an atomic clock 2 lecture/activity (9-11) Implementation into curriculum (11-12N)	Metrology 3: Thermometry Lecture (9:15-9:45) Thermometry activities (9:45-10:45) <i>Bring LabQuests, thermometer and conductivity probes</i>	The Earth 4: Atmospheric Science -Xtreme Weather: floods, tornados, hurricanes, etc -Weather Jeopardy computer lab activities (9-9:45) Visit to SEBA, NIST Store (9:45-10:30) CSI: Titanic (10:30-12N)	Separations 4: Spectrometry Lecture (9:15-10:15) Hand-held Spectrometer activity (10:30-11:30) Westat informal oral evaluation (11:30-12:15)
10-11										
11-12										
lunch	lunch	lunch/Farmers Mkt	lunch	lunch with SURF students/Lunch Club	lunch with SURF students at NCNR	lunch	lunch with NIST folks/Lunch Club		lunch	group lunch out
1-2	Metrology 1: Measurement Uncertainty How Big is Pi? lecture/activity (1-2:30) The Earth 1: Building an atomic clock lecture/activity (2:45-4)	Experimental Design lecture/activity (1-4)	Sharing of Labs tested in the morning among groups (1-2:45) Using NIST-based activities in the classroom (3-4)	Scientist visits one-on-one (1-2) Ice Cream social with Organic Chemical Metrology Group (2-3) -Ink Identification with Thin Layer Chromatography (TLC) lecture/activity (3-4)	Diffraction Demos Instrument BT-1 Tour Crystal Growing! LabQuest Activity (1-4)	SI2 Social Network 1-1:30 -Implementation into curriculum -Trials of the gel electrophoresis kit -Group picture at Newton's apple tree (2-3) The Earth 2: Types of Magnetism (3-4)	The Earth 3: Materials Science Cement Activity (1:15-2) Designing Bldgs to Resist Earthquakes lecture/demos (2-3) Implementation into curriculum	Scientist visits one-on-one (1-2) Solar system scale model activity lecture/activity Richard Steiner (2-3) Soda Can Science: Pressure in a Pop Can lecture/demos Ken Pratt (3-4)	SURF Student Panel Discussion (1-2) Weather-related activities (2-2:30) Implementation into curriculum (2:30-3:30) SURF Seminar Disease Signatures (3:30-4:30)	Visualization Lab/RAVE (Reconfigurable Automatic Virtual Environment) tour (1:30-3 alternating) Presentation of Certificates and group pics (3-3:30) Wrap up and plans for return 3:30-4
2-3										
3-4										