WWNFF CORE Institute in Biology 2003 ***Schedule*** ***Unless otherwise indicated, AM sessions start at 8:30, PM sessions at 1:30***				
	Lead Staff	*Other Staff*	*WW*	*Description (for teacher-participants)*
Day 0: **Saturday, July 5**				
ARRIVALS	JB	GMcN TR	GM/TS	Arrive at The Lawrenceville School, room assignments, start to get to know one another!
Day 1: **Sunday, July 6**				
AM Tours, Tech Orientation, 9:00 - 10:15 am 10:30 - 11:45 am Lunch, noon – 1 pm 1:15 - 2:30 pm	TLS, JC, RD	GMcN TR		Groups will tour by "color code" on nametags! Concurrent: TLS Tours, Tech Orientation
PM: Full Session **Orientation** (3:00 – 4:30 pm)	all	all	all	
Evening: **Opening Dinner**, 6 pm Reception to Follow	all	all	all	Welcome – Liz Duffy, TLS Headmaster and WWNFF Trustee Keynote Speaker – **Dr. Shirley Tilghman, President, Princeton University**
WEEK ONE	*Lead Staff*	*Other Staff*	*WW*	*Description (for teacher-participants)*
Day 2: **Monday July 7**				
AM: Find It, Assess It, Do It: Intro to Lab Procedures & Safety	RD, JB			Basic Molecular Biology Lab Skills and Safety Procedures

WWNFF CORE Institute in Biology 2003 Schedule Unless otherwise indicated, AM sessions start at 8:30, PM sessions at 1:30				
	Lead Staff	*Other Staff*	*WW*	*Description (for teacher-participants)*
PM: Add'l Lab Skills (1:30 –3:00) Concurrent, 3-4 and 4-5 (Physics Lab 1012): Tech Skills – Imaging Skills Pedagogy - Intro To Researching Pedagogy	RD, JB JC TR, GMcN			Lab will be open all PM Intro to Imaging with Justine Cooper Techniques That Work as reported by you! With Tom Ritter
Evening: "Beginner's Guide to DNA"	JB			With faculty member Jim Bonacum
Day 3: **Tuesday, July 8**				
AM: DNA Isolation – High Tech	RD, JB			
PM: DNA Isolation – Low Tech Web Skills I (3:30-5)	GMcN JC	RD JB		The DNA Low Tech lab will be used as an example during the Web Skills I session devoted to basic webpage design and creation. **Take notes and be sure some of you are taking digital photos and video!!**
Evening: Pedagogy – A Study of Models of Instruction – Part I (6:00 - 8:00, Physics Labs 1011 & 1012)	TR, GMcN	RD, JB		Homework: Group Research on Models
	Lead Staff	*Other Staff*	*WW*	*Description (for teacher-participants)*
Day 4: **Wednesday, July 9**				
AM: PCR, High Tech and Low Tech	RD, JB			Identifying DNA fragments
PM: Complete AM Lab Work (1:00-200) Pedagogy – A Study of Models of Instruction – Part II (2:30 – 5:00)	TR, GMcN			Physics Labs
Evening: Designing PCR Primers, Intro to Databases	RD, JB			Lecture Hall

WWNFF CORE Institute in Biology 2003 Schedule Unless otherwise indicated, AM sessions start at 8:30, PM sessions at 1:30				
	Lead Staff	*Other Staff*	*WW*	*Description (for teacher-participants)*
Day 5: **Thursday, July 10**				
AM: Manipulating PCR, Cloning I	RD, JB			
PM: Manipulating PCR, Direct Sequencing I	RD, JB			
Evening: "Welcome to Your Genome"	RD			With faculty member Rob DeSalle
Day 6: **Friday, July 11**				
AM: Manipulating PCR, Cloning II & Direct Sequencing II	RD JB	TR GMcN		
PM: Pedagogy – "It's All About Blenders!" and "Powers of Ten" demo	TR GMcN	RD JB		
Evening: **The Science in Jurassic Park**	RD	all		Movie Night! With Rob DeSalle
Day 7: **Saturday July 12**	*Lead Staff*	*Other Staff*	*WW*	*Description (for teacher-participants)*
AM: Manipulating PCR, Part III (wrap-up)	RD, JB			
PM: FREE TIME				
Day 8: **Sunday, July 13** – DAY OFF	Weekend coverage: RD; on-call: TSS			

WEEK TWO	*Lead Staff*	*Other Staff*	*WW*	
Day 9: **Monday, July 14**				
AM, PM: **TRIP TO AMNH *(New York City)***, 9:45am – 5:45pm (Lv TLS 7:30 am)	all			
Evening: **Free time in NYC** (bus at 9 pm)				

WWNFF CORE Institute in Biology 2003 Schedule Unless otherwise indicated, AM sessions start at 8:30, PM sessions at 1:30				
	Lead Staff	*Other Staff*	*WW*	*Description (for teacher-participants)*
Day 10: **Tuesday, July 15**				
AM: Genomic Revolution PCR/Sequencing Class	RD			
PM: Follow-up from AM (1-1:30) Concurrent: 1:30-3:00 and 3:30-5:00: Meeting with Mentors in Research Grps Tech Skills: Web II Class	RD	JB ML ME JC		Welcome Mike Lemke and Mary Egan, our "adjunct" faculty who will "mentor" two of the research groups
PM: Follow-up from AM (1-1:30)	JB			
Evening: Pedagogy Panel Discussion (6:00 – 8:00 in Lecture Hall)	GMcN	all		Experts in the process of lesson study share their expertise and experiences. With Makoto Yoshida; Patsy Wang-Iverson, Research for Better Schools; Lynn Liptak, Nick Timpone and Bill Jackson, PS2, Paterson NJ.
WEEK TWO, cont'd	*Lead Staff*	*Other Staff*	*WW*	*Description (for teacher-participants)*
Day 11: **Wednesday, July 16**				
AM, PM: Collections – ***JERSEY SHORE (Island Beach State Park)***	all			
Evening: "It's all about Blenders!" Part II (6:00 – 8:00 in Lecture Hall)	GMcN			Four teams will present.
Day 12: **Thursday, July 17**				
AM: DNA Isolation Phase (Prepping & Manipulating Specimens)	RD, JB, ML, ME	JC		
PM: Science Talk: Microbial Diversity Follow up from AM Labs (3:30-5:00)	ML			With Dr. Michael Lemke

WWNFF CORE Institute in Biology 2003 Schedule Unless otherwise indicated, AM sessions start at 8:30, PM sessions at 1:30				
	Lead Staff	*Other Staff*	*WW*	*Description (for teacher-participants)*
	RD/JB			
Evening: Sample Lesson: "Class of 36" and Effective Use of Chalkboard (6:00 – 8:00 in Lecture Hall)	MY, McN			With MakotoYoshida of Global Education Resources
Day 13: **Friday, July 18**				
AM: PCR (Amplification of Study Samples)	RD JB	ML, ME		
PM: Pedagogy: Lesson Study video: "100kg" Picking a Research Lesson Topic (1:00 – 3:30)	GMcN			in Lecture Hall
Evening: **Concert Night**				Special Appearance by **"Flat Rabbit"**
	Lead Staff	*Other Staff*	*WW*	*Description (for teacher-participants)*
Day 14: **Saturday, July 19**				
AM: **BEGIN 10 am** – PCR Phase (assay PCR, determine next steps)	RD JB			
PM: OFF				
Day 15: Sunday, July 20 – DAY OFF	**Weekend Coverage: JB on-call: RJB**			
WEEK THREE				
Day 16: **Monday, July 21**				
AM: Cloning, DNA Sequencing Phase I	RD	JB, L, ME, JC		
PM: Teaching Science by Inquiry (1:30-	TR, McN	JC		Physics Labs

WWNFF CORE Institute in Biology 2003 Schedule Unless otherwise indicated, AM sessions start at 8:30, PM sessions at 1:30				
	Lead Staff	*Other Staff*	*WW*	*Description (for teacher-participants)*
4:00)				
Evening: Lesson Study: Protocols for Observations and Debriefing (6:00 – 8:00)	MY	TR, GMcN		With Makoto Yoshida Lecture Hall
WEEK THREE, cont'd	*Lead Staff*	*Other Staff*	*WW*	*Description (for teacher-participants)*
Day 17: **Tuesday, July 22**				
AM: Cloning, DNA Sequencing Phase II	RD	JB, ML, ME, JC		
PM: Lesson Study Planning (1:30 – 4:00) Templates for Map of Research Idea and Lesson plan Map of Research Idea	TR, McN	JC		Lecture Hall and Physics Labs
Evening: Comparative Genomics	RD			With Rob DeSalle Poster Presentations Due: Wed, July 30!
Day 18: **Wednesday, July 23**				
AM: Cloning, DNA Sequencing Phase III	RD	JB, ML, ME, JC		
PM: Lesson Study Planning (1:30 – 4:00) Design Research Lesson and ancillaries	TR, GMcN	JC		Physics Labs
Evening: Science talk	MM	RD		"Medical Genomics" with **Dr. Maureen Murphy**
WEEK THREE, cont'd	*Lead Staff*	*Other Staff*	*WW*	*Description (for teacher-participants)*
Day 19: **Thursday, July 24**				

WWNFF CORE Institute in Biology 2003 Schedule Unless otherwise indicated, AM sessions start at 8:30, PM sessions at 1:30				
	Lead Staff	*Other Staff*	*WW*	*Description (for teacher-participants)*
AM: Design Research Lesson and ancillaries (8:30 am– noon)	TR, McN	RD, JB, ML, ME, JC		Physics Labs
PM: **Symposium at Princeton University** 1-4:30 Reception, 4:30 – 6	all			A public Symposium at Princeton University's new Center for Integrative Genomics
Evening: **FREE** (bus returns from Princeton at 9 pm)				
Day 20: **Friday, July 25**				
AM: Design Research Lesson and ancillaries (8:30 am– noon)	TR, McN	RD, JB, ML, ME, JC		Physics Labs Complete your research in the lab! ***FINAL DAY FOR MENTORS***
Day 21: **Saturday, July 26**				
FREE DAY! (Lab will be available for groups who need it)	RD JB	GMcN TR JC?		Final Lab Day
Day 22: **Sunday, July 27** – DAY OFF				
WEEK FOUR	*Lead Staff*	*OtherStaff*	*WW*	*Description (for teacher-participants)*
Day 23: **Monday, July 28**				
AM: Data Analysis II, Project Work	RD, JB	JC		
PM: Lesson Study Design Research Lesson and ancillaries (1:30 – 4:00)	TR, McN			Physics Labs
Evening: "Issues in Genethics"				Presented by Fred Friendly

WWNFF CORE Institute in Biology 2003 Schedule Unless otherwise indicated, AM sessions start at 8:30, PM sessions at 1:30				
	Lead Staff	*Other Staff*	*WW*	*Description (for teacher-participants)*
				Seminars
Day 24: **Tuesday, July 29**				
AM: Project Write-ups, Prepare for Poster Presentations	RD, JB	JC		
PM: Lesson Study Design Research Lesson and ancillaries (1:30 – 4:00)	TR, McN			Physics Labs
Evening: Design Research Lesson and ancillaries (6:00 – 8:00)	all			Physics Labs
Day 25: **Wednesday, July 30**				
AM: 2 simultaneous **Research Lessons**, followed by debriefings (8:30 am– noon)	all			Physics Labs 4 of the 6 groups will elect a member to teach the lesson; 2 groups will present today
PM: Lesson Study Defense I - 2 Presentations (1:30 – 4:00)	all			Lecture Hall Of the teams whose members are not presenting a demo lesson, 2 will make presentations to the entire group
Evening: **Poster Presentations**	all			Poster presentations of the lab research
WEEK FOUR, cont'd	*Lead Staff*	*Other Staff*	*WW*	*Description (for teacher-participants)*
Day 26: **Thursday, July 31**				
AM: 2 simultaneous **Research Lessons**, followed by debriefings	TR, GMcN	all		Remaining 2 teams' representatives will present the research lesson
PM: Lesson Study Defense II (1:30 – 4:00)	TR, GMcN			If needed, remaining group not presenting a research lesson will present; continue discussion of

WWNFF CORE Institute in Biology 2003 Schedule Unless otherwise indicated, AM sessions start at 8:30, PM sessions at 1:30				
	Lead Staff	*Other Staff*	*WW*	*Description (for teacher-participants)*
				model lesson experiences
Evening: **FREE TIME**				
Day 27: **Friday, August 1**				
AM: Applications of Lesson Study in Your Home District (8:30 am– noon)	all	all		Lecture Hall What you need to get lesson study started back home [There will be time today to meet with a Mailing Services Rep]
PM: Your Next Step: Resources and Programs Evaluations	all	all	RB	TORCH workshops, Lesson Study, and Resources – WW, Regional and Local Please complete Evaluations !
Evening: Final Dinner	all	all	all	Keynote Speaker: Peter J. Bruns, Vice President, Educational Outreach, Howard Hughes Medical Institute
Day 28: **Saturday, August 2**				
DEPARTURES				
10 - Noon: Faculty and Staff Debriefing	all	all	all	