

**Genes, Biotechnology and the Environment 2009  
Timetable**

Monday 6/29		Tuesday 6/30		Wednesday 7/1	Thursday 7/2		Friday 7/3	
AM	PM	AM	PM	All day	AM	PM	AM	PM
Introduction and name game (1h)	Pipetting practice	Look at plates from plating practice, record results	Groups present experimental design ideas	Field trip: bring outdoor clothes, sunscreen, water, lunch, shoes or boots	Plate water samples	(Introduction to central dogma, 16S <i>rDNA</i> )	Look at plates, record results (most colonies won't have grown yet)	Practice DNA extraction ( <i>E. coli</i> ), PCR for 16S <i>rDNA</i>
Course introduction	Bug show and tell (time permitting)	Introduction to course experiment	Synthesize methods	Drive to Madera Canyon then Tumacacori for collecting	Bug identification, weighing, dissection, plating		Introduction to DNA extraction and PCR	
Introduction to bacteria (lecture from Nancy?)		Brainstorming session in groups on experimental design						
How does a gram stain work?		Homework: look up one of the different antibiotics that we will use in course experiment, how they work, and resistance mechanisms			Read Tringe Science paper			

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Timetable, cont.**

Monday 7/6		Tuesday 7/7		Wednesday 7/8		Thursday 7/9		Friday 7/10	
AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Count colonies on plates, record results	PCR for 16S <i>rDNA</i> from bacterial colonies	Run gels	Practice working with sequences and BLAST	Phylogenetics and tree thinking	Visit GATC	Field trip to waste water treatment plant or sweetwater	Sequence editing, BLAST, similarity measures	Discuss results, divide into focus groups, discuss report due on 7/15	Group work/ sequence analysis
Isolate colonies for DNA extraction and onto an archive plate	Introduction to gel electrophoresis	Sequencing lecture							

Monday 7/13	Tuesday 7/14	Wednesday 7/15
Work on presentations	Work on presentations	Report due
	Practice talks	Presentations