

CTY Genomics

DATE	TOPIC	ACTIVITIES
Day 1:	Genetic Review What is a gene?	Lab Safety Review problem sets Electrophoresis
Day 2:	Eukaryotic Gene Expression	
Day 3:	What is Genomics?	Human Genome Data
Day 4:	How Genomes are sequenced	Use of ENCODE database Review of literature
Day 5:	FIELD TRIP to CELERA	
Day 6:	Comparative Genomics	Explore applications for: Developmental biology Evolutionary biology Gene function & Medicine
Day 7:	Special Chromosomes: Mitochondrial genomics The Y chromosome	Tracking populations (ie. S. African Jews, Native Americans) Exploring families (ie. Thomas Jefferson)
Day 8:	Complex Traits I	Review linkage analysis Associative tests Transmission Disequilibrium Tests
Day 9:	Complex Traits II	HAPMAP project CGAP project SAGE (serial analysis of gene expression)
Day 10:	Cancer Genetics	
Day 11:	Epigenetics	Presentation by Dr. Feinberg
Day 12:	Genome Technology	
Day 13:	Computational Genomics/ Bioinformatics	
Day 15:	Farewells	Parent Conferences