

Investigation: Phylogeny of Benghazi Virus

http://evolution.berkeley.edu/evolibrary/news/081101_hivorigins

Day 18

5mins- Bell Ringer #10

10mins-Review Benghazi incident and goals

Students will review the Benghazi trials and understand the overall goal. Student will construct a HIV phylogenetic tree to support Bulgarian medics innocence in the court.

10mins- **ENGAGE** Launch Event, driving question; "What is the relationship between the HIV strain in the region and HIV strain present in the 400 infected children?"

25mins- **EXPLORE** Students will be given 50 strains including an ancestral HIV strain. They will work in groups of 4 to construct a HIV phylogenetic tree by counting and analyzing the number of mutations.

Ancestral HIV strain

5' AUGGUUCACCAUUGUCGUAAUUUGCGGGAU 3'

Human HIV 1N

5' AUGGUUCACCAUUGUCGUAAUUUGCGGGAU 3'

	mRNA sequence	# of differences	Age
1.	5' AUGGCCACCAUUGACGUAAUUUGCGGGAU 3'		
2.	5' AUGGUUCACCAUUGUCGUAAAAAGCGGGAU 3'		
3.			

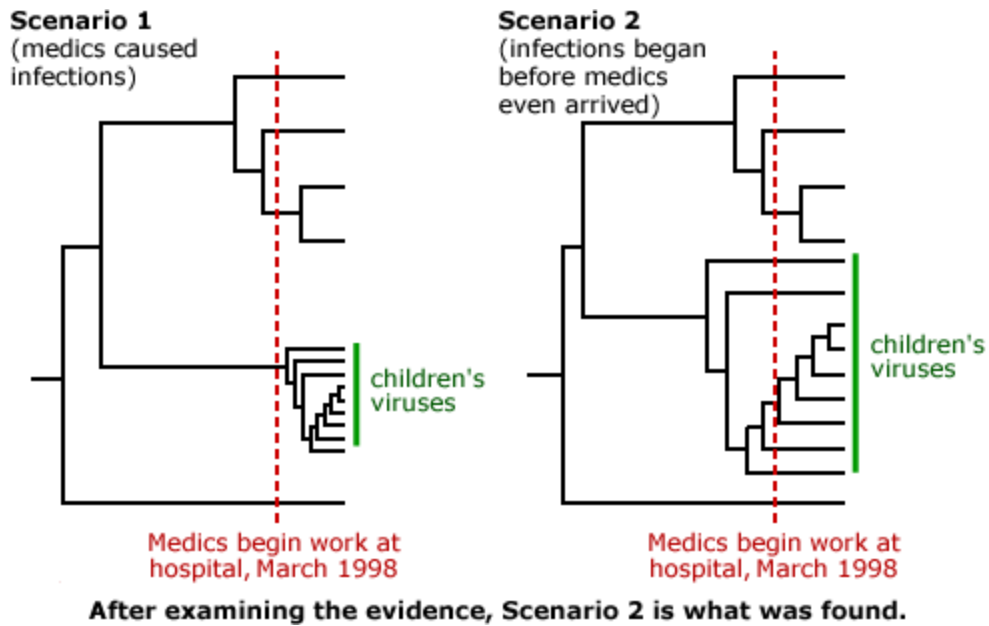
Day 19

5mins- Wrap up

5mins- Pass out rubric

20mins- **EXPLORE** continue group work

Students will construct two phylogenetic tree; one based on the evidence and the other on the assumption that the medics are guilty. Students will create their phylogenetic tree on words by using drawing inserts to quickly manipulate relationships between different HIV strains. The trees would look roughly like the diagrams below.



- 10mins- **EXPLAIN** Group Discussion, compare and contrast trees between groups.
 When students are done with their phylogenetic tree, the group will be paired with another group to discuss similarities and differences between the each group's trees. After exchanging ideas and thoughts, students will be given a chance to revise their tree.
- 15mins- Revise tree
- 5mins- **EVALUATE** Exit Ticket #10