

Name _____ Class Period _____ Date _____

Gene Annotation

Activity Two: Constructing a Proposed Gene Model

Use the information from the corresponding website to complete the questions on this worksheet.

1. Name the two components of the Annotation Tool which display the high quality spliced alignment of EST and cDNA for a given region of genomic DNA.
A. _____
B. _____
2. What part of the Annotation Tool displays alignment data in a map form?

3. What happens when you click on an ID number in the Evidence Plot?

4. What happens when you click on a single exon in the Evidence Plot, and then click on it a second time?

5. What do the numbers in the first column of the Evidence Table correspond to?

6. When comparing two exons, what two pieces of data should be considered?
A. _____
B. _____
7. If a group of exons are in the same color block on the evidence table, how many would need to be selected for the final gene model? _____
8. Alternative splicing explains why there can be different numbers of _____ included in the final mRNA transcript of a gene.

1. The Evidence Plot and the Evidence Table
2. The Evidence Plot
3. The entire structure (all of the exons) are added to the (green) gene model
4. First click and it is selected (not the other exons on the same structure) on the second click it is deselected.
5. The coordinates of the exon correspond to nucleotide bases in the genome, basically defining where the exon starts and stops in the sequence a chromosome
6. The Max Sim Score and the number of cDNA and EST structures that contain the exons in question
7. A color block represents a groups of variants for the same exon, so only one should be selected for each gene model
8. Exons