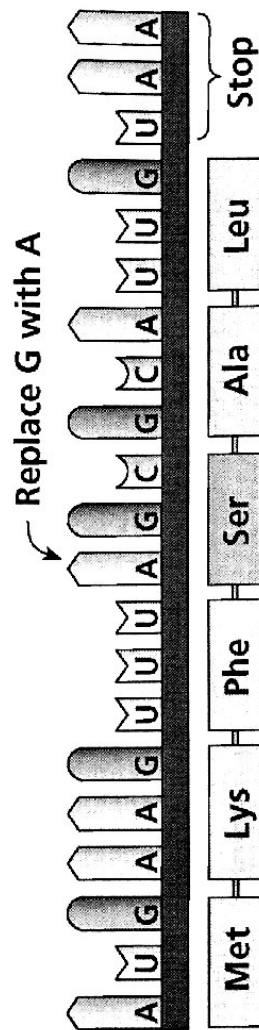


mRNA

Protein

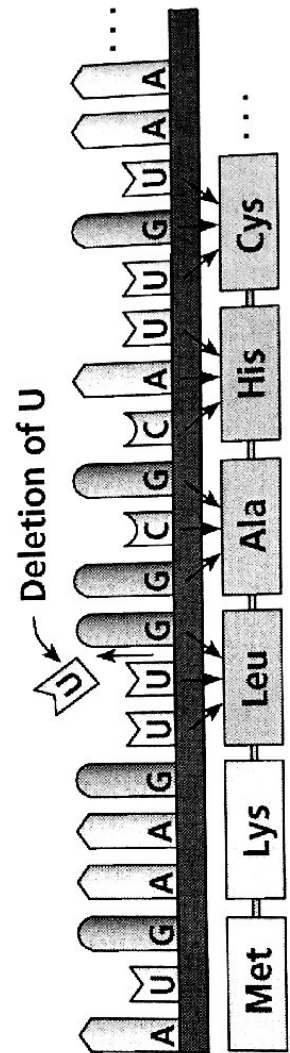
Normal



mRNA

Protein

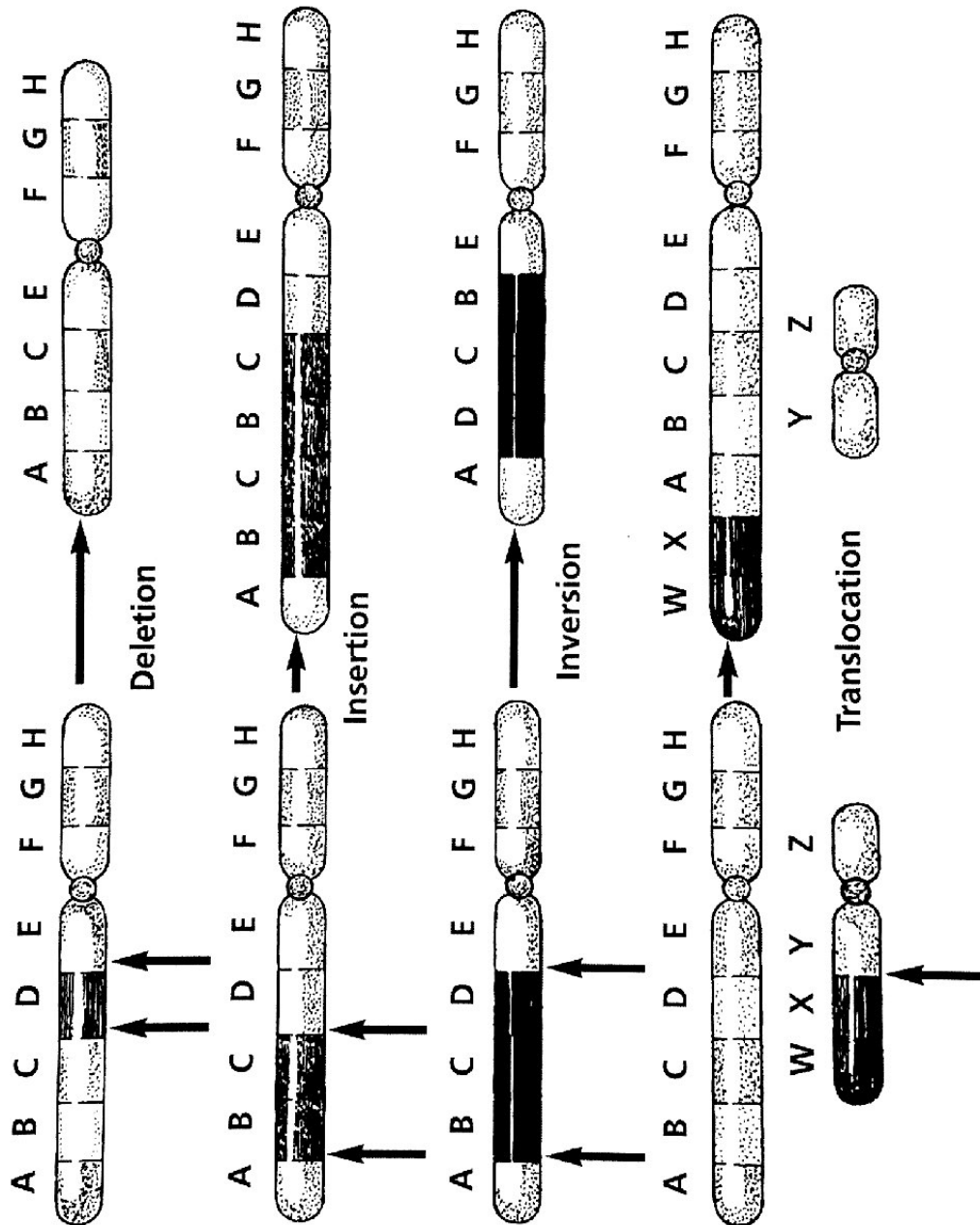
Point mutation



mRNA

Protein

Frameshift mutation

Master
19b
Chromosomal Mutations
Reteaching Skills
Use with Chapter 11, Section 11.3


Worksheet

19

**Gene and
Chromosomal Mutations****Reteaching Skills***Use with Chapter 11, Section 11.3*

1. In transparency 19a, how does the protein labeled *point mutation* differ from the normal protein? What is the effect of this difference?

2. In transparency 19a, how does the protein chain labeled *frameshift mutation* differ from the normal protein? What is the effect of this difference?

3. Which of the two mutations shown in transparency 19a is likely to have the more serious effect on body functions? Explain your answer.

4. What type of gene mutation not shown in transparency 19a would also change every amino acid after that mutation?

5. Why are chromosomal mutations potentially serious?

6. Look at transparency 19b. Describe the chromosomal mutation known as deletion.

7. What happens as a result of insertion?

8. What is inversion?

9. What happens during translocation?
