

Skills Worksheet

## Directed Reading

### Section: Mutations and Genetic Change

In the space provided, explain how the terms in each pair differ in meaning.

1. mutation, mutagen

---

---

---

---

2. point mutation, silent mutation

---

---

---

---

3. reading frame, frameshift mutation

---

---

---

---

**Complete each statement by underlining the correct term in the brackets.**

4. If a mutation causes a sequence of nucleotides to change from ACGAGA to ACGAGGA, the mutation is called a(n) [insertion / deletion] mutation.
5. Mutations that change one or just a few nucleotides in a gene on a chromosome are called [random / point] mutations.
6. If a point mutation is such that it causes a codon to specify a different amino acid, the mutation is called a [missense / silent] mutation.
7. If a mutation causes a sequence of nucleotides to change from ACGAGA to ACGGA, the mutation is called a(n) [insertion / deletion] mutation.
8. A chromosomal mutation that leads to repetitive alleles is called a(n) [inversion / duplication].

**Directed Reading *continued***

---

**Complete each statement by writing the correct term in the space provided.**

9. Mutations can only be passed on to offspring if they occur in cells called \_\_\_\_\_ cells.
10. Mutations that cause a cell to divide uncontrollably can lead to growth of a \_\_\_\_\_.
11. When chromosome pairs fail to separate properly during meiosis, the error is called \_\_\_\_\_.
12. The condition of having two or more sets of chromosomes is called \_\_\_\_\_.