

Name: _____

Date: _____

Heredity and Genetics Vocabulary

8th Grade
Science

Bigham

Instructions: Use the word bank to complete each statement about genetics and heredity.

Word Bank: phenotype; Punnett square; gene; heredity; 46; genome; chromosomes; genotype; pea; mutations; genetics; 23; DNA; chromatid; trait; alleles

1. The study of heredity is called _____.
2. The basic molecule of life is called _____.
3. Structures made of DNA and other molecules are _____.
4. Each identical rod in a chromosome is called a(n) _____.
5. A small section of DNA is called a _____.
6. When DNA copies itself, it is not always perfect. The mistakes made are called _____.
7. Different versions of the same gene are called _____.
8. Humans have _____ pairs of chromosomes, making a total of _____ chromosomes.
9. The genetic make-up of an organism is known as its _____. The actual physical expression of those genes is called its _____.
10. _____ is the passing of genes from parents to offspring.
11. A(n) _____ is all the DNA in one cell of an organism.
12. A physical characteristic is a _____.
13. A _____ is a chart that shows possible gene combinations.
14. Gregor Mendel was the father of genetics and studied _____ plants.

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Charles Darwin

- According to Darwin's theory of evolution, how do new species evolve?
 - artificial selection
 - random chance
 - natural selection
 - unnatural selection
- Religious beliefs were a major source of the opposition to Darwin's theory.
 - True
 - False
- Which best describes the prevailing views about evolution and the age of Earth before Darwin's voyage on the HMS Beagle?
 - Earth and life are recent and have remained unchanged.
 - Species evolved rapidly during the first six thousand to a few hundred thousand years.
 - Earth is billions of years old but species have not evolved.
 - Species have evolved on Earth for billions of years.
- Before and during Darwin's time, many theories of evolution had been proposed. With which theories would Darwin most likely agree?
 - Malthus's theory that species and populations were limited by available resources, lack of resources, and competition, and that competition drove evolution
 - Cuvier's theory of catastrophism, where abrupt changes and the survivors of those changes were not new species at all
 - Lyell's theory of uniformity, where a steady, gradual, and lengthy molding of Earth and its species occurred
 - Lamarck's theory that single, simple forms could become more complex in an individual and thereby cause heritable changes in the next generation
- Which factor does NOT support Darwin's theory of evolution?
 - fossil record
 - homologous structures
 - similarities in embryos
 - differences in plants
- In forming his theory of evolution, of what did Darwin most lack an adequate understanding?
 - geology
 - heredity
 - anatomy
 - geography
- Darwin gathered his early evidence of evolution from the _____ and especially noticed the remarkable differences in _____.
 - Galapagos Islands; monkeys
 - Galapagos Islands; finches
 - Galapagos Islands; fish
 - Hawaiian Islands; fish

8. Darwin was urged to publish his book in 1859 by his friend Alfred Russel Wallace.
 - a. True
 - b. False

9. What was the name of the book Darwin published in 1859?
 - a. Evolution Over Time
 - b. Darwin and the HMS Beagle
 - c. The Origin of Species
 - d. The Origin of Evolution

10. How did Darwin's finches provide evidence for evolution?