Genetics Challenge   Name _____

1. The abbreviation for deoxyribonucleic acid is __ __ $\overline{\underset{26}{}}$.

2. A member of a gene pair that determines a specific trait is a(n) __ __ __ __ $\overline{\underset{19}{}}$ __ $\overline{\underset{25}{}}$ __ .

3. __ __ __ __ $\overline{\underset{37}{}}$ __ is known as the Father of Genetics.

4. A $\overline{\underset{38}{}}$ __ $\overline{\underset{31}{}}$ __ __ __ has genes that are different for a trait, such as Tt.
      $\overline{\underset{53}{}}$

5. The actual gene makeup of an organism is its __ $\overline{\underset{18}{}}$ __ __ $\overline{\underset{58}{}}$ __ __ $\overline{\underset{48}{}}$ __ .

6. __ $\overline{\underset{54}{}}$ __ __ __ $\overline{\underset{51}{}}$ __ are physical characteristics of an organism that are passed down from one generation to the next.

7. __ __ $\overline{\underset{13}{}}$ __ __ __ __ __ __ __   __ __ __ __ __ $\overline{\underset{4}{}}$ __ $\overline{\underset{12}{}}$ __ __ is a condition in which neither of the two genes in a gene pair masks the other.

8. __ $\overline{\underset{57}{}}$ $\overline{\underset{20}{}}$ __ __ __ __ __ __ $\overline{\underset{46}{}}$ __ are rod-shaped structures found in the nucleus of every cell in an organism.

9. A $\overline{\underset{6}{}}$ __ __ __ __ __ __ __ trait is expressed when two different genes for the same trait are present.

10. The physical appearance of a trait is called the __ __ __ $\overline{\underset{14}{}}$ __ $\overline{\underset{52}{}}$ __ __ __ $\overline{\underset{32}{}}$ __ .

11. Mendel experimented with __ __ $\overline{\underset{34}{}}$ __   __ $\overline{\underset{41}{}}$ __ __ __ __ to learn about genetics.

12. A $\overline{\underset{2}{}}$ __ __ __ __ __ __ $\overline{\underset{56}{}}$ __ $\overline{\underset{35}{}}$ __ gene pair consists of two dominant alleles or two recessive alleles.

13. According to the __ __ __ $\overline{\underset{47}{}}$ of __ __ __ __ $\overline{\underset{50}{}}$ __ __ __ __ __ $\overline{\underset{23}{}}$ __ one gene from each gene pair goes to each sex cell.

14. The traits of an organism are controlled by its __ $\overline{\underset{15}{}}$ __ __ $\overline{\underset{36}{}}$ __ .

15. A __ $\overline{\underset{42}{}}$ __ __ $\overline{\underset{39}{}}$ __ __ $\overline{\underset{21}{}}$ __ __ __ $\overline{\underset{40}{}}$ __ is a chart used to show the possible gene combinations in across between two organisms.

16. A $\overline{\underset{8}{}}$ __ __ __ __ __ __ __ $\overline{\underset{3}{}}$ __ $\overline{\underset{22}{}}$ __ gene pair that consists of a dominant allele and a recessive allele.

17. The __ $\overline{\underset{44}{}}$ __ __ __   __ __ $\overline{\underset{45}{}}$ __ __ __ generation is the offspring of the P, or parental, generation.

18. A __ $\overline{\underset{29}{}}$ __ __ __ $\overline{\underset{55}{}}$ __ __ $\overline{\underset{30}{}}$ __ __ is a scientist who studies heredity.

19. A $\overline{\underset{49}{}}$ __ __ __ $\overline{\underset{27}{}}$ __ $\overline{\underset{5}{}}$ __ __ trait seems to disappear when two different genes for the same trait are present.

20. Organisms inherit genes in pairs, one from each $\overline{\underset{43}{}}$ __ __ $\overline{\underset{11}{}}$ __ $\overline{\underset{7}{}}$ __ .

21. __ __ __ $\overline{\underset{24}{}}$ __ $\overline{\underset{9}{}}$ __ $\overline{\underset{33}{}}$ __ is the study of heredity.

22. The __ __ __ of independent __ $\overline{\underset{28}{}}$ __ __ $\overline{\underset{16}{}}$ __ __ __ __ $\overline{\underset{10}{}}$ states that each gene pair is inherited
      $\overline{\underset{1}{}}$
      $\overline{\underset{17}{}}$ independently of the gene pairs for other traits.

Use the letters from the terms to complete the joke!

$\overline{1}$ $\overline{2}$ $\overline{3}$ $\overline{4}$ $\overline{5}$ $\overline{6}$ $\overline{7}$ $\overline{8}$ $\overline{9}$ $\overline{10}$ $\overline{11}$ $\overline{12}$ $\overline{13}$ $\overline{14}$ $\overline{15}$ $\overline{16}$ $\overline{17}$ $\overline{18}$ $\overline{19}$ $\overline{20}$ $\overline{21}$ $\overline{22}$ $\overline{23}$ $\overline{24}$ $\overline{25}$ $\overline{26}$ $\overline{27}$ $\overline{28}$ $\overline{29}$ $\overline{30}$**?**

$\overline{31}$ $\overline{32}$ $\overline{33}$ $\overline{34}$ $\overline{35}$ $\overline{36}$ $\overline{37}$ $\overline{38}$ $\overline{39}$ $\overline{40}$ $\overline{41}$ $\overline{42}$ $\overline{43}$ $\overline{44}$ $\overline{45}$ $\overline{46}$ $\overline{47}$ $\overline{48}$ $\overline{49}$ $\overline{50}$ $\overline{51}$ $\overline{52}$ $\overline{53}$ $\overline{54}$ $\overline{55}$ $\overline{56}$ $\overline{57}$ $\overline{58}$**!**

Genetics Challenge Puzzle - Answer Key

1. DNA
2. Allele
3. Mendel
4. Hybrid
5. Genotype
6. Traits
7. Incomplete dominance
8. Chromosomes
9. Dominant
10. Phenotypes
11. Pea plants
12. Homozygous
13. Law of segregation
14. Genes
15. Punnett square
16. Heterozygous
17. First filial
18. Geneticist
19. Recessive
20. Parent
21. Genetics
22. Law of independent assortment

Joke:
Why did the teacher wear sunglasses? Because her pupils were so bright!