

Name _____ Date _____ Per _____ Score _____
Genetics Quiz **Out of 20**

1. This scientist, who lived on a monastery, did experiments with pea plants and formed the base of modern genetics.

2. What is the name of the shape DNA takes? D _____ H _____.

3. List the abbreviation for each base.

Adenine =

Thymine =

Guanine =

Cytosine =

4. Why are chromosomes always found in pairs?

5. Who are the two scientists credited for discovering DNA?

6. Complete the chain below using its other side.

C	T	A	A	T	G	T	A	C	T	A	A	T	G	T

7. How many **pairs** of chromosomes are in every nucleus of your cells? _____

8. What is an Allele?

9. Number the following terms in order from the largest (1) to the smallest (7).

_____ DNA

_____ Skin Cell

_____ Cytosine

_____ Chromosome

_____ Cow

_____ Gene

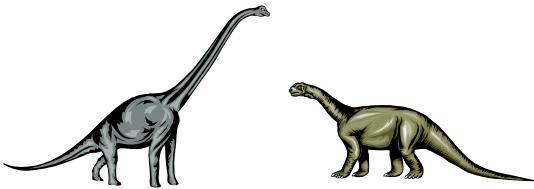
_____ Allele

10. True / False – Chromosomes sets in every body cell of an organism are identical.

EC. What does DNA stand for? (Yep, spelling counts!)

11. (3pts) Albinism is a recessive condition where the organism doesn't have normal pigmentation. (Think of a white lab rat that has pink eyes.) In order to have the condition, a person must have the genotype: **Draw a punnett square** that shows the possible offspring if parents with these genotypes mate: nn (albino) and Nn (carrier) **What % of the offspring will be albino?**

12. (3pts) Pretend that "L" is a dominant allele that makes a Brontosaurus have a Long neck. **Draw a punnett square** to show the possible outcomes if a homozygous dominant dinosaur mates with a homozygous recessive dinosaur. **What kind of neck will the kids have?**



13. (4pts) If the baby dinosaur in the previous problem were to mature and mate with another dinosaur with the **same genotype**, what would the possible genotypes of the next generation be? **Use a punnett square** to answer the following questions: **What percent of the offspring would have short necks? What percent are heterozygous (carriers)?** Label your answers.

EC. (1pt) Brown eyes (B) are dominant over blue eyes (bb).

A widowed blue-eyed man married and had twins that were mysteriously separated at birth. The twin that is living with him has brown eyes. He wonders what color eyes his other child has. His father-in-law was homozygous dominant for brown eyes and his mother-in-law was homozygous recessive. What are the chances of the other twin having the blue-eyed phenotype?