**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_** C L3 LH Genetic Terms Homework T2

**ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Teacher Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_**

**Genetics Terminology Homework**

**Part I:** **Circle** or **Write** in the correct description below to indicate if a trait is a phenotype or genotype.

1. A person’s dimples phenotype or genotype
2. A person’s DNA for dimples phenotype or genotype
3. A person’s brown hair phenotype or genotype
4. A person’s blonde hair phenotype or genotype
5. A person’s Hair color phenotype or genotype
6. A person’s DNA for brown hair phenotype or genotype
7. A person’s Skin color phenotype or genotype
8. Genes for tasting PTC (yuck!) phenotype or genotype

**Part II:** We show alleles, which are different versions of the same gene, with pairs of letters.

**Circle** or **Write** in the correct description to indicate if the genotype is heterozygous or homozygous.

1. Aa Heterozygote Homozygote 5. Bb \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. AA Heterozygote Homozygote 6. YY \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Hh Heterozygote Homozygote 7. Yy \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Ff Heterozygote Homozygote 8. dd \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part III:** We show alleles, which are different versions of the same gene, with pairs of letters.

For each term below **circle** the correct genotype (pair of letters) below.

1. Homozygous Bb bb 4. Homozygous ff Ff

2. Heterozygous Nn nn 5. Homozygous GG Gg

3. Homozygous Yy YY 6. Heterozygous RR Rr

**Part IV:** Some alleles are stronger than others. Some are dominant (strong), some are recessive (weak).

For each term below **circle** or **write** the correct genotype (pair of letters) below.

1. The allele A is Dominant Recessive 4. The allele G is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. The allele F is Dominant Recessive 5. The allele g is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. The allele z is Dominant Recessive 6. The allele D is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part V:** Now we are going to put two sets of vocabulary words together. **Circle** the correct genotype.

Remember that homozygous means that both letters are upper case or lower case. Heterozygous means that one is upper case and one is lower case.

1. Homozygous dominant BB Bb 4. Homozygous recessive nn Nn

2. Heterozygous BB Bb 5. Homozygous dominant GG Gg

3. Homozygous recessive bb Bb 6. Heterozygous RR Rr

**Part VI:** Now we are going to tie it all together. In humans, having dimples is dominant (D) and not having dimples is recessive (d).

1. A mother has a genotype of Dd. What is her phenotype? \_\_\_\_\_\_\_\_\_\_\_
2. A father does not have dimples. What is his genotype? \_\_\_\_\_\_\_\_\_\_\_\_\_
3. Their child is homozygous recessive for the dimples trait. What is her genotype and phenotype?

Genotype: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Phenotype: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Will a person that is heterozygous for the dimples trait actually have dimples? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. How did you know if the person will have or not have dimples? Explain your answer for Q4.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_