-Today you are going to get a review on Heredity and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

-So what is Heredity? Heredity is the \_\_\_\_\_\_\_\_\_\_\_\_\_ of traits from parents to offspring.

-One method of figuring out how offspring will get its traits from mom and dad is by using a punnett square.

-A Punnett Square is a \_\_\_\_\_\_\_\_\_\_ that shows all the possible combinations of alleles that can result from a genetic cross.

-Letters for the trait being challenged are placed on the \_\_\_\_\_\_side for one parent and on \_\_\_\_\_\_ for the other parent. The fancy word used to describe the letter combinations is called \_\_\_\_\_\_\_\_\_\_\_. Some examples of an allele could be \_\_\_\_\_\_\_\_or\_\_\_\_\_.

-The letters used to represent the trait you are crossing should have some connection to the dominant trait. For example, if we were to challenge if the offspring was going to be right or left handed, we would first have to identify that right handedness is dominant for this trait. Then we would select the letters that go with right handedness. You could use R for right hand. Here is an example of a parent that is right handed crossed with a parent who is left handed. Rr vs rr.

-It is important to note that to be dominant you only need to have \_\_\_\_\_ capital for your alleles (Rr). \_\_\_\_\_ capital letters (RR) will also show dominance and also control the trait for the offspring.

-There are some important terms that help with identifying what allele combinations to use.

-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ means the same, so your letter choices could be SS or ss. Homozygous always will need a second word to come with it so you know to use the two capitals or the two lower case.

-Homozygous \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ means you will be using the two capital letters (SS).

-Homozygous \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ means you will be using the two lower case letters (ss).

-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ means different, so your only choice for letter combinations would be Ss. This consists of one capital letter and one lower case letter.

**Practice Problem (Good Luck)**