**Mendel’s Laws**

Gregor Mendel was an Austrian \_\_\_\_\_\_\_\_\_\_ in who proposed his Principles of Inheritance in 1865.

Mendel was curious about how traits passed from one generation to the next. He chose to experiment with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because they reproduce relatively quickly and he could control their fertilization by transferring \_\_\_\_\_\_\_\_\_\_\_ with a small \_\_\_\_\_\_\_\_\_\_\_\_\_. The \_\_\_\_\_\_ were also a useful organism to experiment with because they can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, be pollinated by their own flowers.

He started by observing the plants that formed through self-fertilization first to ensure their \_\_\_\_\_\_\_\_\_\_\_\_\_\_ characteristics were consistent and \_\_\_\_\_\_\_\_\_\_\_\_\_\_. He ended up looking at \_\_\_\_\_\_\_\_ characteristics, but for this class we’ll just look at colour. Mendel confirmed the purity of his plants by verifying that the green pea plants only made \_\_\_\_\_\_\_\_\_\_\_ children and the yellow pea plants only made \_\_\_\_\_\_\_\_\_\_\_\_\_ children. Because these characteristics were tracked to be consistent over multiple generations, Mendel considered them “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”.

Mendel then began to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, pollinating the green plants with the yellow.

**Mendel’s Data**

**Mendel’s Findings**

Mendel summarized his findings into three laws:

**Law of Dominance:**

**Law of Segregation:**

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**Law of Independent Assortment:**

**Genetic Vocabulary**

Genotype:

Phenotype:

Gene:

Allele:

Dominant:

Recessive:

**Mendel’s Success as a Scientist**

Mendel’s results with the pea plants were useful, but could not complete our understanding of heredity and inheritance. Some consider his largest contribution to genetics was his scientific practice. Mendel did three key things to advance the study of genetics: