

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

## Chapter 11 – Genetics Study Guide

### 11.1 The Work of Gregor Mendel

Genetics is known as the study of heredity –

Briefly explain what inheritance means: The delivery of characteristics from parents to offspring.

Who was Gregor Mendel? He was an Austrian monk who founded modern genetics with his experiments on a convenient model system.

Fertilization is the process in which sex cells (Gametes) join to produce a new cell or Zygote .

A Trait is a specific characteristic, such as plant height or seed color in pea plants.

Mendel prevented self-pollination in the peas. He controlled fertilization so he could study how traits passed from one generation to the next.

How did Mendel control fertilization?: (Hint – **self-pollination** vs. **cross-pollination**) \_\_\_\_\_

Self-pollination – sperm cells fertilize egg cells within the same flower. Cross-pollination is when sperm cells fertilize eggs cells of a different flower.

Mendel created **hybrids**, which are crosses between **true-breeding** parents (P generation) with different traits. Perform this cross to create an **F<sub>1</sub> generation**:
