



Name: _____

Date: _____

Period: _____

Section 11.1 Guided Reading
The Work of Gregor Mendel

- 1) Explain the *Chapter Mystery* on the Chapter 11 title page:

- 2) Explain the relationship between the terms "heredity" and "genetics".

- 3) Gregor Mendel a priest, a teacher, and a mathematician. How might his chosen vocations provide him with insight into understanding what makes heredity happen in garden peas?

- 4) What 4 reasons are given in the text to explain why pea plants are a good study subject for learning about inheritance? Come up with a 5th reason on your own.

1.	4.
2.	5.
3.	

- 5) See Figure 11-2. Are the flowers of pea plants male or female? _____

- 6) What two cells fuse during sexual reproduction? _____ & _____. What is this called? _____

- 7) Peas are normally "self-pollinating". Mendel needed to control pollination and artificially cross-pollinate pea plants. Examine Figure 11-2. What tool did Mendel use to move pollen from flower to flower? _____
 Look closely at Figure 11-2 again. What did he do to flowers to prevent self-pollination? _____

- 8) How did Mendel create pure-breeding "stock", like plants that only produce only tall offspring, or only green seeds?

- 9) The offspring of crosses between parents with different traits are called _____.

- 10) Look at Figure 11-3. Name the two traits for
 - a. Seed shape _____ & _____
 - b. Pod shape _____ & _____
 - c. Pod color _____ & _____
 - d. Flower position _____ & _____

- 11) An individual's _____ are determined by factors that are passed from one generation to the next. Today, scientists call the factors that are passed from parent to offspring _____.

- 12) The two different forms of a gene are called factors, or _____. Alleles are either _____ or recessive. This is called the _____.

13) Again, look at figure 11-3. What is the dominant allele for

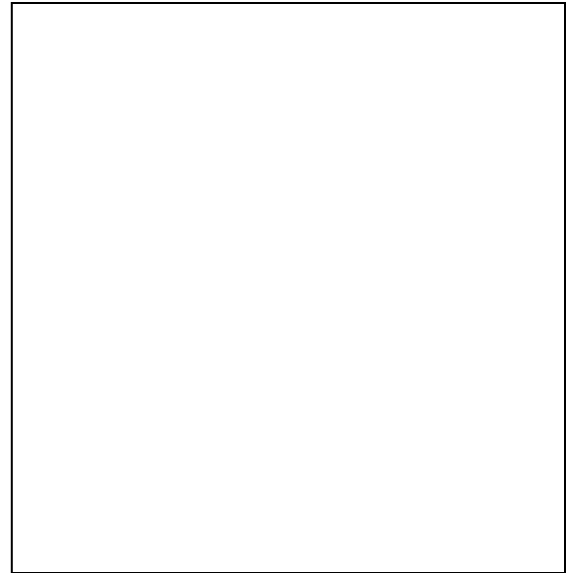
- a. Seed color? _____
- b. Seed coat? _____
- c. Plant height? _____

14) Look carefully at Figure 11-4. Copy it in the box to the right.

What is true about the P generation cross? _____

What is revealed in the F₁ generation? _____

What is revealed in the F₂ generation? _____



15) "Segregation happens during gamete formation." Explain this sentence in your own words using what you've learned on page 312.

16) Look carefully at Figure 11-5. Distinguish between the Homozygous Tall and Heterozygous Tall individuals in the F₂ generation. Hint: What alleles are used to represent each?

We parakeets come in 4 colors: white, green, blue, and yellow. How many alleles might there be for feather color?

