

# Biology 1

## 6.4 Guided Reading

Please read pages 180-182 and answer the questions below on your own paper using complete sentences.

1. How are genes and DNA related?
2. What is a locus?
3. Give an example of an allele using Mendel's pea plants.
4. How many alleles are there for each gene?
5. What are homozygous alleles?
6. What are heterozygous alleles?
7. Distinguish between the terms locus and allele.
8. What determines all of your traits?
9. What is a genotype?
10. What is a phenotype?

11. In Mendel's pea plants, which trait was dominant- wrinkled or round?
  
12. In Mendel's pea plants, which trait was dominant- purple or white flowers?
  
13. Why were all the  $F_1$  plants purple even though they only had one allele for purple flowers?
  
14. What are some misconceptions about the term 'dominant'?
  
15. How are letters used to represent traits in genetics?
  
16. How would a homozygous tall plant be represented with letters?
  
17. What two possible genotypes could a plant with smooth pods have?
  
18. What kind of traits did Mendel study?