

Name: _____

Date: _____

Life Science

Period: _____

Section A5.3: *Modern genetics uses DNA technology.*

Read pages A150-154 and answer the following questions.



Selective Breeding (pg. 151) _____

1. What is *selective breeding*?

2. How does *selective breeding* affect the DNA of a species?

Genetic Engineering (pg. 151) _____

3. What are the three steps involved in genetic engineering?

a. _____

b. _____

c. _____

4. What term(s) are used to identify an organism that is the result of genetic engineering?

5. Provide one example of how scientists have genetically engineered an organism and why they've done it:

6. What is one major difference between changing offspring through selective breeding and genetic engineering?

Risks and Benefits of Genetic Engineering (pg. 152) _____

7. What is one benefit that we can receive from genetically modified food?

8. What is one risk that we can attribute to genetically modified food?



DNA Identification (pg. 153) _____

9. How many regions of DNA are used to make a “DNA fingerprint”? _____

10. Who is the only person who can match an individual’s DNA fingerprint?

Studying Genomes (pg. 154) _____

11. What is a *genome*? _____

12. Approximately how many genes are known to exist in the human genome? _____

13. What are some of the benefits of cloning?

14. Why might the practice of cloning raise concerns about its future use?
