1. What did Charles Darwin observe on the Galapagos Islands?
   somewhat similar species with traits that suited their particular environment.

2. Individuals that are better suited to their environment survive & reproduce most successfully (381) Survival of the fittest

3. Darwin viewed the fossil record as evidence of (382) evolution

4. The most modern organisms are in the (top/bottom) layer of the fossil record. (circle one)

5. Darwin made many observations on which islands? (371) Galapagos Islands

6. Darwin’s revolutionary publication (379) On the Origin of Species

7. An adaptation is an inherited characteristic that (380) increases an organism’s chance of survival.

8. Ability of an organism to survive and reproduce in its environment (380) fitness

9. The number and location of bones of many fossil vertebrates are similar to those in living vertebrates. Organisms that have many similar physical characteristics suggest that they descended from a common ancestor. (381-382)

10. Darwin’s theory of evolution suggests that populations change over time.

11. A change in a sequence of DNA (394) mutation

12. Heritable differences occur because of gene shuffling or recombination that occurs during meiosis.

13. Separation of populations by barriers such as rivers, mountains, or bodies of water (405) Geographic isolation

14. What is behavioral isolation? (404) When 2 populations are capable of interbreeding but have differences in courtship rituals or other reproductive strategies that involve behavior.
15. Isolating mechanism where species reproduce at different times (405) **temporal isolation**

16. When members of 2 populations cannot interbreed & produce fertile young. A factor that is necessary for the formation of a new species. (404) **Reproductive isolation**

17. A well-supported testable explanation (369) **theory**

18. What evidence supported Darwin’s Theory of Evolution? (382-385) **Fossil record, geographic distribution of living species (biogeography), homologous structures of living organisms, & similarities in early development (embryology).**

19. New alleles in a population that make an organism more fit to reproduce (increase/decrease) in frequency. (circle one)

20. The **Miller –Urey experiment** suggested early Earth had the right ingredients for amino acids to form. (424)

21. The pattern of long-term, stable periods (stasis) interrupted by brief periods of more rapid change during evolution. (439) **Punctuated Equilibrium**

22. What is genetic drift? (400) A random change in allele frequency. In small populations, individuals that carry a particular allele may leave more descendants than other individuals, just by chance. Over time, a series of chance occurrences of this type can cause an allele to become common in a population.

23. The type of genetic drift that follows the colonization of a new habitat by a small group of individuals.(400) **founder effect**

24. Individual organisms do not change their genes, the genetic composition of a **population** changes over time.

**Biology STAAR Standards**

B.7.A analyze and evaluate how evidence of common ancestry among groups is provided by the fossil record, biogeography, and homologies, including anatomical, molecular, and developmental

B.7.B analyze and evaluate scientific explanations concerning any data of sudden appearance, stasis, and sequential nature of groups in the fossil record

B.7.C analyze and evaluate how natural selection produces change in populations, not individuals

B.7.D analyze and evaluate how the elements of natural selection, including inherited variation, the potential of a population to produce more offspring than can survive, and a finite supply of environmental resources, result in differential reproductive success

B.7.E analyze and evaluate the relationship of natural selection to adaptation and to the development of diversity in and among species

B.7.F analyze and evaluate the effects of other evolutionary mechanisms, including genetic drift, gene flow, mutation, and recombination

B.9.D analyze and evaluate the evidence regarding formation of simple organic molecules and their organization into long complex molecules having information such as the DNA molecule for self-replicating life