

Name \_\_\_\_\_

Date \_\_\_\_\_

Warm-Up: EVOLUTION DIAGNOSTIC TEST

Choose the letter of the best answer and write them on the blank space provided.

- \_\_\_\_\_ 1. A parent's trait is inherited by offspring in the form of DNA carried on  
a. a single maternal gene.                      c. only sex chromosomes.  
b. one or more genes.                            d. a nucleotide base pair.
- \_\_\_\_\_ 2. Which of the following groups best represents a variation in phenotype?  
a. kindergarten students with different hair colors  
b. sisters who are both homozygous for a trait  
c. trees with many recessive traits  
d. plants in sun growing taller than plants in shade
- \_\_\_\_\_ 3. Which of the rock layers depicted in Figure 10.1 is the oldest?

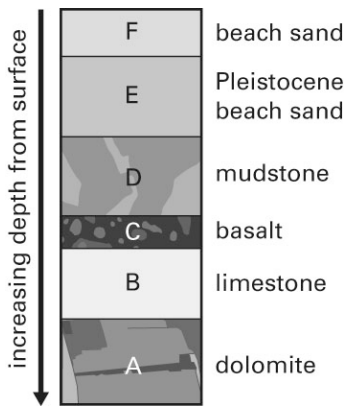
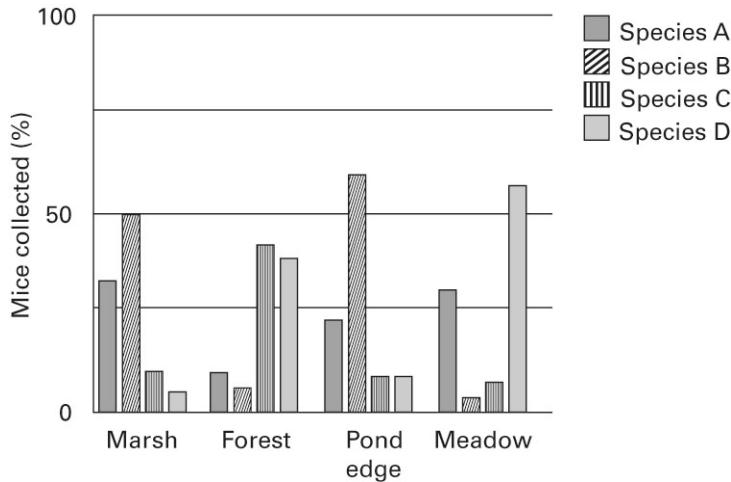


FIG. 10.1

- a. Layer A    c. Layer C  
b. Layer F    d. Layer D
- \_\_\_\_\_ 4. The cellular process that eventually leads to increased genetic diversity is  
a. asexual reproduction.                      c. meiosis.  
b. translation.                                      d. transcription.
- \_\_\_\_\_ 5. Which pair of structures shares similar functions?  
a. human hair and clam shell  
b. rose flower and tree bark  
c. chloroplasts and mitochondria  
d. fish gills and human lungs

6. Our understanding of both biology and geology is based on the idea that living things and environments have changed
- only since humans appeared.
  - repeatedly, rapidly, and rarely.
  - slowly, over billions of years.
  - very little since Earth began.
7. Figure 10.2 shows mouse species collected at different habitats. Which species appears to be best adapted to wet environments?



**FIG. 10.2**

- A
- B
- C
- D

8. A proposed explanation for a wide range of observations and experimental results that is supported by a wide range of evidence is what we call a
- hypothesis.
  - principle.
  - variable.
  - theory.

9. As scientific discoveries are made over time, new findings are evaluated by
- comparing them with those presented previously by other scientists.
  - presenting them to an international committee of government scientists.
  - weighing them against new, untested, and unproven hypotheses.
  - conducting experiments for many years before considering them.

10. Within a species, each individual's DNA is contained on
- the individual's dominant alleles.
  - only the sex-linked chromosomes.
  - half of the organism's genes
  - a set number of chromosomes

*Circle the letter of the correct answer.*

- 1** Who proposed the idea that the human population grows faster than the food supply?
  - A Charles Darwin
  - B Alfred Russell Wallace
  - C Thomas Malthus
  - D Stephen J. Gould
  
- 2** Which of the following adaptations will probably develop most rapidly?
  - A Camouflage
  - B Drug resistance
  - C Mimicry
  - D Large teeth
  
- 3** What are structures that share a common evolutionary origin called?
  - A Homologous
  - B Analogous
  - C Vestigial
  - D Siblings
  
- 4** What are structures without a present-day function called?
  - A Homologous
  - B Analogous
  - C Vestigial
  - D Extinct
  
- 5** In order for evolution to occur, what must happen in a population?
  - A Genetic drift
  - B Geographic isolation
  - C Natural selection
  - D Reproductive isolation
  
- 6** Which of the following can disrupt genetic equilibrium?
  - A Mutation
  - B Migration
  - C Genetic drift
  - D All of the above
  
- 7** What type of natural selection favors average individuals in a population?
  - A Disruptive selection
  - B Stabilizing selection
  - C Directional selection
  - D Bias
  
- 8** The idea that speciation occurs in bursts, between long periods of genetic equilibrium is called —
  - A punctuated equilibrium.
  - B stabilizing selection.
  - C genetic drift.
  - D gradualism.
  
- 9** Polyploidy is the condition of having a multiple of the normal set of chromosomes. What does polyploidy result in?
  - A Geographic isolation
  - B Hybridization
  - C Reproductive isolation
  - D Mutations
  
- 10** What is it called when unrelated species evolve similar traits?
  - A Convergent evolution
  - B Genetic drift
  - C Divergent evolution
  - D Parallelism