Name Date Class

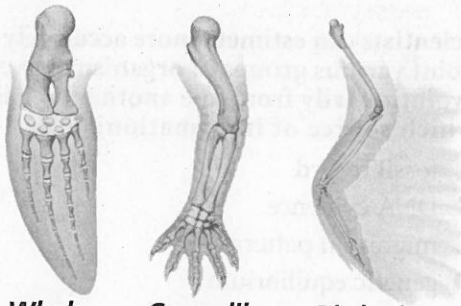
1 **Which principle of natural selection is stated incorrectly?**

A Individuals in a population show variations.
B Variations are not inherited from parents.
C Organisms have more offspring than can survive on available resources.
D Variations that increase reproductive success will be more common in the next generation.

2 **The fact that at least one species of resistant bacteria has developed for almost every antibiotic is evidence for which condition?**

A The bacteria have adapted and could be evolving into a different species.
B The bacteria have learned to mimic other species.
C There is no variation in the bacteria population.
D The antibiotics are being made differently.

3 **Why are the structures shown below considered to be homologous?**



Whale forelimb *Crocodile forelimb* *Bird wing*

A They belong to organisms that evolved from separate ancestors.
B They are the result of geographic isolation.
C They belong to organisms that probably evolved from a common ancestor.
D They are the result of sympatric speciation.

4 **Homologous structures might be the result of a change in allele frequencies over successive generations. Why have these structures probably continued?**

A They were beneficial in a particular environment.
B They were predestined in a species.
C They made a particular organism more attractive to a mate.
D They were neutral, not harmful, mutations.

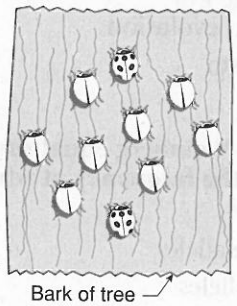
5 **Under what conditions might populations of a short type of sunflower be identified as a new species?**

A They are able to breed with sunflowers from the original population.
B They are unable to breed with the sunflowers of the original population.
C They appear as a new color.
D They produce twice as many blooms as the original sunflower population.

6 **According to which theory does genetic change cause species to change quickly and not gradually?**

A coevolution
B gradualism
C adaptive radiation
D punctuated equilibrium

7 **What unique characteristic would the beetles shown below develop through biological adaptation if, over a period of years, the bark on the trees shown became spotted?**



A The beetles would become spotted.
B The beetles would become plain.
C About half the beetles would become spotted and half would not.
D There would be no change.

8 **According to the theory of natural selection, why are some individuals more likely than others to survive and reproduce?**

A They pass on to their offspring new characteristics they acquired during their lifetimes.
B They are better adapted to exist in their environment than others.
C They do not pass on to their offspring new characteristics they have acquired during their lifetimes.
D They tend to produce fewer offspring than do others in the same environment.

9 **What factor within a species increases the likelihood that some members of a species will survive when environmental conditions change?**

A variation
B disjunction
C polyploidy
D migration

10 **In order for evolution to occur, what must happen in a population?**

A genetic drift
B geographic isolation
C natural selection
D reproductive isolation

11 **What is operating when unrelated species living in different parts of the world, but with similar niches, evolve similar traits?**

A convergent evolution
B genetic drift
C divergent evolution
D parallelism

12 **The Hardy-Weinberg equation is used to determine the frequency of which alleles in a population?**

A recessive alleles
B hybrid alleles
C dominant alleles
D masked alleles

13 **Based on the table below, use the Hardy-Weinberg equation $p2 + 2pq + q2 = 1$ to determine the frequency of the short *(tt)* genotype in a population of pea plants.**

Pea Plants (population: 100)		
TT	*Tt*	*tt*
36	48	16

A 0.16
B 0.36
C 0.48
D 1.0

14 **What type of natural selection favors average individuals in a population?**

A disruptive selections
B bias
C directional selection
D stabilizing selection

15 **Scientists can estimate more accurately at what point various groups of organisms diverged evolutionarily from one another by using which source of information?**

A fossil record
B DNA evidence
C migration patterns
D genetic equilibrium

Name Date Class

1 **What advantage does binocular vision provide for primates?**

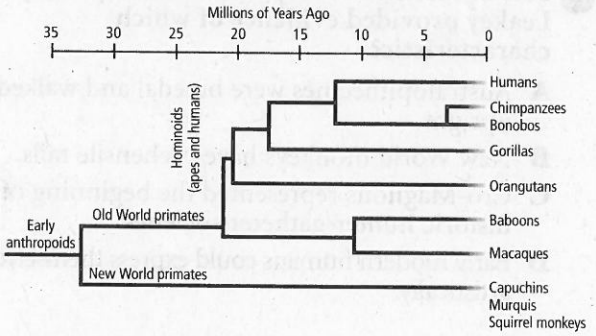
A increased social skills
B more variety in facial expressions
C increased color perception
D greater depth perception

2 **You are researching the anatomy of an unknown primate. You are told that it is an early hominin. Where would you expect to find the foramen magnum?**

A back of the skull because early hominins walked on all fours
B bottom of the skull because early hominins walked on all fours
C back of the skull because early hominins walked upright
D bottom of the skull because early hominins walked upright

Use the diagram below to answer question 3.

3 **Humans share about 96 percent of their DNA sequence with which group?**

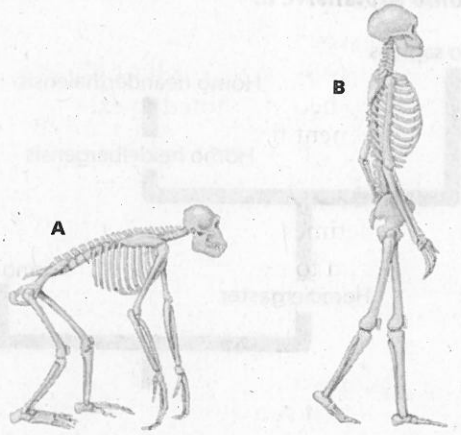


A New World primates
B Old World monkeys
C gorillas and orangutans
D bonobos and chimpanzees

4 **Nocturnal primates are characterized by what feature?**

A ability to see color
B increased sense of smell
C teeth for specialized diets
D sharp black and white vision

5 **What does the figure labeled *B* below illustrate when compared to the figure labeled *A*?**



A advantages of a particular diet
B bipedalism
C specific place of origin
D cultural development

6 **What characteristic in New World monkeys functions like a fifth limb?**

A prehensile tails
B opposable digits
C flexible wrists
D fingernails

7 **How did *Homo erectus* differ from modern *Homo sapiens*?**

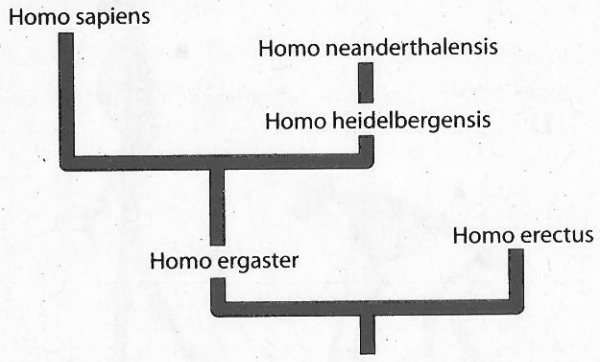
A *Homo erectus* did not have an opposable thumb.
B *Homo sapiens* are bipedal primates.
C *Homo erectus* had a lower jaw without a chin.
D *Homo erectus* had a lower jaw with a chin.

8 **What is true about the primate fossil record?**

A It is complete.
B It is not complete.
C It is seldom helpful in following evolutionary paths.
D It is simple, rather than complex.

Name Date Class

9 **According to the diagram below of the evolution of genus *Homo*, which is the closest ancestor of *Homo sapiens*?**



A *Homo erectus*
B *Homo ergaster*
C *Homo neanderthalensis*
D *Homo habilis*

10 **What does the multiregional evolution model hypothesize for modern races of humans?**

A They arose in isolated populations by convergent evolution.
B They arose from one population by divergent evolution.
C They arose from the New World primates.
D They arose from strepsirrhines.

11 **What has shown that Neanderthals were a distinct species from modern humans?**

A comparison of skull shapes
B DNA evidence from fossil bones
C position of the foramen magnum
D use of tools

12 **What factors threaten primate populations around the world?**

A low birthrate
B loss of tropical habitats
C human predation
D All are factors that threaten primate populations.

13 **Which hypothesis explains the global dominance of modern humans?**

A Mitochondrial Eve hypothesis
B Overlapping hypothesis
C Out-of-Africa hypothesis
D Mosaic Pattern hypothesis

14 ***Homo habilis* derived its name from which characteristic?**

A use of stone tools
B larger brain
C flatter face
D reduced jaw

15 **Sets of fossilized footprints found by Mary Leakey provided evidence of which characteristic?**

A Australopithecines were bipedal and walked upright.
B New World monkeys have prehensile tails.
C Cro-Magnons represented the beginning of historic hunter-gatherer societies.
D Early modern humans could express themselves artistically.