

Natural Selection and Adaptation

Pgs 372-378

Period _____ Date _____

1. Who is Charles Darwin? Pg372

A naturalist from England who lived in the 1800s & studied groups of organisms w/ similar traits

2. What is Darwin's theory?
- The Theory of Evolution

3. What does it explain?
- how traits & species can change over time

4. What kind of beak did a Cactus finch have?
- long, pointed
- why?
- to get seeds from cacti

5. What type of beak did a Warbler finch have?
- thin, sharp
- why?
- to spear insects

6. What type of beak did a Large ground finch have?
- short, heavy
- why?
- to eat large seeds on ground

7. Each species of finch was specialized, or
- suited
- for living in a particular environment and eating the food found there.

8. Darwin's Theory—pg 374. The core of Darwin's theory of evolution is
- natural Selection
- organisms with traits best suited to their environment are most likely to
- survive
- and
- reproduce
- .

9. What is a variation?

a small change in a trait that makes an individual slightly different from members of its species

10. Give an example of a variation in humans.
- hair color, dimples, widow's peaks, nose shape, eye color, ear shape

11. Read the variation in Figure 4 with moths. Eventually, which color moth is more populous?
- brown

12. Pg 376. What is an adaptation?

an inherited trait that increases an organism's chance of surviving & reproducing in a particular environment

13. Adaptations can be
- physical
- traits or
- behavioral
- traits.

14. Example of physical adaptation:
- long sticky tongue in tree frogs, Xylem in plants - tubes to transport water

15. A behavioral adaptation involves
- actions
- rather than body structure.

16. Example of behavioral adaptation:
- mass movement or migration

17. Why are insect mouthparts different?

to help them eat their food - moths = tube mouth for sucking nectar, bull ants = jaws that cut insects
wasps = jaws that crush insects/chew meat

18. Structures like quills on porcupines and thorns on roses help organisms
- dissuade predators
- .

19. Camouflage helps species
- hide
- or trick predators.

20. Muscle and bone adaptations (like hollow bones in birds) help species
- move
- (to find food or avoid predators).

21. Give an example of a species living in an extreme environment.

Cacti = special stems that store water, polar bears = layers of fat for insulation, bats & snakes - hibernate, Ice fish - blood that doesn't freeze, bacteria - proteins allow them to live in Hot Springs @ 100°C