

Movie: Trials of Life: Courting– Begin movie at 9:20, ends 41:30.

1. How do tropical fish prevent inter-species mating?

2. In ducks, why is the plumage of females brown while the plumage of males is of very bright colors?

What else does a male do to convince a female that he is of the correct species before mating?

3. What happens if a male bird displays the wrong courting behavior to a female?

4. What do male hanging flies bring to females in order to convince her to mate?

Why will the male not permanently part with his “gift” once mating is over?

5. What characteristic do female salamanders use when choosing a mate?

6. Pheromones are a chemical stimulant (perfume) released by one individual but affects the behavior/physiology of another individual. In Moose, what is the pheromone found in?

7. In Lauer Birds, females choose males based on what male trait?

Do male Lauer Birds spend much time or energy raising the young?

8. The very elaborate male plumage of the Peacock can certainly be a disadvantage. Name two ways it can be a hindrance to the male Peacock?

When do males usually lose their elaborate plumage?

9. Male Bower birds do not invest energy in elaborate plumage. What do they invest their time and energy in that females will inspect?

10. Male long tailed manakin birds will “dance” _____ months a year and _____% of daylight hours in order to attract a female.

Evolution Movie

1. What theory did Darwin first describe?
2. At what point did real opposition to evolution occur in the public's mind?
3. What was the central issue in the "Scope's monkey trial"? Who won the trial initially and what law was kept on the books until 1967 because of the initial verdict?
4. Does Darwin refute the existence of God or that God could have started life?
5. Name at least two examples of Artificial Selection that Darwin used in his book?
6. What did Darwin initially go to school for?
7. What was the name of the ship Darwin sailed upon?
8. How long did he go and collect specimens across the world?
9. What was the name of the Islands where he did much of his collection? What species of bird did he appreciate the most?
10. How old was he when he returned from his trip?
11. What was the name of the first book Darwin wrote?
12. Name two key points to Natural Selection:
 - 1.
 - 2.
13. Did Darwin publish his book immediately after writing it? Why or why not? What prompted him to publish the book?

14. Why is bacterial antibiotic resistance an example of natural selection?

15. Why is over eating an example of natural selection?

16. Did Darwin ever use the phrase “survival of the fittest”?

17. Does natural selection move species toward “perfection”?

18. What does natural selection do?

Film: Living Together

1. Is the relationship between the monkeys and deer mutualistic, commensalistic, or parasitic?

What benefit do the deer get from the monkeys?

What benefit do the monkeys get from the deer?

2. Is the relationship between the crab and Rag worm mutualistic, commensalistic, or parasitic and why?

3. How does the hermit crab protect itself from its predator the Octopus?

4. Is the relationship between the 1st caterpillar and the ants mutualistic, commensalistic, or parasitic?

What benefit do the ants receive from the interaction?

What benefit does the caterpillar receive from the interaction?

How does the caterpillar communicate to the ants that it is the correct species of caterpillar?

5. How does the 2nd species of caterpillar protect itself from the ants who attack it?

Name two ways that the ant can attack caterpillars?

6. Is the relationship between fleas and birds mutualistic, commensalistic, or parasitic?

Movie: Senescence

1. What is primary effect of Huthcheson-Guildford syndrome (disease)?

2. How long will a person usually survive with the disease?

3. In general, what causes the disease?

4. What hormone injections are used to treat the disease?

5. What animal did Dr. Roy Walferd use in his experiments on aging?

6. According to Dr. Walferd, what two things must an organism do in order to increase its life span and decrease disease susceptibility?

7. Is the experiment that Dr. Walferd is conducting on himself a valid experiment? Why?

8. According to Dr. Walferd, what is the number one factor in causing disease?

9. Some scientists believe that senescence is controlled by a single gene. What animal have they used to test their hypothesis?

10. Referring to the question above, how can an animal so simple be used to understand the cause of senescence in humans?

11. Why would an animal have a gene that slows the rate of aging when nutrients (energy) are low within the environment?

12. What “poison” does the body intake every second that is essential to life but also increases the rate at which we age?

13. What two types of molecular damage do “free radicals” cause within the body?

14. What part of the body are most affected by free radicals?
15. What do antioxidants do?
16. What are two examples of antioxidants?
17. According to the film, is there anyway to escape the damage of free radicals at this time?

18. Are any “normal” human cells immortal (can divide indefinitely)?
19. What did Leonard Haflick determine about cell division?
20. Did the scientific community initially agree with what Dr. Haflick found? Why not?
21. What keeps cells from dividing indefinitely?
22. What cells are immortal?