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CHAPTER 1: The Cat

READING NOTES

1. **Longitudinal** – In anatomy, this term refers to something extending from the head toward the tailbone. A lateral line would be perpendicular, extending across the width rather than the length.
2. **Transverse** – There are multiple body planes that are used to describe how anatomical parts are located in relation to each other. One such plane is the transverse plane. The transverse plane can be thought of as a flat plane, separating the body in half, perpendicular to the spine in an animal.
3. **Quadruped** – An animal that walks on four feet.
4. **Organic and Inorganic** – An organic substance contains the element carbon and is often associated with things that exhibit characteristics of life. An inorganic substance does not contain carbon. When talking about the living world, most substances will be organic, while inorganic substances are more commonly studied when examining the non-living thing.
5. **Nitrogenous** – Something that is nitrogenous contains the element nitrogen. In animals, when describing nitrogenous tissues, this implies that the animal forms amino acids, necessary for building protein in the body. The cat is used for this example, while plants are mentioned as being non-nitrogenous. This is reasonable, as plants do not produce protein the way that a cat or other animal does.
6. **Carbonic Acid** – Carbonic acid is a molecule composed of hydrogen, carbon, and oxygen that plants use to obtain the carbon they need to be organic (i.e., living) things.

COMPREHENSION QUESTIONS

1. Why is the cat valued as a domestic animal?

2. What is the Latin word from which the name "cat" derives?

3. Why does it seem likely that the cat would have been first domesticated in Egypt?

4. How is the domestic cat chiefly different from the wild cat?

5. What is the normal life span of a domestic cat?

6. How many kittens might the owner of a mated pair of cats expect to have every year?

7. Why is knowing the history of the domestic cat and its various breeds not "scientific knowledge" in the most strict sense?

8. Why is it important to recall that we naturally learn by making distinctions?

9. What does it mean to say that an organism is a "complex whole in which all the parts are reciprocally ends and means"?

10. Which four chemical elements are the principal ones into which living things can be dissolved after death?

11. What does it mean to say that an organism is "made up" of these elements?

12. Should an organism be understood to be a collection or mixture of these elements?

13. How do living things differ from non-living things?

14. What are the most basic activities shared by all animals—that is, those activities that indicate they are both alive and animals?

15. How can we negatively characterize the difference between all animals and plants?

16. How are the higher animals, such as the cat, further differentiated from plants?

17. What, then, is an animal?

CHAPTER 11: Day's Herald Bird

READING NOTES

1. **Larynx** – Another term for the voice box, the larynx is an organ at the top of the neck that holds the vocal cords and forms an air passage to the lungs.
2. **Trachea** – Another term for the windpipe, the trachea is a long tube reinforced with rings of cartilage that conveys air to the lungs.
3. **Oviparous Vertebrata** – Vertebrata is the class of vertebrates. Oviparous means that they reproduce by laying eggs.
4. **Forelimbs** – The limbs found toward the anterior end of a quadruped.
5. **Gizzard** – The muscular part of a bird's stomach used for grinding up food.

COMPREHENSION QUESTIONS

1. What familiar bird sings "cheer-il-ee, cheer-up, chee-eer-io" from the top of trees and fence posts early on spring mornings?

2. What is voice?

3. What is the organ of the voice in man?

4. How is the human larynx constructed?

5. How is human vocal sound produced?

6. What do the ventricles and superior ligaments of the larynx do?

7. What is the difference between voice and words (i.e., between vocal sound and language)?

8. Why do birds lack soft mouths?

9. Why are most birds unable to form their vocal sounds into words?

10. What organ is responsible for the bird's voice?

11. Do songbirds have a more impressive syrinx than other birds?

12. Why are the voices of songbirds so loud, while the birds themselves are so small?

13. How do the calls of birds assist them in the task of nourishing themselves and their offspring?

14. Why is there a great chorus of birdsong every spring?

15. What sorts of human behavior can have a positive effect upon the populations of songbirds?

16. What is remarkable about the song of the Mockingbird?

17. Why might the Wood Thrush sing so late into the summer?
