



Science Benchmark Achievements Elementary Science

The Fifth Day: Zoology and Biology

Ages 8-12

Objectives at this age:

- Begin student-created science textbooks for zoology
- Discover the why and how behind God's creations
- Introduction to basic science concepts and vocabulary
- Introduction to famous scientists: Charles Darwin, Gregor Mendel, Aristotle, Louis Pasteur, Hippocrates

Beginning at age 8, children will begin creating a science textbook for each of the scientific disciplines. Even though the textbooks will not be completed until their senior years, students are encouraged to prepare a physics journal at this age to begin recording and illustrating their discoveries.

Zoology – Classification of animals

- Herbivores, carnivores, omnivores
- Producers, consumers, decomposers

Fish:

- Salt water (coastal waters, coral reefs, open ocean, and deep ocean)
- Fresh water (tropical, temperate, migration)
- Vertebrates and invertebrates
- How invertebrates move in water
- How most vertebrates move in water
- Osmosis and Diffusion
- Insulation

Birds:

- Land birds (perching and song birds)
- Birds of prey (day hunters and night hunters)
 - Designed for flight
 - Take off and thrust
- Flightless birds (tropical and arctic)
- Game birds (high-flying and ground)

- Water birds (long-legged and web-footed)
 - Water proofing feathers
- Tropical birds (in the trees, on the ground)
- Family Pets (habitats, training, diseases)
- Reproduction: Eggs

Beasts of the field:

- Wild (meat-eating, fruit-eating, leaf-eating, grass-eating)
- Domestic (farming/barnyard; household pets)
- Furry (thick, thin, hairy)
- Thick-skinned (on land, in the water)
- Scaly (in deserts, in marshes, in jungles)

Cattle:

- Wild (desert herds, arctic herds, mountain herds, flatland herds)
- Domestic (food for mankind, clothing for mankind)

Creeping Things:

- How many legs? No legs?
- Worms (for healthy soil, for food)
- Insects (flying, crawling, jumping)
- Spiders (poisonous, harmless)
- Crabs (land crabs, salt-water crabs, fresh-water crabs)
- Turtles and Amphibians (on the land, in the sea)
- Snakes (habitats on land, water snakes, poisonous snakes)
- Rodents (in the ground, in the trees, in the water, as pets)

Animal cell structure

- Cell division and reproduction