Life Science 7

Chapter 17-1, 17-2
“Birds”
p 442-451

Objectives

- Name two characteristics that birds share with reptiles.
- Describe the characteristics of birds that make them well suited for flight.
- Explain *lift.*
- List some advantages of migration.

Bird Evolution

- very very similar to reptiles
  - _____
  - _____
  - vertebrates
  - very likely they are the closest animals to the dinosaurs!
- Bird ancestors were most likely a group of dinsosaurs called _____(like velociraptors)
- *Archaeopteryx*, fossilized feathered dinosaur probably represents a side branch of feathered reptiles, not the bird ancestor
- Differences are all accountable to the _____

Bird Adaptations for Flight

- Birds are designed specifically for flight
- _____ allow wings to catch the air, and are excellent insulators (lightweight for flight)
  - _____: small fluffy feathers used for insulation
  - _____: larger feathers used to cover the body and wings, streamlines the bird
  - birds use their beaks to spread oil on their feathers
    - keeps them waterproof
    - called _____

Bird Adaptations for Flight

- Bones are porous, to _____, and some fused to increase strength
- Streamlined body shape to reduce _____
- _____ heart allows very efficient circulation,

necessary for flying
- Wings shaped to cause an upward force called _____

Bird Adaptations for Flight

- _____are also efficient, with extensions in between organs and even into the bones!
- Excellent _____, best among the vertebrates???
- Proportionately larger _____ than reptiles and amphibians
  - debate as to birds intelligence…
- Birds are _____- “warm blooded”, body temperature is kept constant regardless of environment
  - allows birds to occupy a wide variety of habitats
  - downside is that birds need to eat A LOT to maintain flight
- Some birds have lost ability to fly (penguins, ostrich, chicken, etc)

Migration

- many birds **migrate** or _____
- Migration allows birds to take advantage of better feeding grounds, nesting grounds, etc…

Nesting

- Birds must keep their eggs _____ during development
- Many build nests to allow one parent to incubate the eggs
- Various nesting behaviors
  - in some species, _____ share the job
  - in others, one or the other do the nesting
  - some birds lay their eggs in other birds’ nests, so they don’t have to take care of their young! (ex: _____)

The Chicks

- some chicks hatch fully developed and ready to feed themselves (= _____
  - ex: chickens, ducks, geese, shorebirds
  - some mammals are precocial as well (antelopes, horses, cows)
- Other chicks need lots of time to develop and cannot fend for themselves (_____
  - ex: robins, wrens, jays
  - mammal examples include: humans, dogs, cats

Classification

- Class Aves (most common classification)
  - Some taxonomists actually include them with the reptiles (class Reptillia)
  - Several groups of birds, can be divided into the **ratites** (non-flyers, lack a keel), and **carinates** (flyers, possess a keel)
  - Several orders and classes of birds, divided by perching methods, feeding, behavior, habitats, etc.

Flightless Birds (List examples)

Water Birds (List examples)

Birds of Prey (List examples)

Perching Birds (List examples)