Envirothon

Kennedi Cope, Easton Utz, Lexi Bennett, Seth Scott, and Gema Enriquez

Aquatic Ecology

- Ecology is the study of how organisms react with their environment and each other.
- Aquatic Ecology is the study of Ecology in the following:
 - Oceans
 - Estuaries
 - Lakes
 - Ponds
 - Wetlands
 - Rivers
 - Streams

- Aquatic organisms are classified into four major groups, decided by biological characteristics, habitat, and adaptations.
 - Microorganisms
 - Periphyton and Biofilm, Algae and Phytoplankton, Protozoa, Fungi, & Bacteria
 - Plants
 - Rooted macrophytes, Floating aquatic macrophytes, Riparian vegetation
 - Invertebrates
 - Worms, Molluscs, Insects, Zooplankton
 - Vertebrates
 - Fish, Amphibians, Reptiles, Mammals

Aquatic Ecology

PROBLEMS: Humans affect aquatics by allowing contaminants to enter water systems. Other gases and small materials can also be inserted in the atmosphere (by oil sand operations, etc.) and later deposited in land and water. Natural factors such as flooding and beavers also affect aquatic life.

SOLUTIONS: Limit amount of trash deposited into aquatic ecosystems. Find alternate ways of manufacturing that is eco friendly.



Soils and Land Use

- 7.5% of the **Earth's** surface provides the agricultural soil that we use for food
- The current rates of soil degradation suggests we have about
 60 years of topsoil left
- Some 40% of soil used for agriculture around the world is degraded or seriously degraded
- 70% of the topsoil is ill or gone
- Annually **24 billion** tonnes of soil are lost due to erosion

Soil Erosion and What to do?

Causes:

- Deforestation
- Overcropping
- Overgrazing
- Rainfall
- Wind

How To Help:

- Planting vegetation
- Introducing organic matter
 - Manure
 - Mulch
- Rotating crops



Replanting of the Okanogan-Wenatchee National Forest

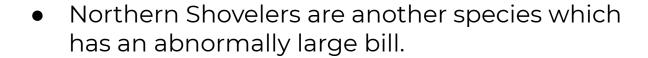
Sources Used:

https://www.arborday.org/programs/replanting/action/past/stories.cfm?year=2016 https://courses.lumenlearning.com/geo/chapter/reading-causes-of-soil-erosion/

Wildlife

Identifying Duck Species

 Mallards are a very common duck that thrives almost anywhere.



 Wood ducks are a smaller duck in which the male shows very vivid colors.







Wildlife 2

- The key for North American waterfowl is composed of how to identify the bird, feeding traveling, nesting, and behavior habits.
- It also contains a map of their habitat.

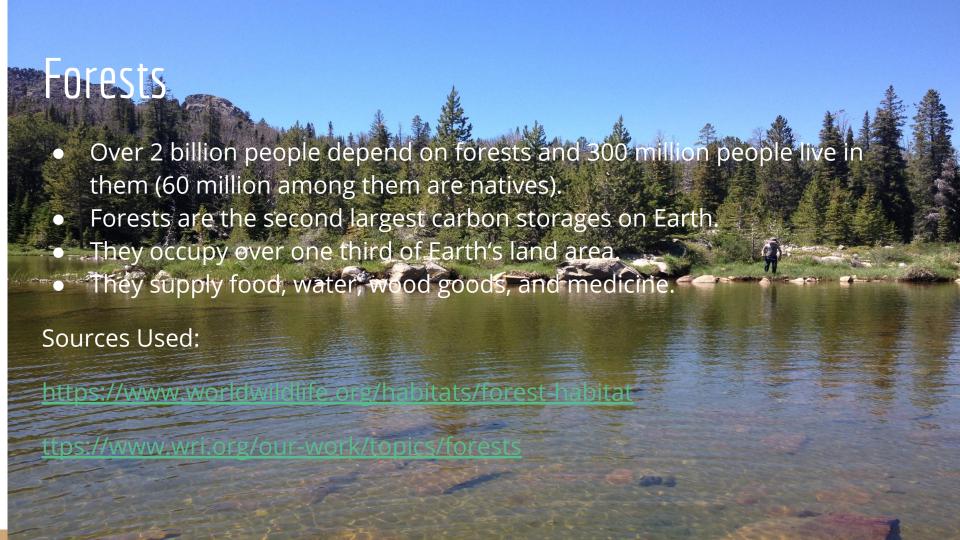
DUCK WINGS

Many ducks have distinctive color markings or patterns on the wing that help in species identification. This is especially useful for aerial observers with a top-down perspective or flying duck. The photographs of adult wings shown below can be helpful in fleti identification.



Current Issue Water Resource Management

Current Issue 2



Summary

Works Cited

"Life in Aquatic Ecosystems." Life in Aquatic Ecosystems - Regional Aquatics Monitoring Program (RAMP),

http://www.ramp-alberta.org/river/ecology/life+in+aquatic+ecosystems.aspx