

**Animal Adaptations to the Environment (1)**

**I. Animals and Nutrient Acquisition**

**A. Mean of Acquiring Nutrients**

- 1) Herbivory
- 2) Carnivory
- 3) Omnivory
- 4) Detritus Feeding

**B. Nutrient Needs**

**C. Link Between Food Source, Species Morphology, and Behavior**

**II. Animal Response to the Thermal Environment**

**A. Homeostasis and Feedback Systems**

**B. Thermal Balance**

**C. Poikilotherms**

**D. Homeotherms**

**E. Heterotrophs**

**III. Animal Adaptations to Moisture**

**A. Maintenance of Water Balance**

1) The Role of Kidneys

2) Osmotic Balance

- a. Hypo-osmotic Marine and Brackish Water Organism
- b. Iso-osmotic Invertebrates in Seawater
- c. Hyper-osmotic Freshwater Organisms

**IV. Responses to Light**

**A. Circadian Rhythms**

1) Biological Clocks

2) Daylength

**B. Tidal and Lunar Rhythms**