

Biology II/Unit 8 Study Guide

bio2u8sg (Ethology)

web resources:

- <http://plantsinmotion.bio.indiana.edu/>
- <http://www.pbs.org/wgbh/pages/frontline/shows/teenbrain/>

Learning Objectives/Things to Know:

1. Plant Responses (Plants) Pages 636-639

- list the environmental stimuli to which plants respond for each type of tropism
- describe two types of nastic movements and explain how they help a plant survive

Concepts: **tropism phototropism thigmotropism gravitropism chemotropism**
nastic movement

2. Seasonal Responses (Plants) Pages 640-643

- define photoperiodism
- describe the role of critical night length, vernalization, and the changing of fall colors in plants

Concepts: **photoperiodism vernalization**

3. Development of Behavior (Animals) Pages 886-892

- describe an example of an innate behavior
- compare four types of learned behavior
- explain how learning and genes can interact to affect behavior

Concepts: **ethology behavior innate behavior fixed action pattern learning habituation**
operant conditioning classical conditioning reasoning imprinting sensitive period

4. Types of animal behavior (Animals) Pages 893-899

- list 3 types of competitive behavior
- describe 3 types of reproductive behavior
- discuss 5 types of communication
- describe 4 types of cyclic behavior
- identify costs and benefits of social behavior

Concepts: **optimality hypothesis aggressive behavior territory dominance hierarchy**
courtship communication aposematic coloration pheromone hibernation

Assignments:

_____ Read from chapters 31 & 44 (or pages above)

Notebook: **10pts**

/10 (your score out of 10 on notebook)

_____ Notes on Learning Objectives

_____ VG: Nature - Brain Power <http://www.pbs.org/wnet/nature/triumphoflife/episode5.html>

_____ Concept Map (digital or not this time)

_____ Case: "My Brother's Keeper - altruistic behavior"

Lab: "If I Were a Worm" **10pts**

Concept Quiz1 (plants) **10pts**

Concept Quiz2 (animals) **15pts**

Unit Test **20pts**

Extra Credit: available in Moodle

Misconception: "That animals understand why they behave in a certain way". *We do not know what animals are thinking when they engage in their behaviors. The scientific evidence that has been collected, however, indicates that nonhuman animals do not have the same kind of reasoning abilities that humans have.*