

California Naturalist – Homework – Chapter 6 -- Animals

We employ a somewhat different approach to homework. The intention of this approach is to foster greater engagement with the course material and cultivate wonder and curiosity. You are also encouraged to review the standard homework/study questions prepared by the UCANR California Naturalist Program and request instructor clarification of anything you're not sure about. You may opt to answer and submit these standard questions for each chapter instead of Sierra Stream's assignment. See below for a link to the PDF with those questions for all the chapters. NOTE: the PDF has not downloaded properly for some people. If this happens to you, please email cnssi@sierrastreamsinstitute.org and we'll send it to you via email.

HOW TO SUBMIT HOMEWORK ASSIGNMENTS

- Create a new email with subject line: CNat-Class x-FirstName LastName

For example: CNat-Class 1-Jane Goodall

- Then either attach your completed homework or paste it into the body of the email.

Submissions WILL ONLY BE OPENED IF they meet these criteria.

- Email your homework to the following email address:

cnssi@sierrastreamsinstitute.org

BEFORE CLASS

- Read chapter 6 in the textbook - you may do the homework as you go if you wish.
 - Class content will build on the readings and PDFs throughout the course.

Optional before class:

- EXPLORE our class website: <https://cnssi.wordpress.com>. This will be ever-evolving. Please note that the info is located in the drop down options.
- View this PDF (originally a PowerPoint):

https://cnssi.files.wordpress.com/2018/03/chapterseven_v1.pdf

HOMEWORK Chapter #6

You will get the most out of the in-class experience if you have done your homework each week before class begins.

The homework for every chapter in the book will be to engage as described below. If you prefer a more traditional homework approach you may INSTEAD submit answers to the standard homework/study questions prepared by the UC California Naturalist Program. See below.

Your Name _____

Homework for Class # _____ **~ Chapter #** _____ **~ Topic**

ENGAGE with material from reading and PDF by briefly noting:

• ***Two things that caught your attention. What interested you? Why?***

1.

2.

• ***Two questions that come to mind about the material. What are you curious about?***

1.

2.

• ***One or two things you'd love to share with someone. Share it if you can!***

1.

2.

• Was there anything that was confusing, or about which you'd like more info or clarification?

Chapter 6 – Animals - UC California Naturalist Program Standard Homework/Study Questions

Below are the standard homework/study questions prepared by the UC California Naturalist Program for Chapter 6. You are encouraged to review these and request instructor clarification of anything you're not sure about.

You may opt to answer and submit these standard questions for each chapter instead of the homework described above.

*This PDF contains study questions for all the chapters in the textbook:
https://cnssi.files.wordpress.com/2015/02/cal-nat-handbook_all-chapters_questions-and-study-guide.pdf*

Chapter 6 – Animals

1. Animal energetics:

- a. What is a heterotroph?
- b. What is a primary consumer vs. a secondary consumer?
- c. Are food webs always really this simple? Describe a food web for an animal you can observe from home.
- d. What do the following terms mean?
 - i. Nocturnal
 - ii. Diurnal
 - iii. Crepuscular
 - iv. Hibernation
 - v. Torpor
 - vi. Estivation
- e. Where are animals more likely to use hibernation vs. estivation as an energy conservation strategy?
- f. What is the difference between endothermic and ectothermic animals?
- g. Parental care: What are the advantages and disadvantages of having many vs. few offspring? What are the costs in each method?
- h. How are exoskeletons and skin similar?
- i. What are two examples of how animals engineer ecosystems?

2. Evolutionary groups: What are some characteristics of the following groups:

- a. Monera
- b. Protista
- c. Fungi
- d. Plantae
- e. Anamalia

3. Compare and contrast Invertebrates to Vertebrates (or, create your own table)

| Invertebrates | Vertebrates |
|-------------------|-------------|
| Skeleton type | |
| Body segmentation | |
| Ancestral "type" | |
| Worldwide biomass | |
| Locomotion? | |

4. What are characteristics of the following invertebrate types: crustaceans, spiders, millipedes, and insects (complete vs. incomplete metamorphosis?)?

5. What are some characteristics of the following vertebrate types: fish, amphibians, turtles/tortoises, snakes and lizards, crocodilians, birds, and mammals.

6. What are anadromous fish? How do they cope with the extreme changes in their environment?

7. What makes amphibians so susceptible to environmental changes?

8. How do bird adaptations maintain their capability of flight?

9. What are two strategies lizards and snakes have adapted to conserve water?

10. Why do snakes flick their tongues?

11. What is the difference between monotreme, marsupial, and placental mammals?

12. Where do you find the most diversity of monotremes and marsupials?

13. Human activity and domestic and introduced animals: What are some of the effects of domesticated and introduced animals on habitat in California?