

## California Naturalist– Homework – Chapter 2-- Geology

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 [cnsi@sierrastreamsinstitute.org](mailto:cnsi@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:

[cnsi@sierrastreamsinstitute.org](mailto:cnsi@sierrastreamsinstitute.org)

### BEFORE CLASS

- Read chapter 2 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:*

- View this PDF (originally a PowerPoint):  
[https://cnsi.files.wordpress.com/2018/03/chaptertwo\\_v1.pdf](https://cnsi.files.wordpress.com/2018/03/chaptertwo_v1.pdf)

## HOMEWORK Chapter #2

You will get the most out of the in-class experience if you have done your homework each week before class begins. However, there's some wiggle room on homework due dates for Classes 1 and 2. Homework for Classes 1, 2, & 3 will be due by Class 3.

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 2 - Geology - UC California Naturalist Program Standard Homework/Study Questions

*Below are the standard homework/study questions prepared by the UC California Naturalist Program for Chapter 2. 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](https://cnssi.files.wordpress.com/2015/02/cal-nat-handbook_all-chapters_questions-and-study-guide.pdf)*

### Chapter 2 - Geology, Climate, and Soils

1. What kinds of plate tectonic activities do we have in California?
2. How were each of the following mountain ranges in California formed:
  - a. Sierra Nevada
  - b. Coast Mt. Ranges
  - c. Transverse Ranges
  - d. Panamint Range
3. How do our mountain ranges influence our climate?
4. What does our location on the western edge of our continent have to do with our climate in CA?
5. How deep are the Central Valley sediments?
6. Rock origins:
  - a. What are the common local rocks in our area?
  - b. How were they formed (are they sedimentary, metamorphic, or igneous)?
  - c. What kinds of the above rocks do we have in our county?
7. What is the state rock of California? What kind of soil does it produce, and how is this important to the plants and animals living in these areas?
8. How do Mediterranean climates differ from continental climates?
9. Draw a precipitation map for a cross section of the state of California.
10. Draw a generic sample of soil stratification, with a description of each soil layer. What does our soil look like locally?
11. How does geology influence soil chemistry?
12. How do Carbon and Nitrogen move through the biosphere? Draw samples of their cycles to help yourself understand the complexities.
13. What are some of the social and environmental impacts of mining?
14. What are mycorrhizae and why are they so crucial for plant survival and growth?