

California Naturalist – Homework – Chapter 4 -- Plants

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 4 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://cnssi.files.wordpress.com/2018/03/chapterfive_v1.pdf

HOMEWORK Chapter #4

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 4 - Plants - UC California Naturalist Program Standard Homework/Study Questions

Below are the standard homework/study questions prepared by the UC California Naturalist Program for Chapter 4. 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 4 – Plants

1.
Plant forms: What distinguishes a tree from a shrub, and an herbaceous plant from trees and shrubs? What is a liana?
2. What is an annual plant? A perennial plant?
3. Draw a generic plant with the following parts:
 - a. Stem
 - b. Buds
 - c. Bracts
 - d. Leaves
 - e. Generic flower, with labeled parts.
4. Flowers:
 - a. Which are the male and female parts of the flower?
 - b. What are tepals?
 - c. Where do you find nectaries?
 - d. What are the fruits of plants formed from?
5. How long have flowering plants been around?
6. Pollination:
 - a. Why do plants use animal pollinators?
 - b.
What is the general exchange between plants and their pollinating animals?
 - c. What other ways do plants transfer pollen from one plant to another?
7. What are four ways that plants disperse their seeds to new locations?
8.
“Plant communities” are a human construct, but useful because we lump plants by general habitat requirements, and are able to expect a generic set of plants under given conditions.
 - a. What factors influence habitat types?

b.

What are the generalized characteristics of and threats to the following community types?

- i. Beach vegetation
- ii. Grasslands
- iii. Salt marshes
- iv. Freshwater marshes
- v. Vernal pools
- vi. Transitional marshes
- vii. Coastal scrub
- viii. Chaparral
- ix. Mixed evergreen forests
- x. Oak woodlands
- xi. Riparian forest
- xii. Coniferous forests
- xiii. Redwood forests
- xiv. Deserts

9. What does the word sclerophyllous mean, and why is it relevant?

10.

How else do plants modify their leaves to deal with the drought conditions of the Mediterranean summer?

11.

How are these plant communities impacted by the Mediterranean climate of CA?

12. Why do these climate types support such great plant diversity?

13. What are two key adaptations some California plants have to fires?

14.

What makes invasive species problematic to California landscapes? What are some examples of problem species?

15. How was fire used as a traditional agricultural tool in California?

What were some of the primary effects of fires on oak woodlands?

16.

What are some of the plant communities highly managed by California Indians?

17.

What are some of the changes we may see in plant communities given predicted climate change?

Exercise: Choose a native plant you know well, and every year collect and press the first leaves in a journal. How does the budding and leafing change over the years?