

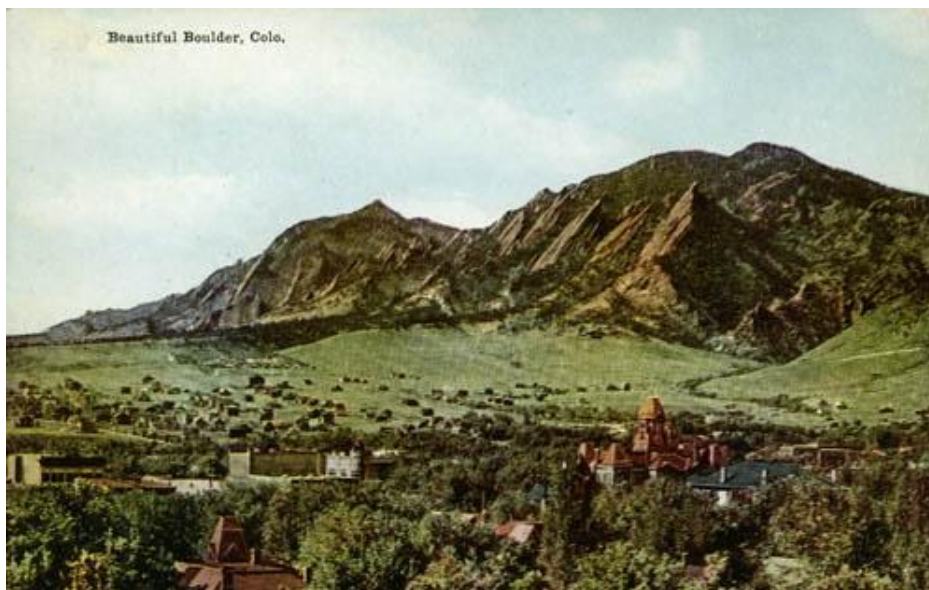
Name: _____

Date: _____

Chautauqua Note Sheet

As we walk up to Chautauqua park today, we would like you all to be reflecting on what we have learned so far in this course and apply it to our field experience.

1. The rocky mountains stopped rising almost 60 **MYA**, and have been slowly eroding since then. Write out this amount of time using standard years.
2. What **abiotic limiting factors** threaten our local ecosystems on a regular basis? Are these **density dependant** or **independent**? Why?
3. What keystone species live in Boulder and Chautauqua park? What type of keystone species would they be (apex predator, engineer, or mutualist)?
4. Pikas, a type of rodent related to rabbits, are native to the Rockies and can die if they are exposed to temperatures of over 78°F. What will likely happen to their environmental **matrix** as the climate warms?
5. What **primary producers** live in Chautauqua park? What **primary consumers** eat them?
6. What **non-point sources** of pollution might exist in and around Chautauqua park?
7. Looking at the current population of **Ponderosa pines**, estimate the number of trees per 100ft². Is this a healthy number for that area? Why or why not?
8. Below are two historical images of Boulder from 1905, one is a painting and the other is a photograph taken near where you are standing in Chautauqua. What differences do you notice between these images and the modern boulder?



9. What sorts of **density dependant** factors effect the human population in Boulder?

10. Describe the biodiversity of this area. How prepared are the ecosystems here for a catastrophe of some sort?

11. Find a 1ft² area of land to observe for ten minutes. Write down any organisms you see, primary producers or otherwise, in your plot. Also write down any abiotic factors you

notice, and speculate if any of them are limiting the life in your plot.

12. Based on your above observations, can you find all the elements of an ecosystem (communities and abiotic factors) in a very small area? Do you think there are ecosystems as small as the area you were just observing? Why or why not?

13. Why might it be important for us to study very small areas similar to the one you just observed?

14. Draw the **Matrix** and **islands/patches** of habitat you see in Chautauqua park on the back of this sheet.