

Name \_\_\_\_\_ Lab Section \_\_\_\_\_

***Introduction***

As a way of introducing you to the field of environmental biology, go to [http://en.wikipedia.org/wiki/Environmental Biology](http://en.wikipedia.org/wiki/Environmental_Biology) and answer the following questions.

1. What is environmental science?
  
  
  
  
  
  
  
  
  
  
2. What are the issues addressed by environmental science?

This assignment is going to focus on only a few of these issues: climate change/global warming, conservation & biodiversity, and one of your choosing.

For rest of this assignment, unless otherwise specified, you may use whatever sources are available to answer the questions and find definitions. Just make sure you use reliable, verifiable, and objective sources.

***Climate Change***

3. Define the following terms:

Greenhouse Effect

Greenhouse Gases

Global Warming

Carbon Footprint

4. Go to: <https://climate.nasa.gov/evidence/> List and briefly describe 4 of the 9 lines of evidence presented that supports climate change.

5. Go to <http://www.footprintnetwork.org/en/index.php/GFN/page/calculators/> to calculate your ecological footprint.

What does the footprint calculator calculate?

Calculate your ecological footprint. Start by clicking on “choose your location” and then answering all the questions.

What is your ecological footprint in Planet Earths?

In what category (e.g. food, shelter) do you consume the most resources?

How many global acres does it take to support your lifestyle?

What is this number in tons of carbon dioxide?

In which category (e.g. energy, crop) do you use the most land?

Click on **Explore scenarios** and choose 1 or more options for reducing your footprint. Which did you choose and how much does it reduce your footprint?

***Conservation & Biodiversity***

6. Define the following terms:

Conservation biology

Biodiversity

Threatened Species

Endangered Species

Extinction

Endangered Species Act

7. Visit the IUCN Red List of Threatened Species:  
<http://www.iucnredlist.org/about/overview#introduction>

Briefly explain what the IUCN does.

Go to: [http://cmsdocs.s3.amazonaws.com/summarystats/2017-1\\_Summary\\_Stats\\_Page\\_Documents/2017\\_1\\_RL\\_Stats\\_Table\\_3a.pdf](http://cmsdocs.s3.amazonaws.com/summarystats/2017-1_Summary_Stats_Page_Documents/2017_1_RL_Stats_Table_3a.pdf)

How many **animals** are listed as extinct (**EX**) or extinct in the wild (**EW**)?

How many **animals** are listed as threatened (critically endangered [**CR**], endangered [**EN**], or vulnerable [**VU**])?

Go to: [http://cmsdocs.s3.amazonaws.com/summarystats/2017-1\\_Summary\\_Stats\\_Page\\_Documents/2017\\_1\\_RL\\_Stats\\_Table\\_3b.pdf](http://cmsdocs.s3.amazonaws.com/summarystats/2017-1_Summary_Stats_Page_Documents/2017_1_RL_Stats_Table_3b.pdf)

How many **plants** are listed as extinct (**EX**) or extinct in the wild (**EW**)?

How many **plants** are listed as threatened (critically endangered [**CR**], endangered [**EN**], or vulnerable [**VU**])?

Go to: [http://cmsdocs.s3.amazonaws.com/summarystats/2017-1\\_Summary\\_Stats\\_Page\\_Documents/2017\\_1\\_RL\\_Stats\\_Table\\_3c.pdf](http://cmsdocs.s3.amazonaws.com/summarystats/2017-1_Summary_Stats_Page_Documents/2017_1_RL_Stats_Table_3c.pdf)

How many **fungi and protists** are listed as extinct (**EX**) or extinct in the wild (**EW**)?

How many **fungi and protists** are listed as threatened (critically endangered [**CR**], endangered [**EN**], or vulnerable [**VU**])?

Now, add it all up! According to the IUCN Red List of Threatened Species, how many **total species** are listed as extinct (**EX**) or extinct in the wild (**EW**)?

How many **total species** are listed as threatened (critically endangered [**CR**], endangered [**EN**], or vulnerable [**VU**])?

8. Why is biodiversity important? Why should we try to preserve it?

***Your Choice Issue***

Choose one of the remaining issues listed in question 2 that is of interest to you and spend some time researching it. You may use whatever resources you like.

9. Which issue did you choose and why?

(continue on back)

10. What new information did you learn about it?

11. As a result of all the information you learned in this assignment, do you think you are likely to try to make changes in the way you and your family live? Explain why or why not.