**Guided Notes: Living things and the Environment**

Directions: Using the Science Explorer book: Environmental Science answer the following questions.

**Habitats pg. 17**

What are all the things an organism needs to obtain from its surroundings to be able to survive?

Looking at Figure 1 answer the Comparing and Contrasting question.

**Biotic Factors pg. 17**

Explain what biotic factors are.

Looking around the classroom list all the biotic factors you see. List the biotic factors you can see from the window.

**Abiotic Factors pg. 18**

Summarize why the following are considered to be abiotic factors

* Water:
* Sunlight:
* Oxygen:
* Temperature:
* Soil:

**Populations** pg. 19

In your own words define population and give an example of a population you might find in the Artic. What about in the Sierra desert?

**Communities** pg. 20

Looking at the picture of the community name all the biotic factors in the picture.

How are communities different from an ecosystem?

How would you describe the ecosystem that you live in?

**Section 2: Studying Populations**

**Population Density pg. 23**

Write the formula for population density

Why is it important to use labels when talking about population density?

**Determining Population Size pg. 24**

Summarize the four ways you can determine population size and give an example of each.

Sharpen your Skills: Calculating activity.

Answer the questions, make a diagram to show how you can up with the answer.

When is sampling used to estimate a population?

**Changes in Population Size pg. 25**

In your own words describe what birth and death rates are and how they influence populations.

What is the difference between Immigration and Emigration?

Figure 8 shows Changes in a Rabbit Population, what do you think happened between years 3 and 4? What about years 4 and 5?

**Limiting Factors pg. 27**

What is a limiting factor and how does it affect a population?

Use carrying capacity in a sentence.

Think of an example of how weather determined a population size in Grand Junction. Give an example using Alaska.

**Counting Turtles Math Challenge/Extension portion pg. 29**

Read over Analyze and Conclude question #1 and determine the Estimated Total Population for years 2 and 3. What you year 4 be if Total number captured was 13 and Number recaptured (with Marks) was 9? Show your work.