

Lab 6 – Ecology

(April 2014)

Section 1 - Levels of Ecological Organization

[2] Hi this is Lyn Koller. This week we will be looking at a few aspects of ecology. In order to understand what we'll be studying, let's break down the word ecology; "eco" or "oiko", the Greek root, translates to "house" and as you all know "ology" translates to "study of". So when studying ecology, we are looking at where we live.

[3] The first thing we need to do is define a few terms. You will remember from the first lab that living things are organized from subatomic particles through atoms, molecules, organelles, cells, tissues, organs, and systems.

[4] Above the level of the organism, living things are also organized into several additional levels. We

[13] At this point you should have filled in all of the definitions in section one. If not, do so now and then try to place the terms in the correct order from lowest to highest level of organization. When you have gotten them in the correct order return to the program so we can continue.

Section 2 - Abiotic Factors

[14] In Section 1 I mentioned living and non-living things. Living things are considered “biotic” factors while non-living things are considered “abiotic” factors. Abiotic factors include things such as temperature, wind, and rain. These abiotic factors determine the types of communities

now you should be able to complete the exercise on “Wind and Rain Shadows” in Section 2. Return to the program when you have finished.

[25] Let’s see if you understand this concept by dragging the labels to their proper locations on the transect. When you have them correct, continue with the program.

Section 3 - Food Chains and Webs

[26] Now that you have an idea about abiotic factors, we’ll focus on biotic factors. The first we’ll look at is trophic levels. A trophic or feeding strategy is simply how an organism obtains energy. Plants start the whol

[47] The anther, supported by the filament is the male portion of the flower. Copy the function of the anther into the table.

[48] The sepals are green most of the time, but in flowers like tulips, they look the same as the petals. Regardless of their color, they form the outside of the flower bud and protect the flower before it blooms.

[49] Take a look at the cross section of this flower. Can you identify the different structures in an actual flower? Be sure you have all the information on the flower structures copied into the table and then you can continue.

[50] Did you get all of that? See if you can drag each label to the correct structure. Once you have them correct, continue with the program.

Section 6 - Flower Reproductive Strategies

[51] Plant reproduction relies on the sperm cells enclosed in the pollen grains getting to the ovules in the

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[83] Desert plants have some of each of the adaptations we have already talked about, plus a few others. Since rainfall is not only low, but unpredictable some plants have a very rapid life cycle. They grow and bloom very quickly and are consequently very small. Other plants like the Palo Verde tree loses its leaves when it's dry and the green bark takes over photosynthesis. Without leaves, the plant loses less water. Spines are also common on desert plants. They provide shade and a windbreak

