Insect classifying arthropods virtual

Introduction to Biology Name: Julie Maxwell Classifying Arthropods Virtual lab (Week 8) Go to the following website for completion: http://www. mhhe. com/biosci/genbio/virtual_labs/BL_18/BL_18. html Upon completion of the Classifying Arthropods Virtual Lab, please answer the following questions thoroughly using complete sentences and proper grammar and spelling.

Data Table | Body Sections(1, 2, 3, or > 3)| Walking Legs (6, 8 or > 8)| Other Appendages| Antennae(0, 2 or 4)| Claws Present? | Jaws Present? Class| Common Name| Specimen 1| | | | | | | | | Specimen 2| | | | | | | | | Specimen 3| | | | | | | | | Specimen 4| | | | | | | | Beach Hopper| Questions: 1. Many species of arachnids are predators, but have no teeth or jaws. How do they obtain nutrients from their prey? They inject venom in the prey that paralyzes them then the predators suck out the nutrients they need. 2. Arthropods are the most diverse group of animals. Describe some characteristics of arthropods that may have contributed to their great evolutionary success. The body segmented, the segments usually grouped in two or three rather distinct regions - making them highly mobile.

* Paired segmented appendages (from which the phylum gets its name) - making them ambulate & walk easily. * Bilateral symmetry - making them relate to theenvironmentquite easily. * A chitinous exoskeleton, which is periodically shed and renewed as the animal grows - making them resistant to shock of hard objects. * A tubular alimentary canal, with mouth and anus - accounting for goodfooddigestion. The circulatory system an open one, the only blood vessel usually being a tubular structure dorsal to the alimentary canal with lateral openings in the abdominal region - ensures better perfusion and less chances of hemolysis due to their being highly mobile. 3.

What are some advantages and disadvantages of having an exoskeleton? Advantages are, the exoskeleton provides a bony plate of armor for support and protection of the soft internal tissues and organs.

Disadvantages; it limits the possible size of the animal. Since the weight of an animal is a function of its volume, a doubling of an animal's size increases its weight by a factor of 8. 4. Which of the five classes of arthropods is the most diverse? Explain. Insecta or Hexopoda (insects) is the most diverse class. There are about 900, 000 known insect species, three times as many as all other animal species together, and thousands of new ones are described each year. They are commonly grouped in 27 to 32 orders, depending upon the classification used.

The largest order is that of the beetles (Coleoptera). Next, in order of size, are the moths and butterflies (Lepidoptera); the wasps , ants , and bees (Hymenoptera); and the flies and mosquitoes (Diptera). Other major orders are the true bugs (Hemiptera); the cicadas , aphids , and scale insects (Homoptera); the grasshoppers and crickets (Orthoptera); the cockroaches (Blattodea); and the mantids (Mantodea). 5. For each of the following characteristics, indicate whether the trait is common to Phylum Arthropoda or specific to certain classes of arthropods: wings, chewing mouthparts, jointed appendages, number of legs, segmented bodies, type of respiratory structure, exoskeleton.