

BIOL 1114 Exam #2 (Preview) October 13, 2014

Use a #2 pencil to fill in the information on your [NCS answer sheet](#). Put your **O-Key Account Username** in the boxes indicated for **LAST NAME** and darken the appropriate circles. **Write your Name (Last, First)** and “**Star**” or “**NoStar**” in the space above the boxes containing your **O-Key Account Username**. Darken the **(S)** or **(N)** in the **last column of the name circles**. Enter the number **1432** and **darken the corresponding circles** in the **first 4 columns** of the “**Student ID.**” Failure to perform this correctly will incur a **-10pt handling fee**. Read all questions and answers **carefully** before choosing the **single BEST response** for each question. Feel free to ask the instructor for clarification.

Although we always think of spiders catching their prey in webs, spiders hunt using several different techniques. For instance the woodlouse hunter spider ambushes its favorite prey, sow bugs (you may know them as roly pollies or pill bugs). Many hunting spiders use venom to subdue their prey. A woodlouse hunter spider is motionless while waiting for its prey.

Spider: <http://ento.psu.edu/extension/factsheets/woodlouse-hunter>

Source: <http://ento.psu.edu/extension/>

Inside an OSU greenhouse, orange plastic is placed in all windows to celebrate OSU's homecoming. At night a plant is growing and actively creating more proteins in the cytoplasm of its cells.

The Hawaiian Islands are the most isolated landmass on earth, being over 2000 miles from any continent. The flora and fauna of Hawaii are derived from Asia and the Americas in about equal proportions. The oldest island, Kauai, is about 5 million years old, while the youngest, the Island of Hawaii is less than a million years old.



Alcohol (the consumable form of which is ethanol) is the most widely consumed toxic substance in the USA. The symptoms of ethanol intoxication stem from the fact that ethanol molecules dissolve parts of the neuronal membranes and keep the K^+ channels open. The electrical potential is generally defined as the net electrical charge on the **inside** of the cell membrane.

Black widow spider venom increases acetylcholine release. Blue ringed octopus venom contains a compound, tetrodotoxin that blocks Na^+ channels closed. Tetrodotoxin production requires a series of enzymatic reactions that are energetically expensive.

Black turban snails, *Tegula funebris*, are marine snails that live in tide pools of the Eastern Pacific. They have thick, black shells that the snail can retreat into to receive some protection from their main predators, shorebirds and crabs. Black turban snails graze on photosynthetic algae that also live in tide pools.

An undergraduate student is helping out with research in tide pools and finds snails that look like black turban snails except that their shells are brown not black. She is convinced that the brown shells are a natural (but cool) variation in the same species. Another undergraduate student notices a large crab with big claws in the tide pool and wonders if this crab would be able to eat turban snails by cracking open their shell. She remembers that she learned something about coevolution in her biology class.