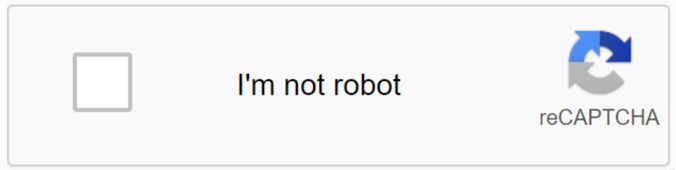

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Mushroom dissection lab answer key

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Here's a look at what students will learn today. Give each student a list of the different mushroom phyla that were discussed yesterday. Play the Kingdom Fungi video and ask them to hypothesize which phylum each of the fungi in the video would be classified. (Note: I play the video from 0:20-3:50). Explain to students that they will dissect several species of fungi today to improve their taxonomic thinking. Give students an overview of what is expected at each of the four stations. For this station, the following equipment will be required: light microscope forceps composed of fungus dissecting the dropper eye blade cover microscope dissecting the tray scalpel probe Using the student document, students should dissect the button fungus noting macroscopic structures. Students should place their fungus on a dissection tray. Students must make a sketch of the specimen in their lab notebooks and label the fruit body, hyphae and gills. Students may want to look at the mushroom structures under a dissection microscope. Students should then gently remove the mushroom cap from the stem. Using the probe, they must gently tease the stem until it breaks into two or more long pieces. Students should gently remove the pieces until they see thin, hair-like threads (also known as hyphae). Students should see the rod under the dissection microscope and sketch what they see in their notebook Students should put the rod aside and look at the cap. Using the forceps and scalpel, students should gently remove a gill. Students should avoid touching the free edge of the gill to avoid damaging the basidia and releasing spores that may be present. Next, students should prepare a wet branching blade. Students should see the edge of the which was not cut by the low and high-powered scalpel. Students must make a sketch of both fields of view. In each sketch, students must identify gills, basidia and spores. Once they have completed their observations, students should have the microscope blades in the broken glass bucket. Students should throw their specimens into the chemical disposal bucket. For this station, the following equipment will be required: light microscope forceps composed of morell dissecting the drip eye blade cover microscope dissecting the tray scalpel probe Using the student document, students should dissect a morell fungus noting macroscopic structures. Students should place their morle on a dissection tray. Students must make a sketch of the specimen in their lab notebooks and label the fruit body, hyphae and ascis. Students may want to look at morell's structures under a dissection microscope. Then, students should gently remove the cap from the stem morilla. Using the probe, they must gently tease the stem until it breaks into two or more long pieces. Students should gently remove the pieces until they see thin, hair-like threads (also known as hyphae). Students should see the rod under the dissection microscope and sketch what they see in their lab notebook. Students should put the rod aside and look at the cap. Using the forceps and a scalpel, students should gently remove an asci. Students should avoid touching the free edge of the asci to avoid damaging the structure and releasing spores that may be present. Then, students must prepare a wet mounting slide for the asci. Students should see the edge of the asci that has not been cut by the low-power, high-power scalpel. Students must make a sketch of both fields of view. In each sketch, students must identify ascis and spores. Once they have completed their observations, students should have the microscope blades in the broken glass bucket. Students should throw their specimens into the chemical disposal bucket. For this station, the following equipment will be required: piece of molded bread sealed in a ziploc bag (Note: this will have to be prepared in advance.) dissect the prepared slide microscope slide of bread mold composed microscope Using the student document, students should see bread mold noting macroscopic structures. Students must make a sketch of the specimen in their lab notebooks and label fruit bodies, hyphae and spores. Students should see the bread pan under the dissection microscope and sketch what they see in their lab notebook. Then students must see the slide prepared at both low power and high power. Students must make a sketch of both fields of view. In each sketch, students must identify the zygote and spores. Students should be for the next group. The mouldy bread should be removed from the chemical disposal bucket at the end of the period. For this station, the following equipment will be required: a petri dish containing a yeast culture (Note: this should be prepared in advance.) dissecting the microscope microscope slide pipette or the eye drip compound microscope Using the student document, students should see yeast culture noting macroscopic structures. Students must make a sketch of the specimen in their lab notebooks and label the fruit body, hyphae and spores. Students should see the entire yeast culture under the dissection microscope and sketch what they see in their lab notebook. Then students should make a slide of yeast culture and see the prepared slide both low and high power. Students must make a sketch of both fields of view. In each sketch, students must identify the yeast cells noting the different shape they see. Students should keep the culture for the next group. Used blades should be placed in the broken glass bucket. At the time, yeast culture can be poured into the sink with large amounts of water. Divide students into their lab groups and give each student copies of the life cycles of four phyla (Ascomycota life cycle, Chytridiomycota life cycle, mushroom life cycle (Basidiomycota) and bread mold life cycle). Ask students to list four similarities and differences between the difference in phyla in their lab notebooks. (Note: these were provided. I copy four life cycles per page. They're cut off by my student assistant. Students place them in their lab notebooks and use them as a reference as they take their notes.) Gather students in class and ask student volunteers to deepen their results by noting where fungal cells are haploid and diploid in the life cycle. Ask students to identify the fruit body, hyphae, stolen gases and spores in each life cycle. Explain to students what all mushrooms have in common. Duties: Ask students to review the video from the beginning of the period. Using the knowledge they have gained for dissection, ask students to reclassify the fungus into specific fungi. Ask them to give two reasons why they choose the particular phyla. All answers must be written in their lab notebook. Before the mushroom dissection lab, I learned a lot about fungi, including how the how they get energy, and their structure. The purpose of this laboratory was to solidify what we learned by examining the different parts of the fungus. First, we looked at the whole fungus with the naked eye and observed and tagged the main parts of a fungus, including the stem, gills and hat. We then disassembled the stem into small strands called hyphae. Under a microscope you see that it was a fuzzy and stringy structure. The gills are small walls that line the underside of the mushrooms we have dissected. Each gill is lined with basidia, which contains spores used for reproduction. We carefully removed one of the gills, and placed it under the microscope to see the basidia. After schematicizing everything we saw, we then answered thirteen questions about mushrooms and mushrooms. For questions, I used my old knowledge, the biology book, and the Internet. Through the questions, I learned the pros and cons of reproduction through spores as opposed to seeds. In simple terms, spores produce in much greater numbers, but very few survive, where as the seeds are usually in much smaller quantities, but do not require perfect conditions to survive. I also learned how mushrooms are only the fruit body of a much larger underground organism. It is composed of mycelium and can extend over 100 miles underground. Nearby mushrooms are usually all of the same organism. They can be compared to fruit, in that they contain the spores (as opposed to the seeds) necessary for the reproduction of the organism. The diagrams have strengthened my knowledge of the structure of fungi, while learning some about what different parts do. I chose this artifact because it taught me a lot about mushrooms, while making me come to conclusions that help me to better preserve information. This lab tested my fine motor skills because it was very difficult to remove only 1 gill, and I ended up breaking and tearing many gills before I got one. I think my answers show that I understand the major concepts. Many of them explain why some things happen or are the way they are such as mushrooms growing in the rings because of the food consumption process. The mycelium grows outwards, and consumes all the nutrients in the middle so that the fungi cannot germinate there. One problem that came up was not being able to find the right setting to see the basidie under the microscope, but it was solved using a setting on another microscope. Another problem was finding different facts online on different websites. To solve what I checked twice with the book and other sites, and used the number or response that came the most. I'm not that good at drawing and drawing. If I had to revise this piece, I'd spend more time on sketches. I'd go, too. in depth in some of the responses. I think this piece reveals how well I learn with finding answers through labs/experiments, as well as doing research. I've had similar labs where I put in less time and didn't do as well. It also taught me that taking longer to get better answers is worth it in the end. End.