

1. **BACKGROUND: FUNGI** are important decomposers that change wastes and dead o_____ into compounds that are useful to plants. They live on or in their food and send out tubes called h_____ with digestive enzymes to dissolve or digest the food in place. Then the tubes (h_____) transport the nutrients.

Except for yeast, FUNGI are a) multicellular, b) eukaryotes and are c) heterotrophs. That means they have a) _____ cells, their cells have b) _____ and they use c) _____ for food. They often reproduce by releasing spores into the air that grow into new organisms. Spores are usually released from one parent, but sometimes created by two, so fungi usually reproduce _____.

Three main fungi types are _____, _____, and _____

Bread rises when yeast uses f ___ and o _____ to live, grow and reproduce. Using oxygen to release energy to live is r _____. The resulting gas, c _____ d _____ forms bubbles in the dough.

2. **YEAST BACKGROUND:** In your text, find a photograph of yeast **budding** that also shows scars where previous daughter or offspring buds have dropped off.

2.1 Do a scientific drawing, here↓, of **one** parent with **bud(s)** and **scars**.

2.2 Label with a ruler, all labels on the same side.

2.3 Count the yeast "buds" on your calendar. How many? _____

2.4 Budding is, a form of a _____ reproduction, meaning reproduction with one p _____.

2 pts

3. **YEAST LAB:**

EXTRA::

3.1 Use one drop of yeast culture on a microscope slide. Add a coverslip.

3.2 Focus on low light. Yeast will look like many grains of sand.

3.3 Increase your magnification until you can locate singles.

3.4 Locate at least one yeast cell that is forming a "bud".

3.5 Have checked. Made a scientific drawing here↓..

5 pts Extra

4. MUSHROOM BACKGROUND:

Mushrooms have a **cap (the fruiting body)**, **gills**, **stalk** and **hyphae**.

This drawing is missing most of the h _ _ _ _ _ , (or tubes) are inside the stalk and spread out in the ground. Most would break off in the ground.

Label with the above 4 terms using straight lines out to the right.



5. MUSHROOM LAB: Gills and Spores:

Share a whole (or use a half) white mushroom cap and stalk. (*Genus Agaricus*)

5.1 Remove the stalk. Break it to view the hyphae which are t _ _ _ _ .

5.2 Count the number of gills in 1/4. _____

Estimate the total number. _____ Show your math: _____

5.3 Mushroom gills are not like the gills of fish. The gills of fish absorb o _ _ _ _ _ . **The gills of mushrooms make and spread spores.**

5.4 What do spores do? _____

5.5 Take a photo the gills with a hand held microscope.

Record the photo number. _____ Have checked, 5 pts

EXTRA:

5.6 Mushrooms are classified by their **spore color and pattern**.

Find the spore color by making a "Spore Print".

Leave the cap (gills down) on a white paper. Label name & period.

Place in a tote tray for later. Check daily.

Have checked when you see spores.

View with handheld microscope. Photo # _____ 5 pts Extra

EXTRA:

5.7. Find the Percentage of water in your MUSHROOM:

Find the mass of your mushroom now and after it dries.

Show your measurements and math. Don't forget to save and dry your stalk.

5 pts Extra

6. MOLD:

Mold has tubes or h_____, fruiting b_____ and reproductive s_____, like mushrooms. In mold hyphae do not gather in a stalk as in mushrooms, but stay separate, more like a web. For this reason, they are microscopic when alone and would not be seen. Look at Figure 14 in your text PHLS, page 235. Read about "Disease-Fighting Fungi" on page 241.

In 19 __ , Alexander F_____ noticed that _____ killed b_____. That led to the antibiotic p_____, made from blue-green m_____. We often see this mold growing on o _____.

Since some mold caused allergic reactions, use the following internet addresses to view some nice photos of mold.

6.1 Central Science Home Page>>Microscope>>Electron Microscope>>Mold
(The photos in this site are colored by the author.)

6.2 After viewing the mold, click on "More Stuff" to see Shower Mold and some bacteria and paramecium that we have studied.

6.3 Draw ONE hypha and its fruiting body of Shower Mold here↓.

6.4 Write its name and your complete reference/internet address.

3 pts

7. LICHEN: An example of symbiosis: (Use your text.)

7.1 Describe LICHEN, using and explaining or defining the term symbiosis:

7.2 Why Important? Give 2 reasons.

2 pts