Name _____ Teacher _____ Date _____

3.2: Grading the Observing Bread Molding Worksheet

*This worksheet has "grading" in the title because at this point, students can be held accountable for correct answers. Level 4 (correct) responses to the questions are in **blue bold italics** below. There are also comments about common Level 2 and Level 3 responses to help you with grading and making decisions about what to emphasize in future lessons.*
Red italics suggest ways to grade student responses by giving them points for correct or partially correct answers. There are 12 points total on this worksheet.
Use this worksheet to complete the bread mold investigation and to record your observations, measurements, and class results.

A. (Day 1) Find the Mass of Your Bread and Mold.

1. ☐ Collect your labeled Petri dish with bread and mold, a digital balance, and your worksheet from the Pre-Lesson. Note: DO NOT open the lid—classmates may have allergies to bread mold.
2. ☐ Look on your worksheet from your Pre-Lesson and find the beginning mass of your Petri dish and bread from 7 days ago. Write the mass in the table where it says, "**Mass of Petri dish with bread and mold before (7 Days Ago)**."
3. ☐ Turn on your digital scale until it reads 0.00g. Place the entire Petri dish with the lid onto the scale.
4. ☐ Record the final mass of your Petri dish with bread and mold in the table where it says, "**Mass of Petri dish and bread and mold after (today)**."

B. (Day 1) Set up the BTB Investigation.

1. ☐ Gather a large, sealable container (1 per group).
2. ☐ Stack all four of your group's Petri dishes in the container. 3
3. ☐ Put an open Petri dish with BTB in it next to the moldy bread inside the container.
4. ☐ Record the color of the BTB in the table where it says, "**Color of BTB before (Today)**."
5. ☐ Seal the container and wait 24 hours for results.

C. (Day 2) Find results of your BTB Investigation.

1. ☐ After 24 hours, return to your sealed container with the Petri dishes with moldy bread and BTB. Open the container and immediately record the color of the BTB in the table where it says, "**Color of BTB after 24 hours**." You may wish to compare it to the color of fresh BTB in a Petri dish, with both placed on a piece of white paper.
2. ☐ After you've recorded the color of the BTB, throw away the Petri dishes and moldy bread.

D. Measurements during the investigation

Results will vary from group to group, but every student should record results from his or her group. 1 point for each correct line: 10 points total

Measurements Before	***Measurements After***

Mass of Petri dish with bread and mold before (7 Days Ago)	**Mass of Petri dish with bread and mold after (Today)**
Date: _____	Date: _____
Mass: _____ g	Mass: _____ g
	Change in mass: _____ *g*
Color of BTB before (Today)	**Color of BTB after 24 hours**
Date: _____	Date: _____
Color of BTB: _____	Color of BTB: _____
	Change in color:

E. Results for the whole class: *Make notes about how the observations and measurements of other groups compared to yours. Describe patterns in your class data.*

1. Changes in mass of the bread and mold:
Students answers should reflect patterns in class data. Generally, students should observe a decrease in the mass of the bread-mold system after 7 days.
1 point for correct response

2. Changes in color of BTB:
Student answers should reflect patterns in class data. Generally, the BTB should turn yellow.
1 point for correct response