Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_

### Lesson 2.2 Yeast Fermentation Observations and Explanations Worksheet

**A. Procedure:**

1. Pour some BTB solution into the top of a petri dish and place it in the sealable container. Place your digital scale next to the BTB petri dish, turn it on, and wait until it reads 0.00g.
2. Add 1 tsp of baker’s yeast and 1 tsp of sugar into a 100 mL beaker. Add about 40 mL of hot water. Gently stir the mixture a few times. Place the beaker on the digital scale and record the mass and the time in the table below. Cover and seal the container.
3. Without unsealing the container, record the mass of the petri dish every 5 minutes.
4. At the end of 30 minutes, unseal the container, record the mass of the petri dish and the color of the BTB.

**B. Measurements during the investigation.** Record your measurements on the table below.

|  |  |  |
| --- | --- | --- |
| **Mass of your beaker (including yeast, sugar, and water)** |  | **Changes in color of BTB** |
| Beginning mass: \_\_\_\_\_\_\_ grams, time \_\_\_\_\_  \_\_\_\_\_ grams, time ­­­­\_\_\_\_\_\_  \_\_\_\_\_ grams, time ­­­­\_\_\_\_\_\_  \_\_\_\_\_ grams, time ­­­­\_\_\_\_\_\_  \_\_\_\_\_ grams, time ­­­­\_\_\_\_\_\_  \_\_\_\_\_ grams, time ­­­­\_\_\_\_\_\_  \_\_\_\_\_ grams, time ­­­­\_\_\_\_\_\_  \_\_\_\_\_ grams, time ­­­­\_\_\_\_\_\_  \_\_\_\_\_ grams, time ­­­­\_\_\_\_\_\_  End mass: \_\_\_\_\_\_\_\_ grams  Change in mass: \_\_\_\_\_\_\_ grams |  | Beginning color:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  End color:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**C. Results for the whole class:** Make notes about how the measurements and observations of other groups in the class compared to yours.

Changes in mass for the whole class:

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Changes in color of the BTB for the whole class:

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**D. Explaining your results:** Try to write an explanation of your class results that includes answers to all Three Questions: the Location/Movement Question, the Carbon Question, and the Energy Question

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**E**. **UNANSWERED QUESTIONS:** What questions about movement of atoms, about molecules with carbon atoms, or about changes in forms of energy can you NOT answer based on evidence from the investigation? Write your ideas below.

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