

Student's Name \_\_\_\_\_

## THINKING WITH SCIENCE

### Observation Quiz

#### Lesson 3, The Bubbly Liquid

1. Besides the experimental group, what other group is always a part of a properly designed experiment?
  - A. manipulated
  - B. control
  - C. scientific
  - D. valid
2. Why should there be only one manipulated variable in any experiment? Otherwise:
  - A. the conclusion wouldn't be valid
  - B. you wouldn't know what caused the result
  - C. both of the above.
  - D. neither of the above.
3. What is the control question for the question, "Does A contain any water?"
  - A. Does A contain only water?
  - B. Does A contain anything else?
  - C. Does B contain any water?
  - D. Does B contain anything else?
4. How could you tell that the JAR liquid wasn't the manipulated variable?
  - A. because they were different
  - B. because they were the same
  - C. because they didn't contain any yeast
  - D. because they didn't contain any alcohol
5. Before you put yeast in water, it is \_\_\_\_\_.
  - A. dormant
  - B. dead
  - C. active
  - D. a liquid
6. What does the Latin word "dormir" mean?
  - A. sleep
  - B. eat
  - C. grow
  - D. none of the above

7. What adjective describes a conclusion that is supported by the data?

- A. valid
- B. refuted
- C. false
- D. unreliable

8. The word that means "to prove a conclusion false" is:

- A. validate
- B. refute
- C. justify
- D. support

9. The bubbles coming from bottle B contain:

- A. carbon monoxide
- B. carbon dioxide
- C. carbon sulfide
- D. carbon chloride

10. The word "yeast" above the arrow in the chemical reaction means:

- A. the yeasts are alive
- B. the yeasts are causing the reaction
- C. the yeasts are dead
- D. the yeasts are smart

11. Each hole in a slice of bread indicates the location of:

- A. a carbon dioxide bubble
- B. a starch molecule
- C. a sugar molecule
- D. all of the above

12. All types of alcohol:

- A. take away pain
- B. explode
- C. kill brain cells
- D. all of the above

13. The alcohol contained in beer and wine is:

- A. methyl
- B. ethyl
- C. isopropyl
- D. deadly

14. One of the main symptoms of brain damage from alcohol is:

- A. stumbling
- B. memory loss
- C. laughing
- D. none of the above

Students's Name ANSWER Key

**OBSERVATION QUIZ FOR "THINKING WITH SCIENCE"**

Quiz for Lesson 3

Quiz Number \_\_\_\_\_

1. A ☒ B C D E
2. A B ☒ C D E
3. A B ☒ C D E
4. A ☒ B C D E
5. ☒ A B C D E
6. ☒ A B C D E
7. ☒ A B C D E
8. A ☒ B C D E
9. A ☒ B C D E
10. A ☒ B C D E
11. ☒ A B C D E
12. A B ☒ C D E
13. A ☒ B C D E
14. A ☒ B C D E
15. A B C D E
16. A B C D E
17. A B C D E
18. A B C D E
19. A B C D E
20. A B C D E