

Student's Name _____

THINKING WITH SCIENCE

Observation Quiz

Lesson 8 (The Vial)

1. Why could you tell from the diagram that the vial liquid was water, if you knew that the jar liquid was water?
 - A. it was clear
 - B. air floated above it
 - C. there was no cap on the vial
 - D. water is the only clear, colorless liquid
2. Why would it be logical to ask whether the vial gas is helium?
 - A. because the gas was floating on the water
 - B. because helium rises
 - C. because helium is colorless
 - D. none of the above
3. What two words explain why this focus works?
 - A. density and pressure
 - B. weight and pounds
 - C. water and gas
 - D. air and liquid
4. In the Latin language, "com" means"
 - A. after
 - B. before
 - C. together
 - D. up
5. A universal law that is involved in this focus is:
 - A. all gases can be compressed
 - B. all gases float
 - C. water sinks in oil
 - D. liquids can be compressed
6. The compressed air that Scuba Divers used is:
 - A. put into their tanks under high pressure
 - B. compressed
 - C. released through a regulator
 - D. all of the above

7. How deep is the atmosphere of the earth?
- A. 8000 miles
 - B. 250 miles
 - C. 63 miles
 - D. 5000 feet
8. Most automobile tires have an air pressure, in pounds per square inch, of:
- A. 32
 - B. 150
 - C. 15
 - D. 12
9. The vial sinks when you press on the cover because:
- A. more water enters
 - B. the air compresses
 - C. both of the above
 - D. neither of the above
10. When the lid is off a container, the pressure, at sea level, is:
- A. the same inside and outside the container
 - B. 12 pounds per square inch
 - C. greater on the inside than on the outside
 - D. greater on the outside than on the inside
11. The part of the ear that is inside our body has how many sections:
- A. 1
 - B. 2
 - C. 3
 - D. 4
12. The Eustachian tube connects:
- A. the outer ear and the middle ear
 - B. the middle ear and the throat
 - C. the middle ear and the inner ear
 - D. none of the above
13. The auditory nerve leads from the inner ear to:
- A. the brain
 - B. the middle ear
 - C. the outer ear
 - D. the throat

14. If the eardrum can't vibrate freely, then:
- A. we can't hear very well
 - B. we get headaches
 - C. the pressure is the same on both sides of it
 - D. we have wax in our ears
15. When your ears pop, it is caused by:
- A. the inner ear
 - B. the Auditory nerve
 - C. the ear drum
 - D. the outer ear
16. You can demonstrate that air expands when pressure is decreased on it by:
- A. Opening a plastic water bottle on Mount Rainier, capping it, and driving home with it.
 - B. Opening a plastic water bottle at home, capping it, and driving up on Mount Rainer.
 - C. Pressing on the cover of the focus
 - D. Filling a Scuba diver's tank
17. Why shouldn't you hold your nose, close your mouth, and blow hard with your lungs?
- A. The Eustachian tube will get plugged
 - B. The inner ear will get damaged
 - C. The auditory nerve could get damaged
 - D. The ear drum could get damaged
18. When you press on the cover of the focus, the ----- increases everywhere inside the cover.
- A. water
 - B. pressure
 - C. air
 - D. all of the above
19. Making a mass of air smaller is called ----- it.
- A. declining
 - B. expanding
 - C. compressing
 - D. decompressing it
20. Everything above earth's atmosphere is called:
- A. space
 - B. the troposphere
 - C. the hydrosphere
 - D. protoplasm

Students's Name ANSWER KEY

OBSERVATION QUIZ FOR "THINKING WITH SCIENCE"

Quiz for Lesson 8

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