Bill Nye the Science Guy: Respiration /60

1. In your upper body there is a strong muscle called the ______________________.
2. When you inhale, your diaphragm goes __________ and your lungs __________.
3. When your breath in, your body gets __________ from the air.
4. ______________ is the same chemical that makes candles burn and iron rust.
5. We combine the oxygen with our __________ to get the energy we need to live.
6. Your __________ are full of tiny little passageways like sponges.
7. These ________________ allow you to take in a lot oxygen with each breath.
8. Your lungs have as much surface area as a ____________________________.
9. Surface area is how ______________ something is.
10. Your lungs are full of tiny passages (sacs) called _____________________.
11. Your ______________ lung is bigger than your ______________ ____________.
12. Your right lung is divided into _________ parts, and your left lung is divided into _______ parts.
13. Why is your left lung smaller than your right lung? ________________________
14. Accumulation of ______________ causes pain in our muscles when you are working “at a level more than your lungs can supply”.
15. Cellular __________________ occurs when our cells combine chemicals in food with oxygen to store energy in a chemical called ______ (adenosine triphosphate).
16. Your body uses ______ as a sort of ________________________________.
17. Your body __________ energy and __________ later.
18. When you breathe in, your diaphragm ________________ and air ______________
19. What happens when you relax your diaphragm? __________________________
20. We have slime inside our nose and lungs called ____________, which traps ______ and ____________ and keeps it from __________________________.
21. Cigarettes put ____________ and ____________ into your lungs.
22. Every cell in your body does ________________________________.
23. Humans __________ breathe underwater without special equipment, but fish can get dissolved __________ from water using their ____________.
24. ____________________ goes out of fish _________ into the water.
25. Every time you breathe in, you take in _______________________ molecules of air!

Review

1. What muscle causes our lungs to fill up with air? ________________________
2. What two materials combine to produce energy in respiration? ___________ and ____________
3. What is the name of the tiny air sacs in the lungs? _______________________

4. Which lung is smaller? _______  Why? ________________________________

5. How does a smoker’s lung look different from a healthy lung?
   ______________________ and _______________________________

6. How can you keep your muscles and lungs healthy? _____________________

7. What causes the pain in your legs if you exercise more than your lungs can
   supply? _______________________________________________________

8. What is the job of ATP (adenosine triphosphate) in your cells? __________
   __________________________________________________________________

9. Why doesn’t most dust and smoke get into our lungs? _________________
   __________________________________________________________________

10. What harmful substance from cigarettes can get into a person’s lungs? __

11. How is respiration in fish the same as in humans? ______________________
    __________________________________________________________________

12. How is respiration in fish different than in humans? ____________________
    __________________________________________________________________

13. Unscramble these words to write the equation for cellular respiration.
    __________________ -> __________________ + __________________ + __________
    doof          genoxy          ergyen          barcon          oxidide          etawr