**A picture containing helmet, headdress

Description automatically generated**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Blood and Circulation Webquest**

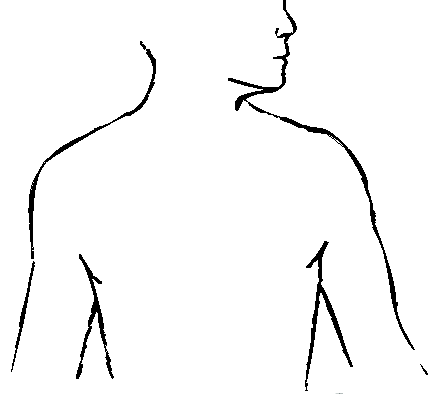
**PART I***: Introduction to the circulatory system*

Check out this link to investigate the role of the circulatory system in our bodies:

<https://my.clevelandclinic.org/health/body/21833-cardiovascular-system>

1. The cardiovascular system has a very important function ― getting o\_\_\_\_\_\_\_\_\_\_\_ and n\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to your entire body and removing w\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. The two main components of the cardiovascular system are:
2. **True** / **False** (circle one) Your heart circulates about 2,000 gallons of blood every day.
3. How does the cardiovascular system help with other organs?



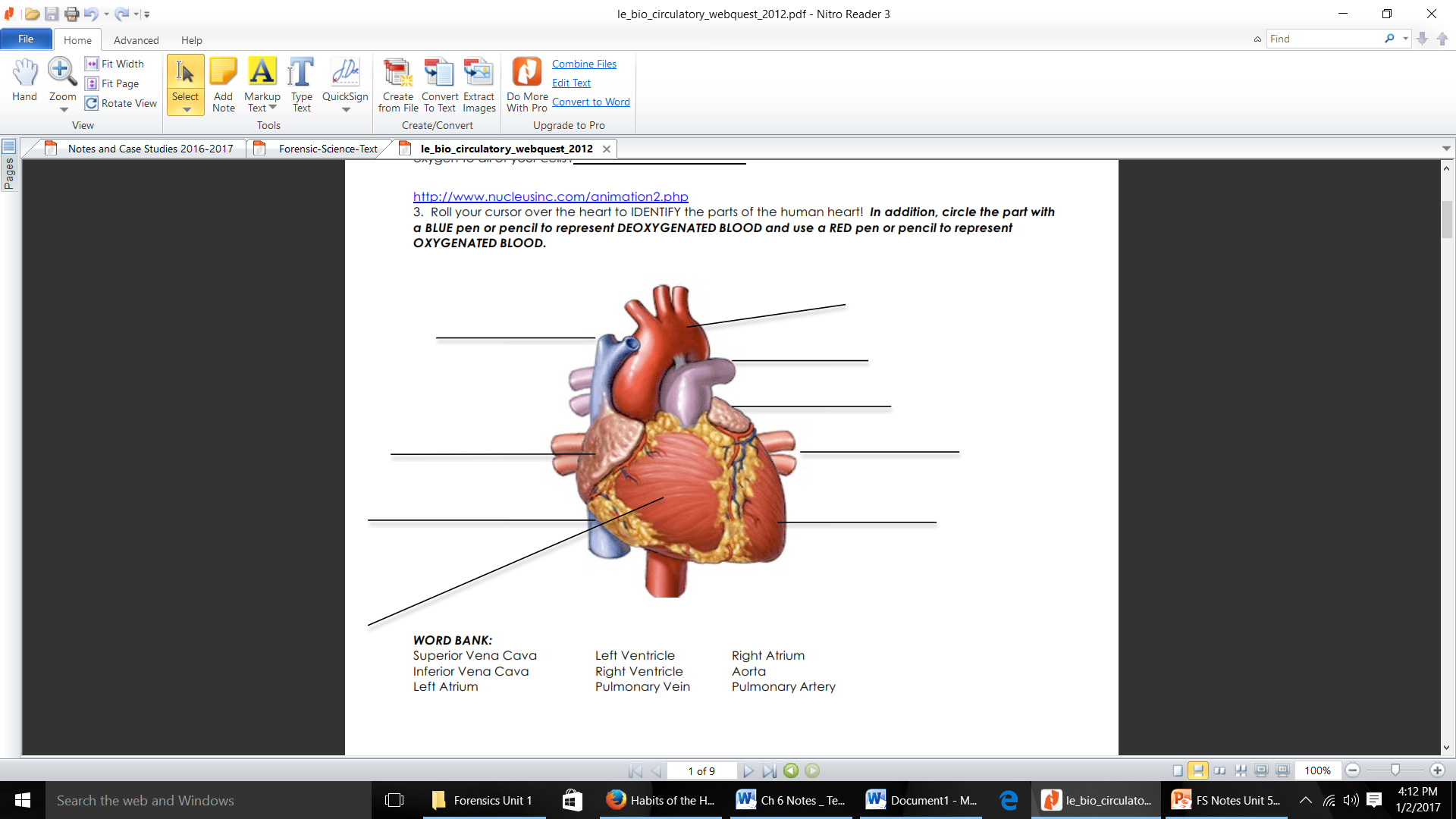
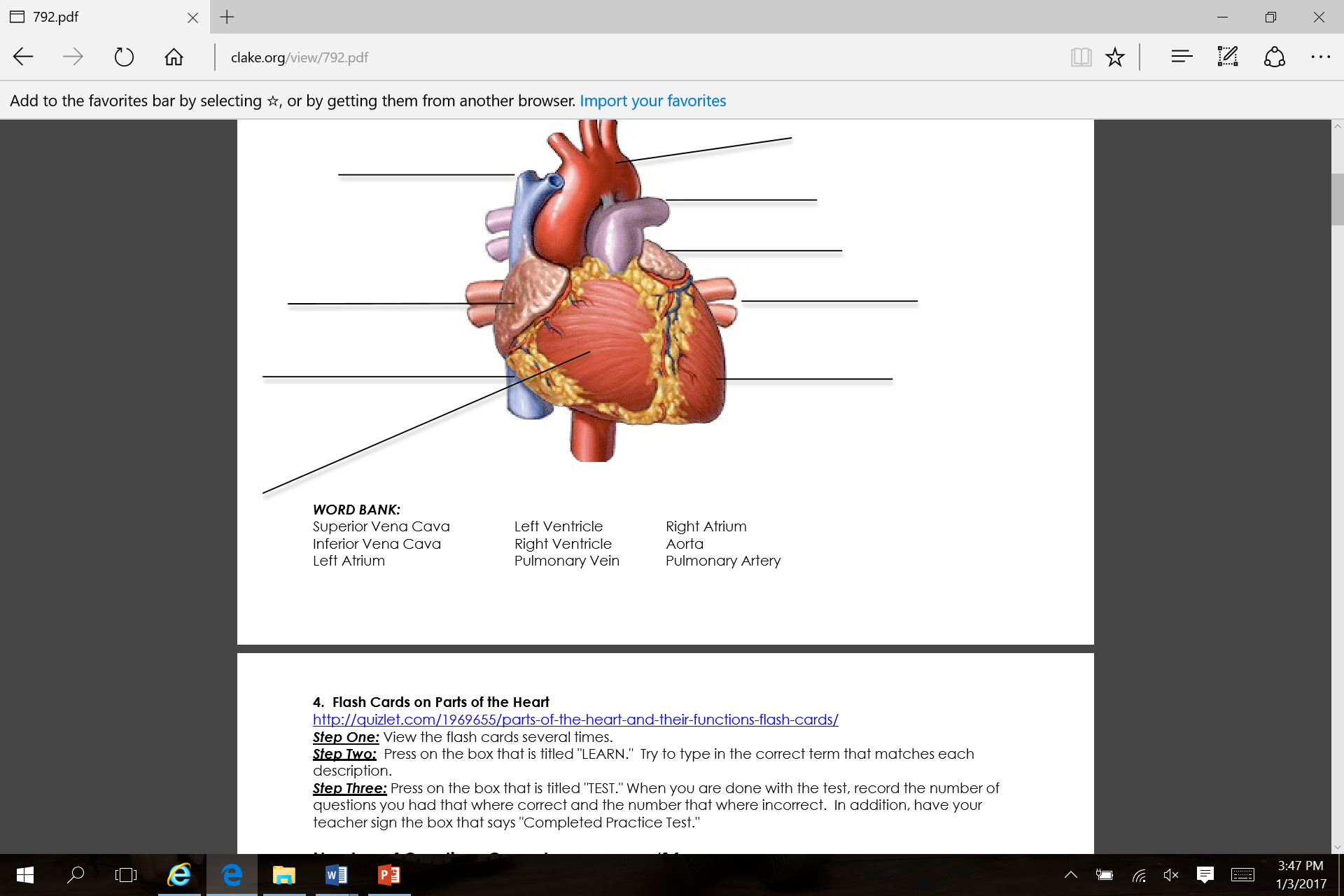
**PART 2***: A Closer Look at the Heart*

<https://www.healthywa.wa.gov.au/Articles/F_I/How-your-heart-works>

1. Click on the link above. Where is your heart located? Find the location of the heart and place a star on the body below where the heart is anatomically located.

<http://www.innerbody.com/image/card01.html>

6. Click the link and roll your cursor over the heart to IDENTIFY the parts of the human heart ***In addition, circle the part with a BLUE pen or pencil to represent DEOXYGENATED BLOOD and use a RED pen or pencil to represent OXYGENATED BLOOD.***



7. Flash Cards on Parts of the Heart <http://quizlet.com/1969655/parts-of-the-heart-and-their-functions-flash-cards/>

***Step One:*** View the flash cards a couple of times.

***Step Two:*** Press on the box that is titled "LEARN." Try to type in the correct term that matches each description.

***Step Three:*** Press on the box that is titled "TEST." When you are done with the test, record the number of questions you had that where correct and the number that where incorrect.

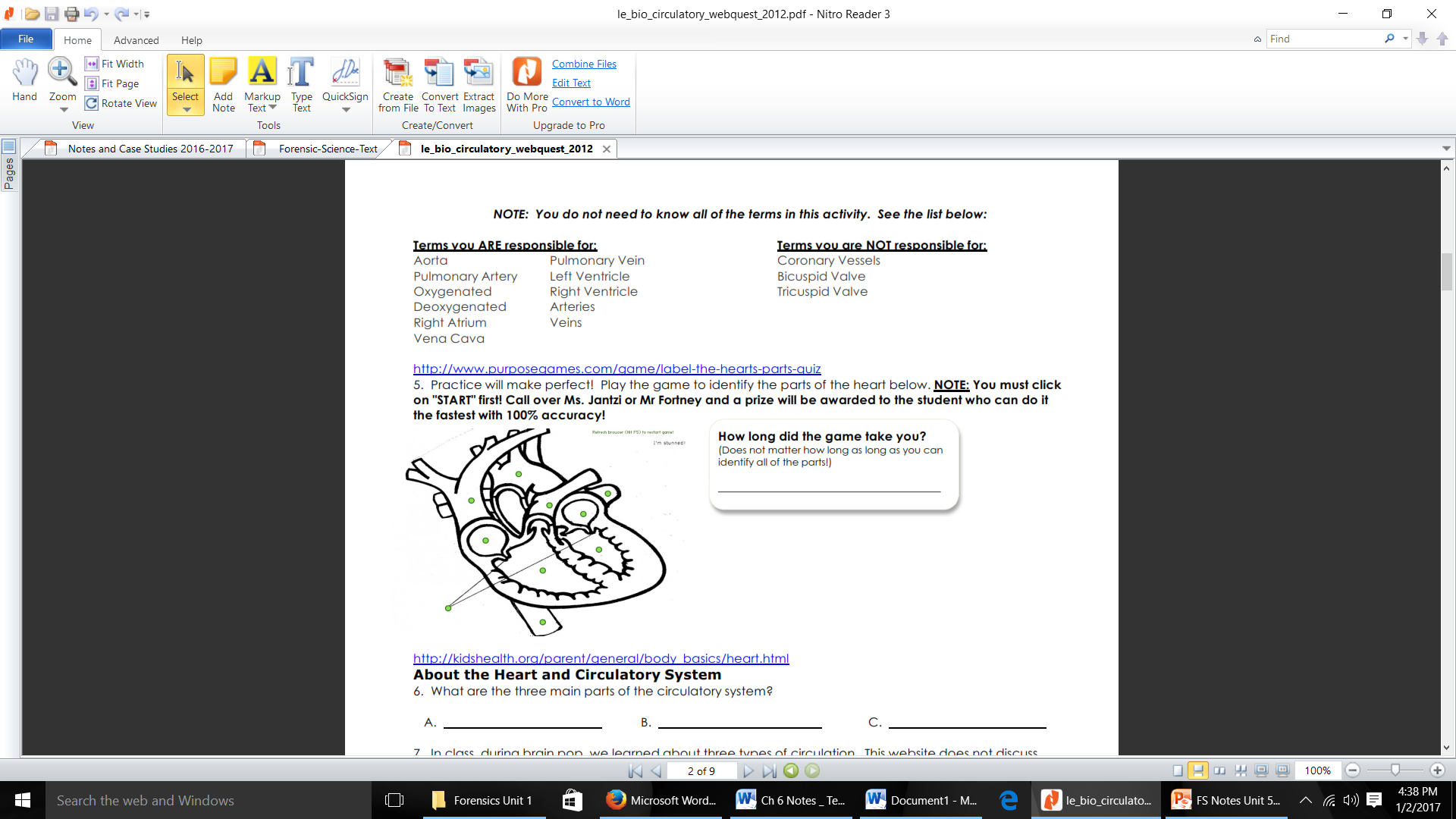
**Number of Questions Correct \_\_\_\_\_/14**

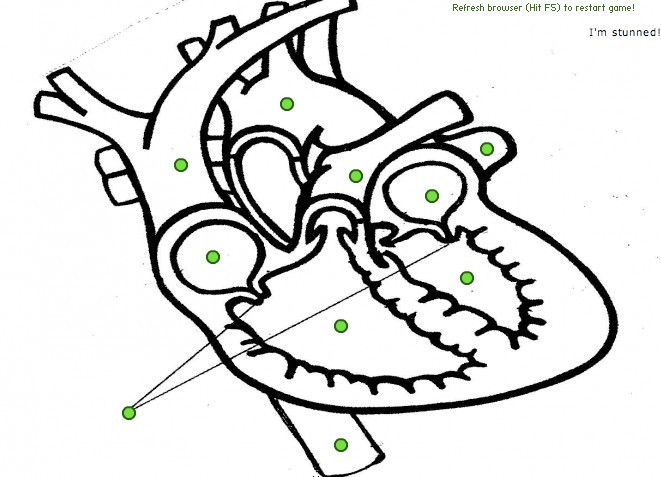
**Number of Questions Incorrect \_\_\_\_\_/14**

8. Practice will make perfect! Play the game in the link below to identify the parts of the heart below.

<http://www.purposegames.com/game/label-the-hearts-parts-quiz>

**NOTE:** You must click on "START" first! See how fast you can do it with 100% accuracy!





**PART 3***:* About the Heart and Circulatory System

Click here: ↓

<http://kidshealth.org/parent/general/body_basics/heart.html>

9. The function of the circulatory system is to: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. Humans have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ chambered heart.

11. What are the two circulatory pathways?

P\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ S \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. Describe the following:

Pulmonary Circulation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Systemic Circulation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13. What signals the heart to beat/contract?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

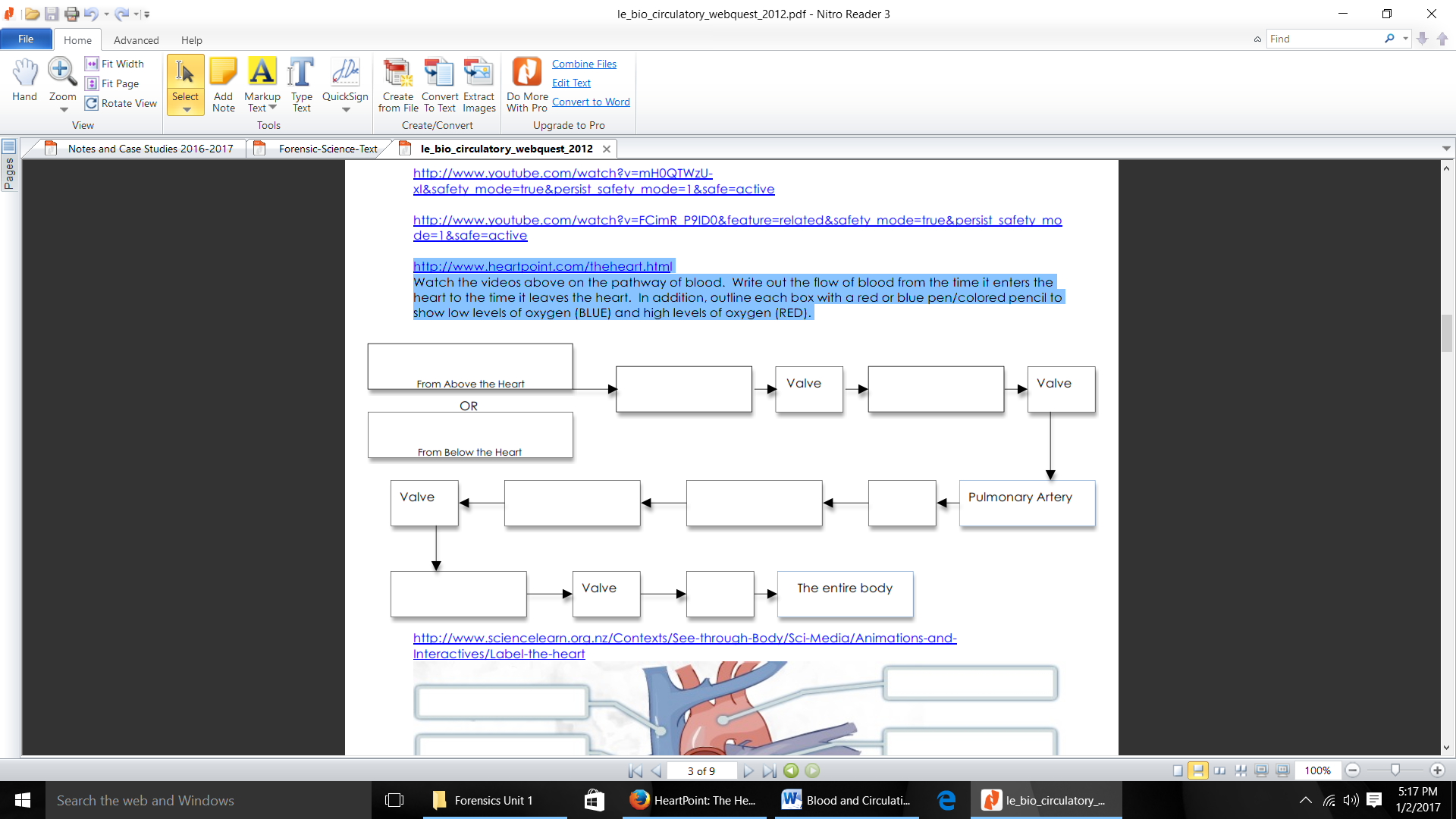
14. What is the difference between systole and diastole?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***View the animation of blood flow through the heart and fill in the blanks below:***

<http://www.heartpoint.com/theheart.html>

15. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, receives "used blood" from the body. Blood will be pushed through the tricuspid valve to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the chamber which will pump to the lungs through the pulmonic valve to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, providing blood to both lungs. Blood is circulated through the lungs where carbon dioxide is removed and oxygen added. It returns through the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which empty into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, a chamber which will push the \_\_\_\_\_\_\_\_\_\_Valve open. Blood then passes into the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. This is the largest and most important chamber in the heart. It pumps to the rest of the body. As it pumps, the pressure will close the \_\_\_\_\_\_\_\_\_\_\_ valve and open the aortic valve, with blood passing through to the \_\_\_\_\_\_\_\_\_\_\_\_, where it will be delivered to the rest of the body.

16. Go through the link above on the pathway of blood. Write out the flow of blood from the time it enters the heart to the time it leaves the heart. In addition, outline each box with a red or blue pen/colored pencil to show low levels of oxygen (BLUE) and high levels of oxygen (RED).

Lungs

***Part 4:*** *Blood and Vessels*

<http://biology.about.com/od/humananatomybiology/ss/blood_vessels.htm>

17. Blood vessels are hollow tubes that transport [\_\_\_\_\_\_\_\_\_\_](http://biology.about.com/od/humananatomybiology/a/blood.htm) throughout the entire body.

18. These tubes are constructed of layers of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

19. What is the difference between arteries and veins? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20. What process happens in the capillaries? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

21. One of the most common diseases of the arteries is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

<https://www.thoughtco.com/facts-about-blood-373355>

22. The color of blood is determined by the type of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ used to transport oxygen.

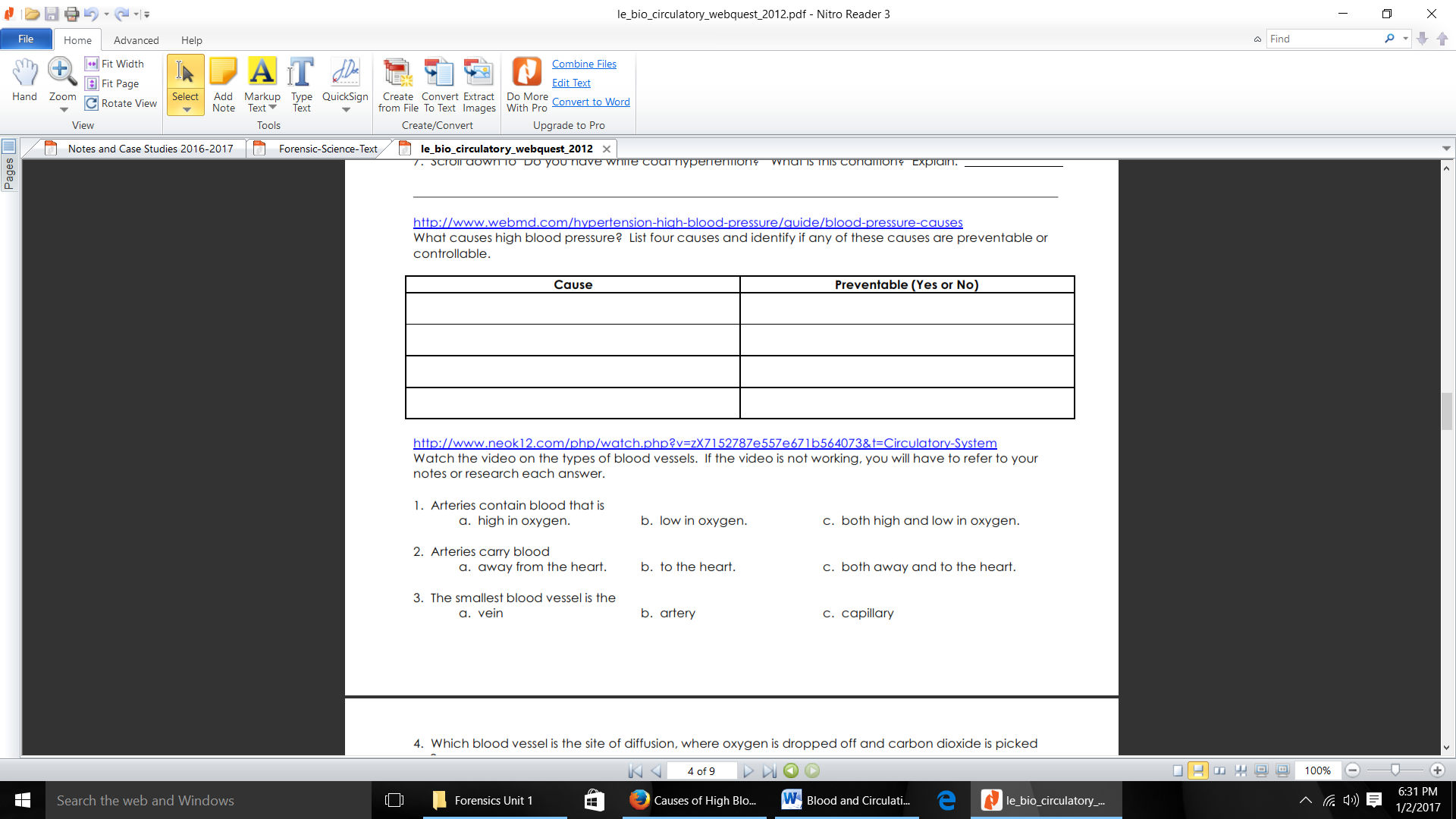
23. The adult human body contains approximately \_\_\_\_\_\_\_\_\_\_\_\_ gallons of [blood](http://biology.about.com/od/humananatomybiology/a/blood.htm).

24. About \_\_\_\_\_\_\_\_% of the body's blood cells are produced in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

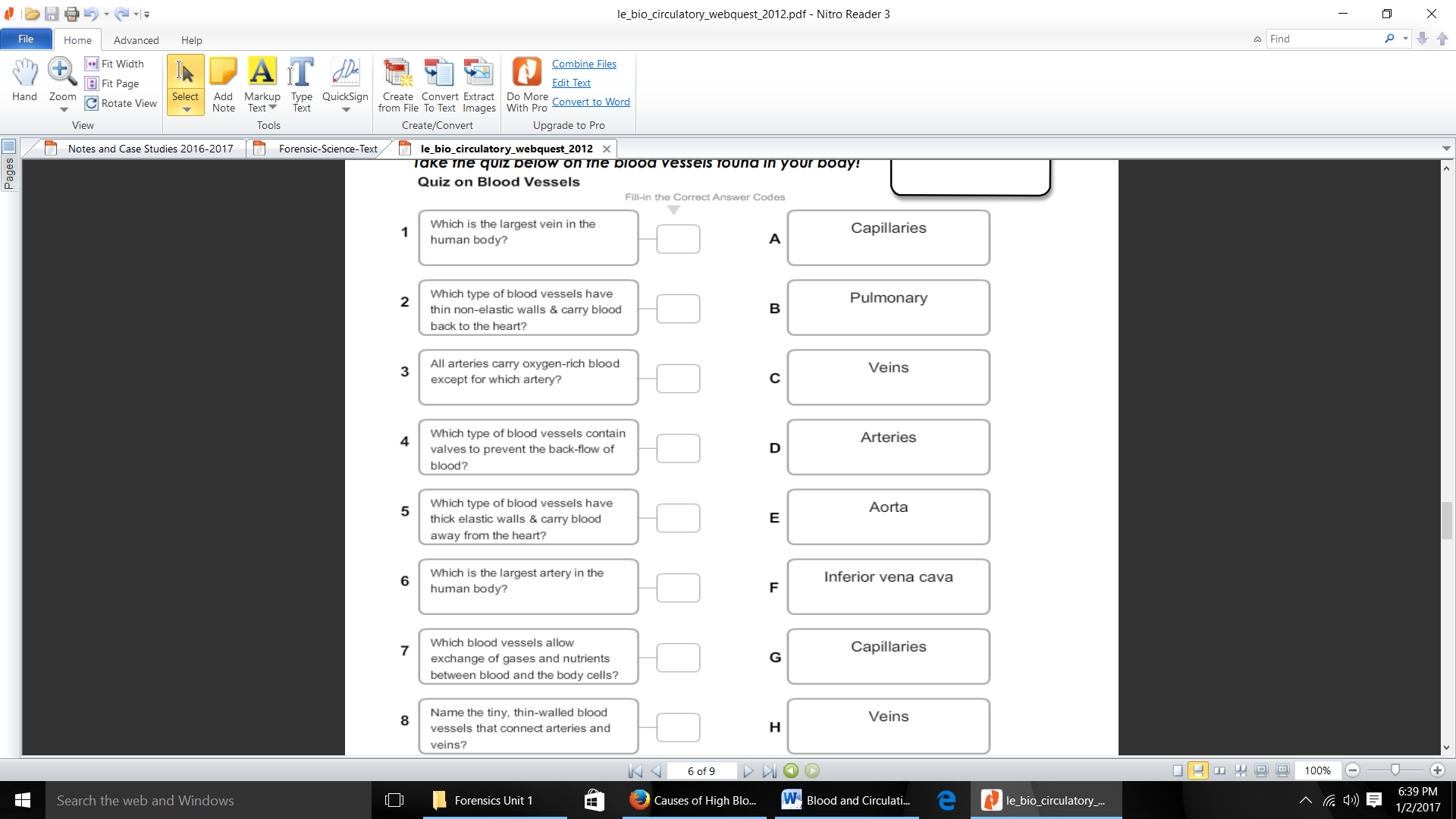
25. Mature red blood cells do not contain a \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

26. The most common [blood type](http://biology.about.com/od/genetics/ss/blood-type.htm) in the United States is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The least common is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

<http://www.webmd.com/hypertension-high-blood-pressure/guide/blood-pressure-causes>

27. Clinking on the link above, examine the causes of high blood pressure and if they are preventable or not.

28. Quiz yourself- See how well you have been paying attention so far:



29. click on the link below to learn more about what makes up blood

<https://kidshealth.org/en/kids/blood.html>

|  |  |  |
| --- | --- | --- |
| **Component of Blood** | **Job** | **Looks like…** |
| Red Blood Cells |  |  |
| White Blood Cells |  |  |
| Platelets |  |  |
| Plasma |  |  |

30. Where are blood cells made? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

31. How many blood types are there? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

32. Why is blood assigned a positive or negative? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

<http://www.wisc-online.com/objects/index_tj.asp?objID=AP14604>

**RED BLOOD CELLS-** Use the link above for some info on RBC’s

33. Blood is called the “River of life” because it carries \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

34. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the FLUID COMPONENT of blood and makes up \_\_\_\_\_\_\_\_\_\_\_\_ %.

35. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ makes up the remaining percentage of blood.

36. Red Blood Cells are also known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ . What is their main function?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

37. How are Red Blood Cells designed to perform this function? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

38. What is HYPOXIA or CYONOTIC mean? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

39. How long are red blood cells active for? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

<http://www.sciencekids.co.nz/sciencefacts/humanbody/blood.html>

**Blood Facts**- Click on the link above for some interesting blood facts

40. Blood makes up around \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the weight of a human body.

41. Blood contains \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ , \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

42. These blood cells float in a yellow liquid called blood \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Blood \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is made up of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_water and also contains various nutrients, electrolytes, gases, proteins, glucose and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.