Immune System Webquest

Visit the following website and answer the corresponding questions in your lab notebook. Make sure to draw images NEATLY and in COLOR where it asks you to.

Website #1 Microbiology Online: http://www.microbiologyonline.org.uk/about-microbiology/microbes-and-the-human-body

→ Click on Immune System:

1. List 5 types of 1st Line of Defense your body has.
2. Describe your body's 2nd Line of Defense according to the website.

→ Click on Antibody-Antigen Complex:

If pathogens get past your 1st and 2nd line of defense, your 3rd line of defense (very specific) comes into play. Define the following two words using the website:

3. Antigen:
4. Antibody:
5. Draw a picture of an antibody (the little Y's) in your lab notebook.
6. Next, draw an antigen binding to the antibody's specific shape. Label both the **antibody** and **antigen**.

Website #2 Anatomy of a splinter: http://www.sumanasinc.com/webcontent/animations/content/inflammatory.html

1. What chemical is released from the mast cells after the skin is damaged?
2. What happens to the capillaries in response to the release of histamines?
3. How would the skin look after the changes to the capillaries?
4. What do the phagocytes do?

Website #3: Go to http://www.funsci.com/fun3_en/blood/blood.htm#17

Scroll through the webpage and answer the following questions:

1. What are hematic cells?
2. What is an erythrocyte's job?
3. Draw a representation of what an erythrocyte looks like up close →
4. Scroll down to Leukocytes. What is a leukocyte?

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5. Create a similar table in your lab notebook the following table about the various types of leukocytes:

Type of Leukocyte	What do they do	% found in blood	Drawing of cell
1.			
2.			
3.			
4.			
5.			

Website #4: https://www.youtube.com/watch?v=zQGOcOUBi6s

1. How do macrophages fight infection?
2. When macrophages need help – who do they call?
3. What is the downside of neutrophils? How is this problem overcome?
4. If macrophages and neutrophils can't fight the infection who helps next?
5. What cells are activated in the lymph nodes?
6. What happens when the helper T-cell finds the matching dendritic cell?
7. What do B-cells produce?
8. How do antibodies work?
9. Why are memory cells important?