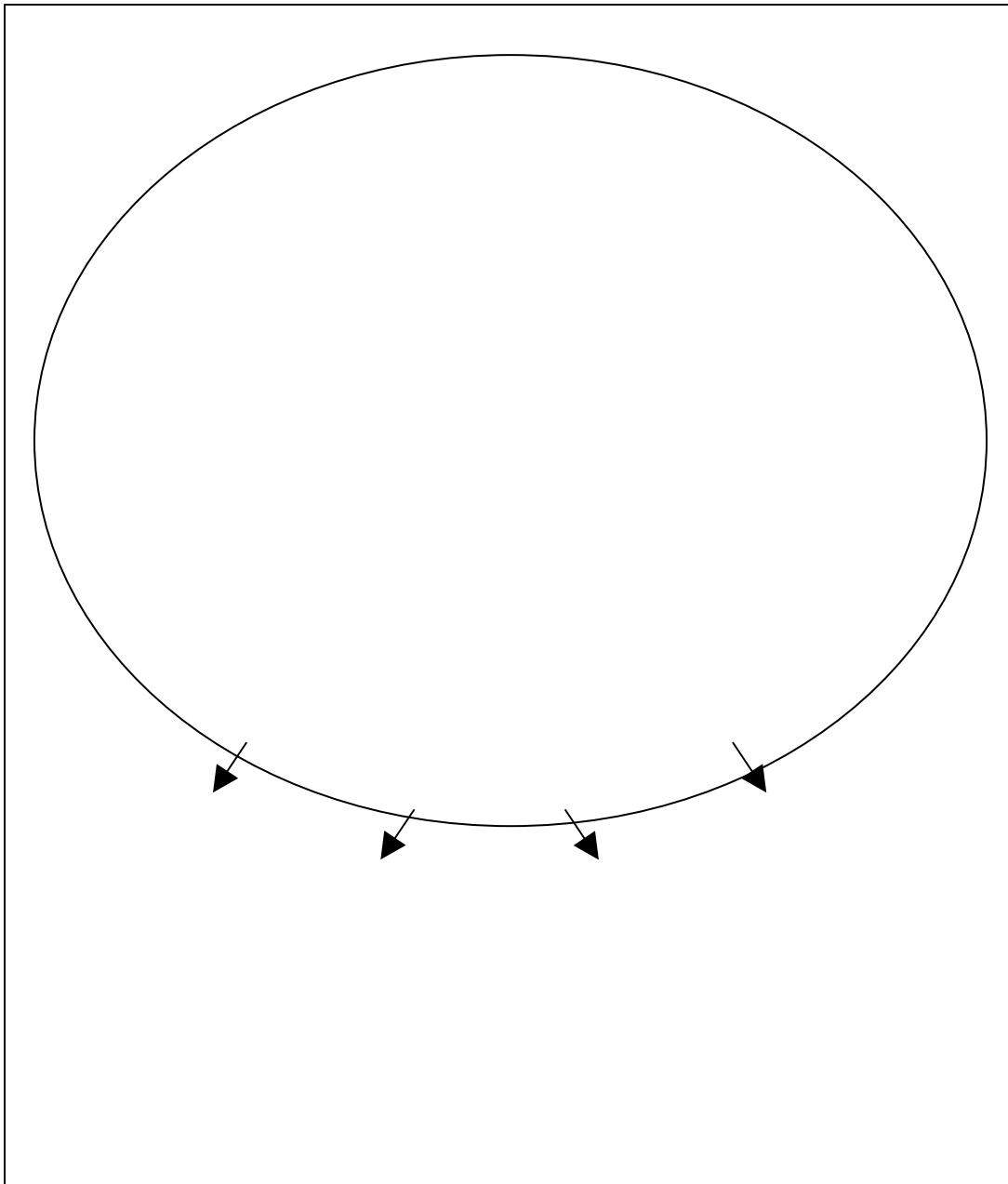


## ALTERNATE IMMUNE SYSTEM WORKSHEET

© 2010 (Permission to reproduce for educational purposes)

NAME: \_\_\_\_\_

The Lord of the Immune System podcast basically described a battle between “good” characters within a fortress and “evil” characters trying to penetrate the fortress defenses. Here is your chance to create your own analogy of the immune system using a story, movie plot or other source of inspiration. Some possibilities include battles from the movies “Avatar,” “Harry Potter” or “The Twilight Saga: Eclipse.” You can also just use a military analogy with different types of soldiers & weapons. Assume that the circle is some sort of fortress to protect. Place the names of various “characters” in your story in appropriate places in the diagram. Leave a little space below each character or weapon name so that you can fill in the real names of various parts of the immune system after.



**HERE ARE THE REAL NAMES OF PARTS OF THE IMMUNE SYSTEM TO WRITE BELOW EACH CHARACTER/WEAPON IN THE DIAGRAM. YOU MIGHT CONSIDER USING A DIFFERENT COLOR PEN OR MARKER THAN THE ONE YOU USED FOR THE CHARACTER NAMES.**

- |                              |  |                   |
|------------------------------|--|-------------------|
| ➤ BACTERIA                   | ➤ FOREIGN ANTIGENS                           | ➤ PROTOZOA        |
| ➤ COMPLEMENT                 | ➤ HELPER T CELLS                             | ➤ LYSOZYME        |
| ➤ VIRUSES                    | ➤ INFLAMMATION & FEVER                       | ➤ PARASITIC WORMS |
| ➤ EOSINOPHILS                | ➤ SKIN & MUCOSA                              | ➤ B CELLS         |
| ➤ PHAGOCYTES/<br>MACROPHAGES | ➤ ANTI-MICROBIAL SECRETIONS                  | ➤ ANTIBODIES      |
|                              | ➤ CYTOTOXIC T CELLS/ NATURAL<br>KILLER CELLS | ➤ CYTOKINES       |

**THEN BRIEFLY DESCRIBE THE ROLE OF EACH COMPONENT OF THE IMMUNE SYSTEM IN DEFENSE AGAINST PATHOGENS IN THE MARGINS OF THE PAGE.**

### REVIEW QUESTIONS

1. WHAT ARE THE **5 TYPES** OF ANTIBODIES MADE BY THE IMMUNE SYSTEM?
2. WHAT IS THE GENERAL NAME FOR THE “**BEACONS/SIGNALS**” THAT OUR IMMUNE SYSTEM SENDS OUT?
3. HERE ARE FOUR DIFFERENT DISEASES. WHICH OF **THE FOUR TYPES OF “BAD GUYS”** CAUSE THESE DISEASES IN HUMANS? GIVE THE REAL NAME OF THESE BAD GUYS.  
**A) AIDS                      B) MALARIA                      C) STREP THROAT                      D) PINWORM**
4. WHICH “CHARACTERS” ARE INVOLVED IN THE **HUMORAL** IMMUNE RESPONSE? GIVE THEIR **REAL NAME** AND INDICATE WHAT DO THEY DO.
5. WHICH “CHARACTERS” ARE INVOLVED IN THE **CELL-MEDIATED** IMMUNE RESPONSE? GIVE THEIR REAL NAME AND INDICATE WHAT DO THEY DO.
6. HOW WOULD YOU FIT **VACCINATION** OR **ANTIBIOTIC DRUG THERAPY** INTO THIS ANALOGY?
7. WHAT IS THE DIFFERENCE BETWEEN **INNATE** AND **ACQUIRED** IMMUNITY?

### CHALLENGE ACTIVITY

CREATE YOUR OWN PODCAST BASED ON THE ANALOGY YOU USED FOR THIS WORKSHEET!