Mr. Ulrich Name:……..Block:……

Fighting The Flu

Before we start, jot down a few notes on what you already know about the immune system by answering the following questions:

1. What is a virus?
   A bit of nucleic acid wrapped in proteins

2. How are viruses exceptions to cell theory?
   They don't carry out all life processes

3. What is a *pathogen*?
   A living organism that causes disease

4. What are some other types of organisms that cause disease?
   Some bacteria (e.g. *E. coli*), fungi (e.g. *Candida*), protists (e.g. *Giardia*) and animals (e.g. tapeworms)

5. What parts of your body are involved with fighting off infection?
   White blood cells

While watching the movie, jot down different types of cells involved in the immune response as well as any mechanisms white blood cells use to fight of pathogens

Types of cells	Mechanisms white blood cells use
Natural Killer Cells	- Identify abnormal cells - Release a toxin that kills infected cells (and some other healthy ones too)
Macrophages	- Eat cell debris - Release interleukins which cause fever and increase circulation to infected area
Dendritic cells	- Collect viral proteins (ID's) - find specific T-cells
T-cells	- destroy infected cells
B-cells	- Make antibodies against virus - remember how to make the antibodies against virus

You should be able to briefly explain what is happening on a cellular level as the body is invaded