

Enrichment Activity

Name: _____

Lifecycle of Malaria (10 points)

Period: _____

PART 1: Instructions:

Watch the animation at this site and then answer the questions: <http://www.hhmi.org/biointeractive/malaria-mosquito-host>

Questions:

1. Only female mosquitoes drink blood. Why?
2. What do all mosquitoes eat most of the time?
3. The parasitic form of malaria that causes illness in humans dies and is digested in the stomach of the mosquito. So then what stage of the protozoan's life cycle survives inside the stomach?
4. Describe the sequence of events that enables the malaria eggs to be fertilized by sperm from other malaria protozoan rather than sperm from the same protozoan that produced each egg.
5. After the fertilized (zygote) cell leaves the stomach, what does it change into? What is produced by these?
6. How do the malarial parasites get into the body of the next victim?
7. What percent of the world's population is infected with malaria each year?
8. What two populations are most vulnerable to dying from malaria? Why do you think this is?

PART 2: Instructions:

Watch the animation at this site and then answer the questions: <http://www.hhmi.org/biointeractive/malaria-human-host>

Questions:

1. Which famous American is named as having suffered from malaria?
2. Why do mosquitoes inject saliva into their bites?
3. Once it enters the body after a mosquito bite, where does the malaria parasite travel to inside of the body to replicate?

4. These cells then release thousands of modified parasites that infect which type of cell next?
5. What happens inside of these cells?
6. What are the symptoms of malaria?

PART 3: Instructions:

Read through the following website and answer the questions below: http://malaria.jhsph.edu/about_malaria/

Questions:

1. How many people die from malaria each year?
2. Compare the number of deaths to the number of people who get the disease each year. What percent of people who are infected with malaria end up dying from it?
3. Why is malaria tougher to combat than diseases like HIV and tuberculosis?
4. What causes the periodic high fevers that affect malaria sufferers every 48-72 hours?
5. What percentage of the world's population lives in areas that put them at risk for infection?
6. How many different plasmodium species (a type of protozoan) cause malaria in humans?
7. Which form is most fatal?
8. Ninety percent of all cases of malaria occur on which continent?
9. What is the average (most common) age of people killed by malaria?
10. How often does a child die of malaria?
11. Continent wide, one in every 20 African children, or _____% are killed by malaria. This equates to _____ children dying of malaria EACH DAY.
12. In the last five years, two alarming things have happened. What are they?
 - 1) _____
 - 2) _____
13. Which type of malaria-transmitting mosquito is found world-wide, including in the U.S.?
14. How is climate change predicted to affect malaria outbreaks?
15. What economic toll does malaria have on African families?