**Survival of the Sickest Chapter Questions**

**General Directions:**

You have been assigned **3 chapters** from Survival of the Sickest. Submit the required material for the FIRST CHAPTER LISTED for you to kidblog. For the LAST TWO chapters listed for you, submit the required information to [www.turnitin.com](http://www.turnitin.com)

Your assignment is to write a **summary** of your assigned chapter in your post.  Be sure to **title your post** with the chapter name.  In the same post, type in the questions and answers to your questions–be sure to title your post!  After others have posted their summaries and questions, you are required to make **comments and/or ask additional questions** about 3 other posts/chapters.

Your comments must be respectful and appropriate for a school assignment!

Your grade will be based on the quality of your work and the thought you put into your posts and answers. Superficial or inferior work will cause a decrease in your grade!

**Introduction—I did this one for you—but you are allowed to comment on this post**

1. Why did the author write this book?

2. What is natural selection--EXACTLY?

3. Since you already know more about evolution than the common person, explain why you think genes that make people sick are still in the gene pool after millions of years.

4. What does this statement mean: “one organism’s survival is another organism’s death sentence”

5. What is a mutation—EXACTLY?

6. Explain how a mutation can be beneficial to a population.

7. What does this statement mean—“DNA isn’t destiny—it’s history”?

**Chapter 1—Ironing It Out**

1. The author points out many ways in which iron impacts life. Identify/describe at least five.

2. In the context of this chapter, explain the author’s reference to Bruce Lee and to the barber pole.

3. What is hemochromatosis and what are the symptoms?

4. What is the evolutionary advantage of having hemochromatosis?

5. Explain why cystic fibrosis might still be in the population.

**Chapter 2—A Spoonful of Sugar Helps the Temperature Go Down**

1. Distinguish between each of the three types of diabetes.

2. What did the ice cores of 1989 reveal about the Younger Dryas?

3. Describe the body’s arsenal of natural defenses against cold.

4. Describe the connection between *Rana sylvatica* and diabetes.

5. Explain the statement made in this chapter: “When natural selection goes to work, it doesn’t favor adaptations that make a given plant or animal better”

**Chapter 3—The Cholesterol Also Rises**

1. Why do we need the following: vitamin D, Cholesterol, folic acid?

2. Briefly describe the connection between the two concepts:

a. tanning beds; birth defects

b. sunglasses; sunburn

c. hypertension; slave trade

d. Asian flush; drinking water

e. skull shape; climate

f. body hair; malaria

3. What’s so fishy about the Inuits’ skin color?

4. Explain the good and bad of ApoE4

**Chapter 4—Hey, Bud, Can You Do Me a Fava?**

1. Explain the role of G6PO.

2. Briefly describe the connection between the two concepts:

a. European clover; Australian sheep breeding crisis of the 1940s

b. Capsaisin; birds and mammals

c. malaria; air conditioning

d. favism; fava beans

3. Explain the following statement found in this chapter: “Life is such a compromise.”

4. Explain the connection that Haldane made between malaria and sickle cell anemia.

**Chapter 5—Of Microbes and Men**

1. Identify three ways in which microbes/parasites move from host to host.

2. For each pathway you listed in number one, explain the relationship of the mode of transmission to the virulence of the invader.

3. Explain the concept of host manipulation using the spider/parasitic wasp example in the book.

4. Explain the relationship among *Toxoplasma gondii*, cats and humans.

5. What is MRSA and what influence have humans had on the genetic makeup of this organism?

**Chapter 6—Jump into the Gene Pool**

1. Briefly discuss the following terms:

a. vaccine

b. antibodies

c. B cells

d. junk DNA

e. retroviruses

2. What is the Weissman barrier?

3. What is the connection among these terms:

a. transposons; viruses; evolution

b. sunspots; flu epidemics

4. Humans have about 25,000 genes and more than a million different antibodies. How is this possible?

5. What is a persisting virus?

**Chapter 7—Methyl Madness: Road to the Final Phenotype**

1. Make connections between the following terms:

a. vitamin supplement; agouti mice

b. snakes; long tailed lizards

c. Barker Hypothesis; fathers who smoke

d. smoking grandmothers; asthmatic children

e. Betel nut chewing; cancer

2. Epigenesis may be partially responsible for the childhood epidemic of obesity. Explain.

3. “Good times mean more boys. Tough times mean more girls?” Explain.

4. What is epigenetics?

**Chapter 8—That’s Life: why You and Your iPod Must Die**

1. Make connections between the following terms:

a. progeria; lamina A

b. Hayflick limit; telomeres

c. Cancer cells; stem cells

d. size; life expectancy

e. risky child birth; big brains and bipedalism

2. Explain the author’s iPOD and aging analogy.

3. Identify the 5 lines of cancer defense.

4. What are the two accomplishments of biogenic obsolescence?

5. Compare and contrast the Savanna and aquatic ape hypotheses.

1st Period

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| Sydney | 1 | 7 | 4 |
| Aimee | 2 | 7 | 5 |
| Bailey | 3 | 7 | 6 |
| Luke | 4 | 7 | 8 |
| Chase | 5 | 7 | 1 |
| Austin | 6 | 7 | 2 |
| Jacques | 8 | 7 | 3 |
| Leanne | 1 | 7 | 4 |
| Stephanie | 2 | 7 | 5 |
| Zera | 3 | 7 | 6 |
| Kristen | 4 | 7 | 8 |
| Maci | 5 | 7 | 1 |
| Elizabeth | 6 | 7 | 2 |
| Denise | 8 | 7 | 3 |
| Danie | 1 | 7 | 4 |
| Allison | 2 | 7 | 5 |
| Deanna | 3 | 7 | 6 |
| Devyn | 4 | 7 | 8 |
| John | 5 | 7 | 1 |

5th Period

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| **Name** | **1st Chapter** | **2nd Chapter** | **3rd Chapter** |
| Sarah B | 6 | 7 | 2 |
| Kate | 8 | 7 | 3 |
| Sarah C | 1 | 7 | 4 |
| Emma | 2 | 7 | 5 |
| Rae | 3 | 7 | 6 |
| Shaina | 4 | 7 | 8 |
| Levi | 5 | 7 | 1 |
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