**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_**

**Cracking the Code**

**Directions: Watch the episode at the link below. The numbers on the left hand side tell you approximately where the answers can be found (4:35 means 4 minutes, 35 seconds into the program).**

http://www.pbs.org/wgbh/nova/body/cracking-the-code-of-life.html

1. (4:35) The message of life has been passed down from one generation to the next in what form?
2. What does DNA look like (either from the lab or from the video)?
3. How many more genes do humans have than fruit flies?
4. (10:50) How closely are you related to the person sitting next to you? (In a percentage form)
5. In the past, how long did it take to find particular gene?
6. What % of our genes are used to code for proteins?
7. Now, how fast do we “get the letters” out (find the code for DNA).
8. (16:00) A person with Tay-Sachs Disease has one letter (or base) changed in their DNA. What are the effects of this one mutation? Write your answer in at least 2 complete sentences.
9. What is a mutation? (From your notes).
10. (25:00) – What is the ultimate hope or goal of coding the entire genome?
11. (41:00) – Again, how closely are we are related on a genetic level?
12. **Why** are we so closely related?
13. What is the one thing we have learned today about the DNA code?