Name Pd

**Cracking the Code of Life**

**The race to decode human DNA**

1. \_\_\_\_\_\_\_ % of the genes in a banana are the same as in humans.
2. We have as many genes as a fruit fly.
3. Our code is about billion steps long.
4. If you stretched out your DNA, how long would it be?

*Doesn’t the fetus look like an alien?*

1. Every baby is the same as any other baby.
2. How long did it take to find the gene for susceptibility to breast cancer?
3. What percent of our own genes are active?
4. What has made the mapping go faster?
5. Hayden has Tay-Sachs disease. How many bases were wrong to cause this?

*So sad… this is when I cried.*

1. If only one parent gives the Tay Sachs gene to a child, will the child have the disease?
2. How could mapping the genome help?
3. They initially thought it would take years to decode a human.
4. What did Mr. Ventor do to speed it up?
5. How long did Mr. Ventor say it would take him to do the genome?

*Wow!! A race!! Go Team Go!!*

1. By 2000, base pairs a second were being found.

*Hmm… Competitive!!*

1. Who are we mapping?
2. Who do you think Solaris is mapping?
3. Is our human DNA really different from another human’s DNA?
4. What’s the average difference between genes in chimpanzee?

*Just think… If we’re so closely related to a banana, we’re probably more related to a*

*Cockroach!!*

1. In November 1999, how much had they sequenced?

*Moving speech! Think that guy has job satisfaction? I just like his shirt.*

1. What are companies trying to patent?
2. What are the requirements for getting a patent?
3. How long does it take?
4. How many genetic patents are in limbo?
5. Briefly describe the problem between science and business.
6. Which is more difficult, finding genes or finding cures?
7. When did they find the gene for cystic fibrosis?
8. What makes up three-dimensional?
9. What determines what proteins do?
10. What caused Riley’s protein to be misshapen?

*Hey look a channel protein imbedded in a lung cell membrane.*

1. How is Toni’s case of cystic fibrosis different than Riley’s?
2. EXATLY HOW MANY GENES??
3. How can proteins interact to make more than just 30,000 different proteins?
4. What is the big race for?
5. How can you find the genes for things like pattern baldness?
6. Why is Iceland a valuable place for finding genes?
7. Do you believe this data base is an invasion of privacy? Why or why not?

*Hey look it’s our old friends, Vincent and company.*

*Anyone wonder about those baby gene chips? Where are they getting all the babies to make chips for?*

1. What is the percentage risk of breast cancer if you have normal genes in BACR1 and BACR2?
2. What is the percentage risk for breast cancer if those genes are mutated?
3. If you were the daughter would you get screened? Why or why not?
4. When was the Human Genome Project done?
5. Who won the race?
6. How much of the 3 billion bases pairs is actual genes?