



# Cracking the code!

## Are you a "gene-ius?"

1. If your mom has blue eyes and your dad has brown, what color are your eyes likely to be?  
a. Blue      b. Brown      c. One blue and one brown      d. Gray
2. In 1958, UW geneticist Joshua Lederberg won a Nobel Prize for his discovery using:  
a. Bacteria      b. Yeast      c. Molds      d. Viruses
3. Fold your hands together by interlocking your fingers! Which thumb is on top?  
a. Right      b. Left
4. UW-Madison geneticists are learning about:  
a. How one cell becomes a whole body  
b. The effects of diet on aging  
c. How a seed responds to gravity  
d. All of these
5. Both your mother and father gave you genes. How many did they each give you for your dimples (even if you don't have them)?  
a. One      b. Two      c. Four      d. Six
6. What is the chemical responsible for all of your traits for how you look?  
a. Fat      b. DNA      c. Protein      d. Carbohydrates
7. How many genes do you have?  
a. 70 -80 thousand      b. 120-130 thousand      c. 400-500 thousand      d. 30-40 thousand
8. The study of genes have helped us:  
a. Prove citizens innocent or guilty of crimes  
b. Produce insulin in bacteria for diabetics  
c. Develop hybrid corn  
d. All of these
9. The chemical structure of everyone's DNA is the same.  
a. True      b. False
10. Geneticists use fruit flies to learn about many of life's processes, including how nerves function and how body parts develop. Fruit flies live for:  
a. 5 days      b. 2-3 weeks      c. 3 months      d. 4 years



## Did you crack the genetic code?

1. You will probably have **brown** eyes. Brown eye-color genes are dominant over blue eye-genes.
2. The oldest department of its kind, UW Department of Genetics has been a pioneer in many areas. In 1958, UW geneticist, Joshua Lederberg, won a Nobel Prize for understanding how genetic material is organized in **bacteria**.
3. **Either answer is right!** Your instinct to fold one thumb over another depends on your genes! You have a dominant left thumb gene if the left thumb is on top. If your right thumb is on top you have two recessive genes for that trait!
4. **All of these!** Learning about how a seed responds to gravity, studying the effects of diet on aging, and how one cell develops into a whole body are being studied by UW-Madison geneticists to help improve life!
5. Your parents gave you equally **one** gene for each trait that you have for dimples, eyes, right or left handedness, height, IQ, and even the size of your feet!
6. **DNA** (Deoxyribonucleic acid) is the chemical that encodes our genes, which carries the blue print of life!
7. We don't know the exact number of genes, but scientists estimate that humans have **30,000-40,000 genes**. A fruit fly has a little more than 13,500 genes!
8. **All of these!** Genetics has helped us to produce insulin-using bacteria for diabetics, and hybrid corn was developed at UW-Madison in 1933. Today, being able to crack the code of DNA sequences has allowed the FBI to identify criminals.
9. **True!** Every person or animal has the same DNA. However, the sequence order of each person's DNA makes you and me different.
10. Fruit flies have a short life span of **2-3 weeks** allowing genetic research projects to move quickly. Each female fruit fly can produce 200 babies!

Did you crack the code?				
Number Correct	10	7-9	4-6	0-3
	Genius	Sleuth	Detective	Fruit Fly

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