

# Intro to Genetics

Follow the steps below and answer questions 1-9

- Go to the class website ([www.jmazzabiology.com](http://www.jmazzabiology.com)) and click on link #6 under Molecular Genetics Links on the links page.
- Click on *What is DNA?* Read the information on each page and then answer 1 and 2.
- Then go to *What is a Gene?* Read the information on each page and answer 3 and 4.
- Then go to *What is a Protein?* Read the information on each page and then answer 5-9 below.

## Questions

### What is DNA?

- 1) The shape of a DNA molecule was described as a ladder. How would you describe the shape of a DNA molecule?
- 2) How are the "letters" (called bases) related to genes? What is the relationship between genes and proteins?

### What is a Gene?

- 3) What important information does a gene contain (they are the instructions to build what molecules)?
- 4) Genes are made of \_\_\_\_\_ (fill in the blank)

### What is a Protein?

- 5) Why are proteins so important to an organism? (Be more specific than the 1<sup>st</sup> paragraph of the tutorial)
- 6) Explain how receptor proteins AND structural proteins help to transmit a pain signal
- 7) How do cells know how to build a protein in the correct shape? Also, why is the shape of a protein important?
- 8) Where in the cell are instructions to make proteins stored?
- 9) Where in the cell is the protein actually built? How do the instructions get there (what molecule is used as a "messenger")?