Bioinformatics Vocabulary

• **Processing, analyzing, experimenting with data**
  - Where does the data come from?
  - How do we get it?
  - What does it mean?
  - What do we do with it?

• **From nucleotide to protein to gene**
  - Identification is important
  - Annotation is important
What does DNA (data) look like?

- TGAAC vs ACTTG
  - Which direction is right?
- What is a base-pair?
  - nucleotide?
- What is a protein, how coded?
  - Identification?
- What is an amino acid?
  - Codon? Coding?
- Why are proteins important?
  - Finding? Using?...

http://www.blc.arizona.edu/Molecular_Graphics/DNA_Structure/DNA_Tutorial.HTML
How do we get CGATC into software?

http://seqcore.brcf.med.umich.edu/doc/educ/dnapr/sequencing.html
From Shotgun to Gene

- **Comparing two approaches**
  - HGP: human genome project
  - Celera Genomics

- **Why was there a race? Is the race over?**
  - Who owns the data?
  - What public good does the data serve?

- **Should scientists be concerned about public policy?**
  - Was the Manhattan project like the HGP?