

Focus Questions and Vocabulary
Genetic Technology
Honors Biology

Chapter 11

- How do proteins turn genes on or off? (11.1)
- How does a DNA microarray work? What can it tell us? (11.11)
- Describe the steps of signal transduction in words or with a picture. (11.12)
- Describe the steps involved in cloning an animal. (11.15)
- What are some ways therapeutic cloning could be used? (11.17)
- Describe the steps of cancer development. (11.19)
- Examine the table of cancer risks in the United States (Table 11.21). What surprises you? (11.21)

Chapter 12

- Describe the steps of gene cloning through recombinant DNA technology. What is it used for? (12.1)
- Describe how a restriction enzyme works. (12.2)
- What are some common products that are made with genetically modified organisms? What organisms are they made using? (12.6)
- What concerns are there about genetically modified organisms? (12.9)
- Describe how gene therapy could be used to treat diseases. (12.10)
- Describe the Human Genome Project. What did it tell us? (12.18)
- What is the FOXP2 gene? What has studying this gene told us? (12.21)

Chapter 11

adult stem cell	gene expression	regeneration
carcinogen	histone	reproductive cloning
clone	homeotic gene	signal transduction pathway
differentiation	nuclear transplantation	therapeutic cloning
DNA microarray	oncogene	transcription factor
embryonic stem cell (ES cell)	proto-oncogene	tumor-suppressor gene

Chapter 12

biotechnology	gene therapy	recombinant DNA
DNA fingerprinting	genetic engineering	restriction enzyme
DNA profiling	genetically modified organism	transgenic
forensics	genomic library	Vaccine
gel electrophoresis	Human Genome Project (HGP)	
gene cloning	plasmid	