Making Proteins, Biotechnology, and Gene Regulation Unit Reading Guide (LIFE 9TH Edition)

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Making Proteins and Biotechnology Reading** |  |  |
|  | **TOPIC** | **PAGES** | **NOTES** |
|  | 14.1 | What is the evidence that genes code for proteins? | 290-294 (4pgs) |  |
|  | 14.2 | How does information flow from genes to proteins? | 294-296 (2) |  |
|  | 14.3 | How is the information content in DNA transcribed to produce RNA? | 296-300 (4) |  |
|  |  14.4 | How is eukaryotic DNA transcribed and the RNA processed? | 300-304 (4) |  |
|  | 14.5 | How is RNA translated into proteins? | 304-310 (6) |  |
|  | 14.6 | What happens to polypeptides after translation? | 310-313 (4) |   |
|  | 15.1 | What are mutations? | 316-323 (7) | Read these sections quickly to review mutations and become familiar with some of the methods used in biotechnology. |
|  | 15.2 | How are DNA molecules and mutations analyzed? | 323-327 (5) |
|  | 13.5 | How does the polymerase chain reaction (PCR) amplify DNA? | 286-287 (2) |
|  | 18.1 | What is recombinant DNA? | 386-388 (2) |
|  | 18.2 | How are new genes inserted into cells? | 389-391 (3) |
|  |  |  |  |  |

Suggested Bozeman Science YouTube review videos: DNA and RNA Part 1, DNA and RNA Part 2, Transcription and Translation, Mutations, Molecular Biology (a biotechnology review)

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Gene Regulation Reading** |  |  |
|  | **TOPIC** | **PAGES** | **NOTES** |
|  | 16.1 | How do viruses regulate their gene expression? | 342-348 (6) |  |
|  | 16.2 | How is gene expression regulated in prokaryotes? | 348-352 (4) |  |
|  | 16.3 | How is eukaryotic gene transcription regulated? | 352-356 (4) |  |
|  |  16.4 | How do epigenetic changes regulate gene expression? | 356-360 (4) |  |
|  | 16.5 | How is eukaryotic gene expression regulated after transcription? | 360-362 (3) |  |
|  |  |  |  |  |
|  |  |  |  |  |

Suggested Bozeman Science YouTube review videos: Development: timing and coordination, Gene regulation, Signal transmission and gene expression.

Unit Test Target Date = Monday 4/27/15