**Unit 5 Review Stations**

Station 1: Nucleic Acid Structure

1. Draw and label a piece of DNA that is TWO BASE PAIRS in length. How many individual nucleotides are present in your diagram? Label the hydrogen bonds?
2. What is the shape of a DNA molecule? What part of the molecule is the ‘Important” part? (HINT: the part that contains the code?)
3. At the bottom of the sheet, draw and label a piece of RNA that is 4 Nucleotides long.
4. Write 2 things that are different between the RNA molecule and the DNA molecule.

Station 2: Processes

1. Watch the video Amoeba Sisters: DNA Replication (The Cell’s Extreme Team Sport) linked to weebly

<https://www.youtube.com/watch?v=5qSrmeiWsuc>

While you view create a chart of the ENZYMES that are involved in DNA Replication and what function they contribute to the process:

|  |  |
| --- | --- |
| **ENZYME** | **FUNCTION** |
|  |  |

1. Watch the video Teacher’s Pet: Protein Synthesis… linked to weebly

<https://www.youtube.com/watch?v=2zAGAmTkZNY>

As you watch, list the steps of transcription and translation in your own words. Try to condense the steps to 8 or less.

Station 3: Protein Synthesis Analogy

Complete the **Protein Synthesis Analogy Sheet: Construction/ Candy Factory** worksheet and staple it to your loose leaf.

Station 4: Mutations

Complete the Mutation worksheet and staple it to your loose leaf

Station 5: DNA Technology

Re-create and fill in the chart:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Biotechnology Process** | **Description/How it works** | **Example** | **Possible Uses** | **Bioethical Issues associated with it** |
| Recombinant DNA |  |  | GMOs |  |
|  | DNA loaded onto a gel to separate by size and charge |  |  |  |
| Cloning |  |  |  |  |
|  | Sequenced the entire Human Genome using samples for individuals around the world. |  |  |  |
|  |  | Nasal Spray with new gene to cure Cystic Fibrosis |  |  |