**Biology 12AP Modeling Protein Synthesis** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Block: \_\_\_

**Goal:** *I can use models and representations to communicate concepts using scientific language*

**Your Mission:**

* Use the protein synthesis templates to show & communicate how transcription & translation work
* Used coloured paper to create your additional structures, enzymes and other necessary factors
* Explain the process of Protein Synthesis out loud using the **key vocabulary** (from notes & handouts etc)

**Assessment:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **DEVELOPING** | **PROFICIENT** | **Extending** |
| **Process & AnAlyze InfoRamtion**  | A partial understanding is shown. Inconsistent or limited explanation of vocab. Almost all extra structures included | A complete understanding is shownDescriptive use of vocabulary. All extra structures included  | Sophisticated understanding shown that adds connections. Addresses errors in protein synthesis & new Qs or concerns technologies etc |
| **communication** | A moderate ability to share ideas clearly. Some points are hard to follow or understand. Some group members don’t contribute evenly | A solid, consistent ability to share ideas. Audible, clear, smooth visual & verbal communication. Evidence of preparation & practice. Roles are evenly divided | Thoroughly engaging & clear! Well polished presentation that flows authentically. Strong ability to respond to audience Qs & to generate deep conversation questions. WOW could be used as a teaching tool for others! |

**Key vocabulary to consider including:**

The Central Dogma, gene expression, transcription, translation,

transcription factor, promoter, terminator, Guanine Gap, PolyA tail, RNA polymerase, mRNA, complementary bases, initiation, elongation, termination, introns, exons, spliceosome, snrPS, mature mRNA, eukaryotes vs prokaryotes, evolution

initiation, elongation, termination, codon, anticodon, ribosome, A, P , E sites, rRNA, tRNA amino acids, polypeptide, peptide bond, point mutations, frameshift mutations, missense, non-sense mutations, insertions, deletions, mutagens



 **Skill: COMMUNICATING about PROTEIN SYNTHESIS**

|  |  |  |
| --- | --- | --- |
|  **Try this next!**  |  **Criteria** | **You’re Rocking It!** |
|  | **I can…*** **Consistently Make Eye Contact**
* **Speak loudly, clearly & with intonation**
* **Use body language that shows engagement & confidence**
* **Use & show meaning of scientific vocab:**

The central dogma, gene expression, ***transcription:*** transcription factor, promoter, complementary mRNA, terminator, Guanine Gap, PolyA tail, RNA polymerase, initiation, elongation, termination, introns, exons, spliceosome, snrPS, mature mRNA ***translation:*** initiation, elongation, termination, codon, anticodon, ribosome, A, P , E sites, rRNA, tTRNA, amino acids, polypeptide, peptide bond, point mutations, frameshift mutations, missense, non-sense mutations, insertions, deletions mutagens* **Verbalize additional connections & go deep into the topic**
* **Respond to Qs well & facilitate conversation**
 |  |

***Let’s practice building our communicating skills AND giving constructive feedback 😊***

