

Transcription and Translation Multiple Intelligence Lesson Plan

1. Benchmarks:
 - a. B4.2.g. Describe the processes of replication, transcription, and translation and how they relate to each other in molecular biology.
2. Behavior Objective:
 - a. The students will be able to explain the process of transcription and translation with greater than 80% accuracy.
 - b. The students will be able to explain the difference between transcription and translation with greater than 80% accuracy.
3. Anticipatory Set:
 - a. The student will have fill out the multiple intelligence survey.
4. Objective/Purpose:
 - a. “Today, we will create projects to explain the process and the difference between transcription and translation from different representations. You will work with a group of students who share similar learning styles. Together the team will create a project which demonstrates understanding of the transcription and translation. This encourages student participation by forming new connections of the transcription and translation with the real world situations and how it affects the protein synthesis.
5. Input:
 - a. Task Analysis:
 - i. The teacher will review the agenda for the day.
 - ii. The teacher will introduce and review the directions for the “Transcription and Translation” in-class activity
 1. The students will separate into their learning styles group.
 - iii. The students will work in their groups or individually on their project for 30-35 minutes.
 - iv. The groups will present their projects in class.
 - v. The teacher will end the class with an overall discussion on the purpose of the activity.
 - b. Thinking Levels:
 - i. Knowledge: define transcription and translation.
 - ii. Comprehension: explain the process of transcription and translation.
 - iii. Application: demonstrate their understanding of transcription and translation to their neighbors
 - iv. Analysis- compare and contrast their projects about the transcription and translation among their peer groups.
 - v. Synthesis: create examples of representations of the transcription and translation.
 - vi. Evaluation: justify their representation of the transcription and translation.
 - c. Learning Styles:
 - i. Auditory- Students will listen as their peers explain the process of transcription and translation as well as compare and contrast the two

concepts when they present their projects. The students will listen to the story telling of the transcription and translation .

- ii. Bodily/Kinesthetic- Students will perform a skit (role play) about the transcription and translation.
 - iii. Interpersonal- Students have a choice to work independently on the “Mitosis vs. Meiosis” in-class activity.
 - iv. Intrapersonal- Students have a choice to work independently on the “Transcription and Translation” in-class activity.
 - v. Musical- Students will sing or rap their music lyrics explaining the process of transcription and translation as well as compare and contrast the two concepts.
 - vi. Logical/Mathematical- Students will demonstrate their puzzle of the transcription and translation.
 - vii. Naturalistic: Students will demonstrate the natural phenomena of the transcription and translation.
 - viii. Visual- The students will watch their classmates present their projects as well perceiving the spatial representation of the transcription and translation.
- d. Methods and Materials:
- i. Ways of Presenting- small groups, discussions, document camera, projector
 - ii. Materials needed: Poster boards, large sheets of paper, markers
6. Modeling:
- a. The teacher will explain what the students will need to incorporate into their class projects.
 - b. The teacher will provide an example of explaining the difference between transcription and translation through one of the representations, which the students would be able to use.
7. Check for Understanding:
- a. The teacher will ask students to use hand signals within the three groups to check for understanding of the assignment.
 - b. The teacher will ask some of the following open ended questions within the small groups:
 - i. How can you represent/demonstrate transcription and translation from your representation?
 - ii. What natural phenomena are modeled by transcription and translation?
 - iii. Where do we use transcription and translation?
 1. Are there any particular examples? If so, what are they?
 - c. The students will work on the “Transcription and Translation” in-class activity.
 - d. Teacher will circulate to help with difficulties.
8. Independent Practice:
- a. The students have a choice to work on the “Transcription and Translation” in-class activity and present their project to the class.
9. Closure:
- a. After presenting the group projects, bring the class back together to for a class discussion and reflection on what they learned today about mitosis and meiosis.

- i. This will allow the students to reflect what they learned today.
- b. The student's should self-assess their own understandings