

Do you know the master programmer?

Name _____ Period ____ Teacher _____

Introduction:

In this activity, you will be creating models of various genetic compounds. You will achieve this by using simple materials; various candies, marshmallows and toothpicks. You will apply the knowledge you have regarding the compounds to create accurate models. After completion of the activity, you will be allowed to eat the unused candy!

Objective: Why are you doing this activity? _____

Procedure:

1. Construct a DNA model using different candies for each different component of the molecule connecting them with pieces of toothpicks.
2. Create a legend, i.e., a key, for the various components of the models.
3. Separate the two DNA strands and replicate them by attaching the proper Nucleic bases (base pairing rule A-T, G-C and Dexoyribose sugar, hydrogen bonds)
4. Using one strand of the DNA molecule as a template, construct a matching strand of RNA (base pairing rule A-U, G-C and ribose sugar).
5. Using the RNA strand as the template, assemble the proper amino acids to create a portion of the protein molecule.

Conclusion: Summarize what you have learned from this activity.

NUCLEIC ACIDS CHECKLIST

Molecule	Proper bases	Proper sugars	Proper bonds	Legend
DNA				
RNA				
tRNA				
protein				