

Origami DNA

Summary

Students will use paper models of DNA, RNA and amino acids to form a protein chain.

Main Core Tie

Science - Biology

[Standard 4 Objective 3](#)

Time Frame

1 class periods of 90 minutes each

Group Size

Small Groups

Materials

- [cutouts handout](#)
(attached)
 - [correct sequences overhead](#)
(attached)
 - [student worksheet](#)
(attached)
- scissors
1.5 meter butcher paper
markers
paper clips

Instructional Procedures

Gather the materials and decide how big the butcher paper can be. It will depend on the size of you tables or pushed together desks.

Read the introduction with students and if you'd like, give them a piece of scratch paper and see how they do on "fold the paper twice". You will probably have many "mutations" in the class. Go over the instructions. This is a difficult activity and they will need to be cautioned to read the instructions again as they proceed.

Students should cut out the DNA, tRNA-aminoacids pairs and the mRNA. They do not need to cut out the base pairs. They should tape the DNA and mRNA into strands of 27 base pairs.

Assign students to groups of 3-4. Each group member should have a different DNA code. Give students time to label the two sides of their DNA.

Help students draw the "cells" on the butcher paper. You may wish have them made ahead of time.

When students are ready, they should place their DNA in the nucleus to make the mRNA then take it to the ribosomes to make the protein.

Make an overhead of the correct sequence for each group. (see below) Have students check their work.

Have the winners from each group stand and describe how they worked so quickly.

Allow students time to finish the analysis questions and write their conclusions.

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)