

Angeles City Science High School
Science 10

Name: Paul Gerald D. Pare

Section: 10-Hawking

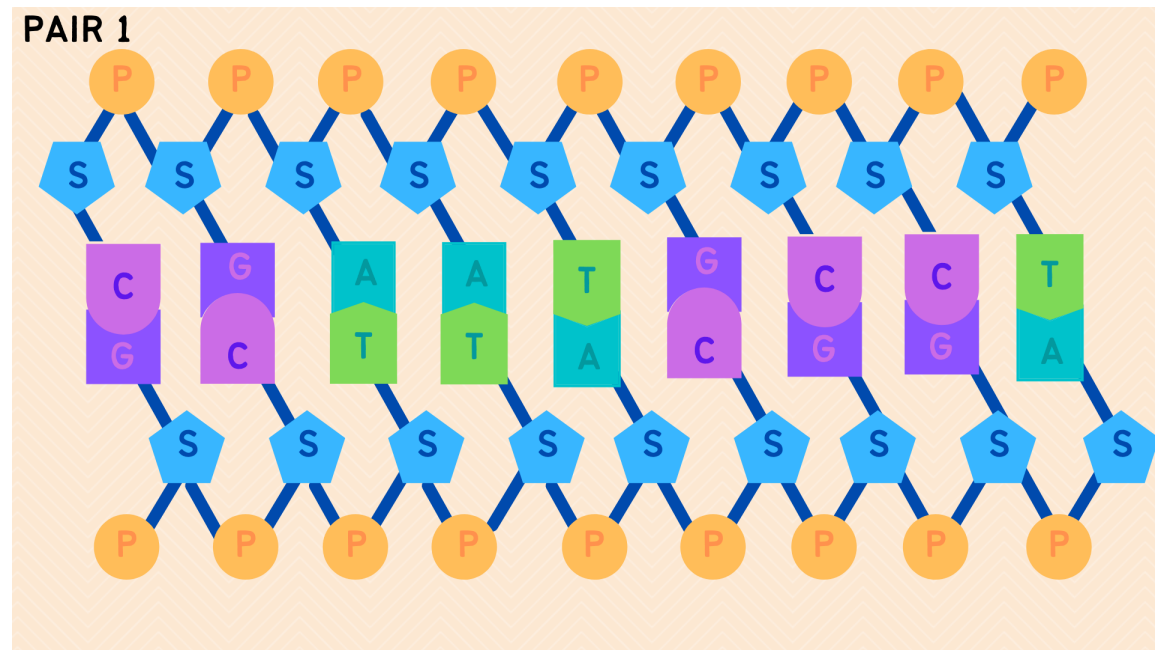
Activity 3: DNA makes DNA

Objective: Make a model of a DNA template to determine the sequences of bases in the new DNA strand.

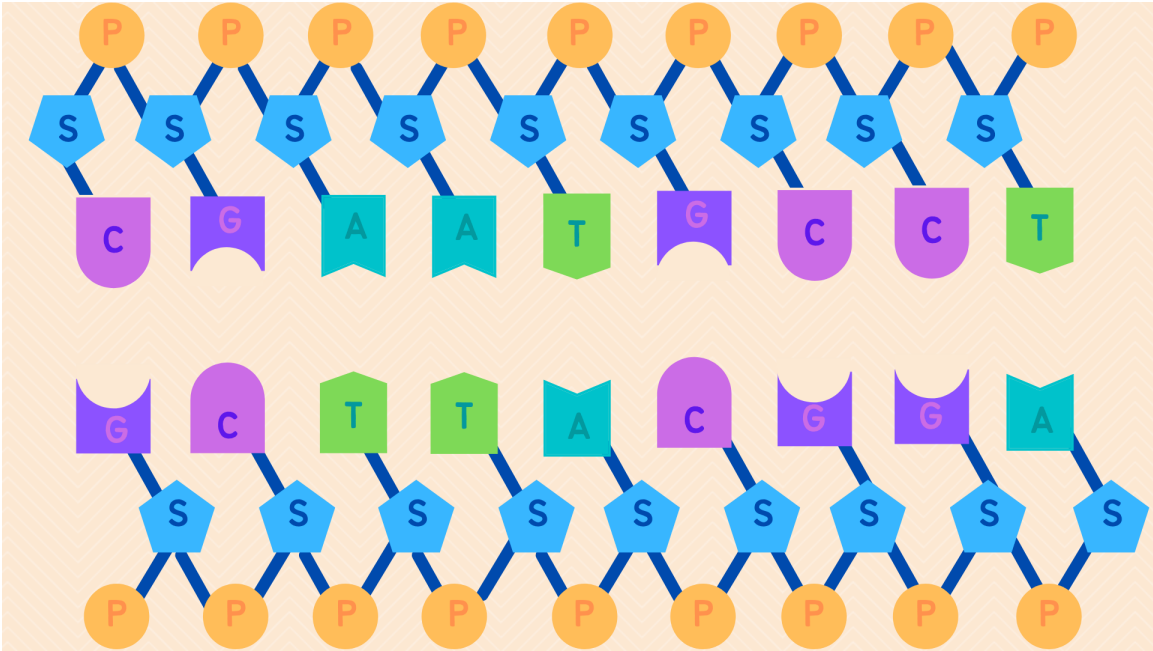
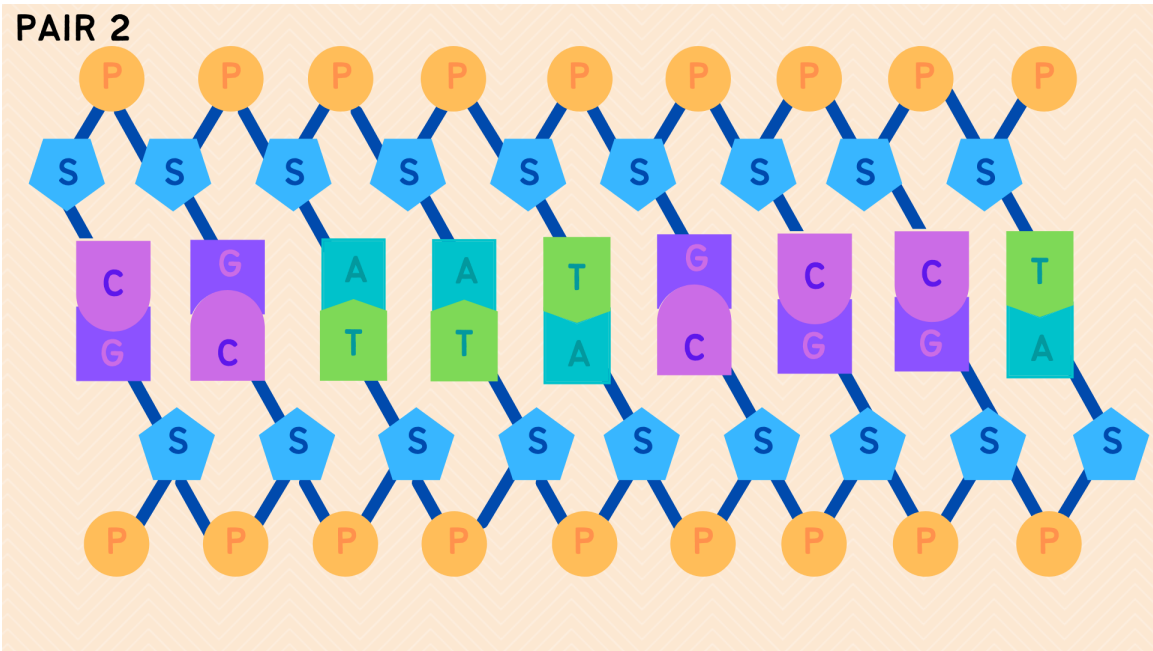
Materials: For each group: DNA patterns (see preparation), Paper, Pencil, Scissors

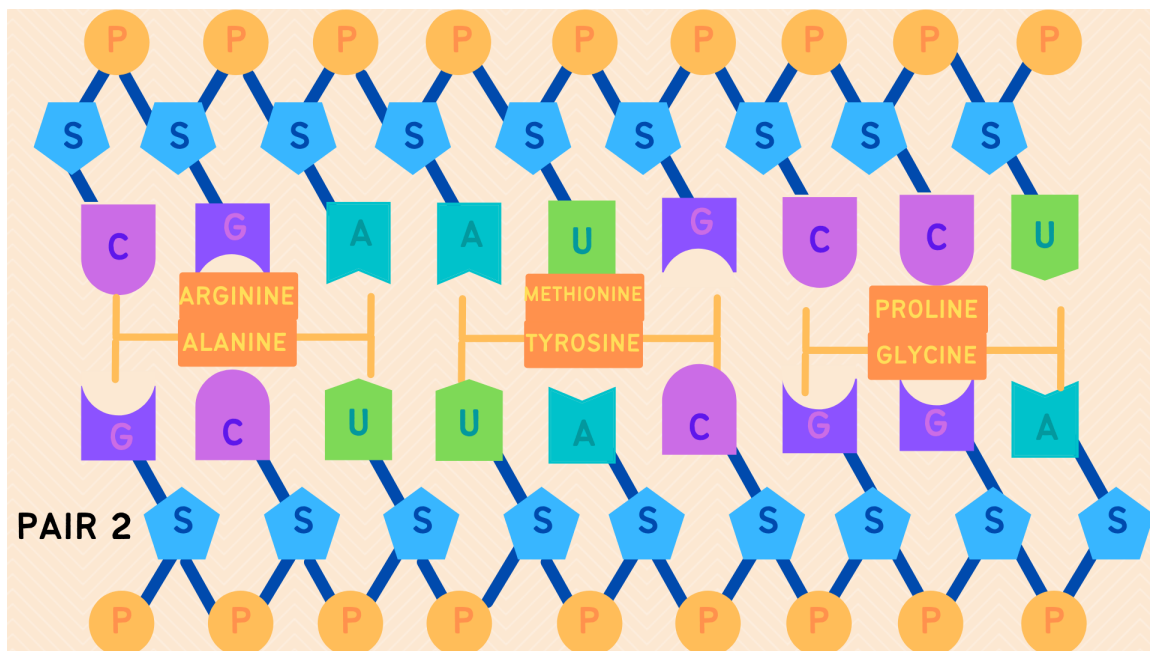
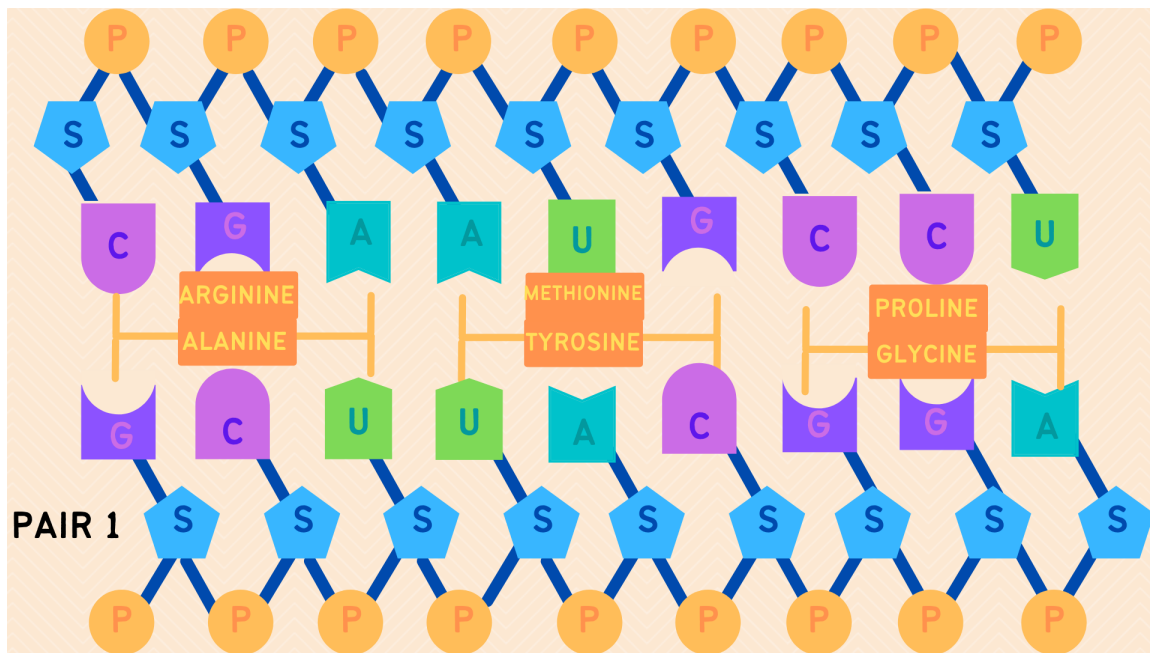
Preparation: Create and duplicate sample patterns of the following parts of the DNA molecule: the four bases (A, C, T, G), a sugar (S), and a phosphate (P).

Directions 1. Ask students to use the DNA template to trace and cut out 16 each of sugar and phosphate, and 8 of each base. 2. Have students build a model of a segment of a DNA molecule. The segment should contain 4 base "rungs". Any bases can be used for the sequence, as long as the appropriate complementary bases are used for the pairs. 3. Once students have made their models, ask them to separate the models down the middle so that there are now two single strands of DNA. 4. Have students create new double-stranded DNA by matching complementary nucleotides to the bases on each single strand. 5. Let the students make a series of codon and identify the proteins form.



PAIR 2





Discussion Questions

1. Compare the two new strands of DNA. Are they the same or different? Why?

They are the same because the same amino acids are used for both of the pairs and so with their complementary amino acids.

2. How does the structure of DNA molecule help account for the great variety of life that exists on Earth?

The DNA structure unlike other parts of our system, is very flexible, can regenerate, and makes everyone unique in some sort of ways even in identical twins. With the idea of heredity from both, from one or the other one's DNA of our parents, this makes everyone unique. Alleles and genes play an important role in determining someone's body feature such as eye color, color of our skin, and etc.