

DNA MODEL STEM ACTIVITY

MATERIALS

- Toothpicks
- multi-colored gumdrops
- paper or plastic plate, to work on so the table stays clean from loose sugar
- blank sheet of paper/pencil/markers for coding notes and sketching (optional)

PROCEDURE

1. Create Color Key! Assign the four letters A, T, G and C a gum drop color!



2. Start building! Attach one gum drop to each end of the toothpick.

Remember the pairing rules

A with T

C with G



3. Once you have a few rows, connect each set with more toothpicks and twist when you're down to create the double helix.



Pictures from: <https://www.youtube.com/watch?v=GI0Nmm3znBA&feature=youtu.be>

LEARNING OUTCOMES

- Students reinforce their knowledge that DNA is the genetic material for all living things
- Students become familiar with creating and building models

WHAT THIS MEANS

DNA is the the genetic material for all living things. DNA in humans determines things such as eye color, hair color, or even how the lungs work.

Students model DNA Structures using toothpicks and gumdrops that represent the four biochemicals (adenine, thiamine, guanine, and cytosine) that pair with each other in a specific pattern, making a double helix.

GLOSSARY

- Deoxyribonucleic acid: abbreviated DNA
- Model: (noun)A representation of something for imitation, comparison or analysis, sometimes on a different scale
- (A): purine adenine
- (T): pyrimidine thymine
- (C): pyrimidine cytosine
- (G): purine guanine

RELATED VIDEOS

English

- <https://youtu.be/GI0Nmm3znBA>

Spanish

- <https://youtu.be/NcsKWG2P7Q4>

Source: https://www.teachengineering.org/activities/view/cub_biomed_lesson09_activity2