

MAKE A 3D MODEL OF THE DNA DOUBLE HELIX

The genetic information for each organism is held in DNA, a macromolecule found in the nucleus of almost every cell. DNA is made up of two strands created by thousands of nucleotides that are twisted in the shape of a double helix. In this project, you will build and analyze the structure of the DNA ladder.

- **Cut the red and black licorice sticks lengthwise.** Use the licorice and string to create two sides of the DNA ladder. What does each color represent? What pattern did you create for the ladder sides?
- **Sort the jelly beans to represent the four different bases.** Which colors will pair with each other as you build your ladder? Why?
- **Using marshmallows as hydrogen bonds and the jelly beans as bases, build the rungs of your DNA ladder with toothpicks.** What does each rung look like? What patterns do you see?
- **Attach the ladder rungs to the licorice sides of your ladder.** Where do you attach the rungs? After you have built the ladder, what do you need to do to complete your model of a DNA double helix?

To investigate more, compare your DNA ladder to your classmates' ladders. How are they similar? How are they different?

◀ Inquire & Investigate

Ideas for Supplies ▼

- red and black hollow licorice sticks
- scissors
- string
- jelly beans (at least four different colors)
- small marshmallows
- toothpicks

