$\qquad$ Period: $\qquad$ Date: $\qquad$

## WHAT ARE THE HEIGHTS OF THE STUDENTS IN MY BIOLOGY CLASS?

## INTRODUCTION

Polygenic inheritance occurs when many genes interact to produce a single trait. The genes may be on the same chromosome or on different chromosomes, and each gene may have two or more alleles. Each allele contributes a small, but equal, portion to the trait being expressed. The result is that the phenotypes usually show a continuous range of variability from the minimum value of the trait to the maximum value.
In humans, height is controlled for more than two genes. In this activity, you are going to measure the height of the students in the class in centimeters, and record the information on a data table. Then you are going to make a graph with you results. If it is true that more than two genes control height in humans, then your graph should have the shape of a bell.

## MATERIALS

Meter sticks

## INSTRUCTIONS

1. Measure the height of the students in centimeters.
2. Record the information in the data table.
3. Make a graph with the information gathered. Arrange by shortest to tallest person.
Data Table: Height of Students in my Biology Class

| Name of students | Height in cm. | Name of students | Height in <br> cm. |
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## Questions:

1. If height was determined by complete dominance then how many total heights could there be?
2. If height was determined by incomplete dominance then how many different heights would there be?
3. What does the prefix poly mean?
4. What do you think the suffix -genic refers to?
5. What is a polygenic trait?
6. Polygenic traits show a wide variety of phenotypes. Name two other polygenic traits.
