

#### 4 Thinking about what you observed

- a. For each trait, which form was most common, Form 1 or Form 2?
- b. Why do you think one form is more common than the other?
- c. Do you think your classroom population is typical of a larger population such as your entire school or community? Explain your answer.
- d. Traits are controlled by factors called **genes**. For each trait listed in Table 1, you get one gene from your mother and one gene from your father. For each trait, there is a dominant form and a recessive form. The **dominant** gene masks the effect of the **recessive** gene for the trait. Based on your class data, which form of each trait do you think is the dominant form? Explain your answer.
- e. The dominant and recessive forms for each trait you studied are listed below. Was the recessive form of any trait more frequent than the dominant form? Make a hypothesis that explains this result.

Trait	Dominant form	Recessive form
A. Earlobe	Free	Attached
B. Dimples	Dimples present	No dimples
C. Chin	Cleft present	No cleft
D. Hairline	Widow's peak	Straight
E. Finger hair	Finger hair present	No finger hair
F. Thumb	Straight thumb	Hitchhiker's thumb
G. PTC tasting	Taster	Non-taster

#### 5 Exploring on your own

- a. Pick any trait (except for PTC tasting) and gather data about the trait from a larger population. Examples of a larger population include your school, neighborhood, and place of worship. Follow these steps:
  1. Make a hypothesis about what you will observe.
  2. Collect data from as many people as you can and record your results in a data table.
  3. Graph your data.
  4. Present your results to the class for discussion.
- b. Do you think people who are related to each other would show more similarity among the seven traits than unrelated people? Design an experiment to test your hypothesis.