

Tracking Down Traits

Description

During this activity, students will investigate human genetic traits.

Time Frame

1 lesson (45 minutes)

Correlation to Texas Essential Knowledge and Skills

During this activity, students will be exposed to the following Texas Essential Knowledge and Skills:

Note: Some TEKS statements below end with a ; or *and* and nothing thereafter—this indicates that further TEKS statements follow but are not included here.

(6.11) Science concepts. The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to:

- (A) identify some changes in traits that can occur over several generations through natural occurrence and selective breeding;

Note: The TEKS listed here are the main content TEKS for this activity; however, this activity may also cover additional content and process skills included in other TEKS.

Materials

Tracking Down Traits data chart (included at the end of this activity)

Background Information for the Teacher

During this activity, students will be looking at human traits. Most of these traits have been passed down for generations within the human population. Students may see that only a few students in the class have traits that are not so common. This activity should emphasize some traits can change over generations through natural occurrence.

Advance Preparation

Make a copy of the Tracking Down Traits data chart for each student and a transparency of the chart for the teacher.

Procedures

1. Begin to introduce vocabulary by asking students to list the traits that all sixth-graders share. These traits will be common, easy-to-observe traits

found within the human population. Write these traits on the chalkboard or on chart paper for easy viewing.

2. Indicate to students that in addition to thinking about ways sixth-graders are alike, they should examine some ways in which sixth-graders are different or unique as individuals.
3. Give a copy of the Tracking Down Traits data chart to each student. Ask students to sit next to partners.
4. Put the transparency of the Tracking Down Traits data chart on an overhead projector. Walk students through the traits on the data chart as the partners look at each other's traits. For each trait, ask for a show of hands from the students who exhibit the trait and have each student record that number on their data chart.

Note: It is important to discuss respecting other people's feelings by not making personal or negative comments about traits.

5. Have each student illustrate the information from the data chart in a graph.
6. Have each student look at the graph and write a paragraph explaining the distribution of the traits in their classroom (such as the number of brown-eyed students compared to the number of blue-eyed students).

Formative Assessment: Check the students' graphs for correct labeling. Monitor student responses to the following questions:

1. Which traits were easy to locate?

[the visible traits]

What made locating these traits easy?

[You could see if the trait was present. Lots of students had the trait.]

2. Which traits were challenging to locate?

[the traits not readily visible]

What made locating these traits challenging?

[You had to ask to find out if the trait was present. Not many students—if any—had the trait.]

3. Were there any traits you were unable to locate?

[Student answers will vary.]

What might be the reason for not locating these traits?

[The traits were not visible. The traits were not present in the group.]

Tracking Down Traits

Data Chart

Trait	Number of Students Exhibiting Trait
Curly hair	
Straight hair	
Brown eyes	
Blue eyes	
Green eyes	
Brown hair	
Blond hair	
Red hair	
Many freckles	
Some freckles	
No freckles	
Right-handed	
Left-handed	
Can write equally well with both hands	
Dimples	
No dimples	