

My Family's Traits

Overview

In this exercise, students will look at some traits found in humans. These traits have been chosen because the pattern of their inheritance is similar to the examples the students have been working with in the previous exercises.

Textbook References

McDougal Littell

Not addressed directly in text, but mentioned in a few places in Chapters 4 and 5.

Prentice Hall

Chapter 15, Section 1 pp. 564-570, Human Inheritance

Materials

*Materials to be supplied by the teacher or the students are marked with an asterisk.

Materials for the whole class

- 1 transparency of *My Family's Traits—Summary Sheet*

Materials for individual students

- 1 photocopy of *My Family's Traits*, the student sheet

Procedure

- After learning about traits in the preceding lessons, we are now going to look at some real human traits. Hand each student a copy of *My Family's Traits* and explain that these are real human traits. They should fill in the first column (me) based on themselves. Students may need to work with a partner to help identify which traits they have.
- When the students have finished, collect the data from the whole class for each trait by a show of hands. Record these data on the overhead transparency, and then have the class determine the class percentages for each trait.
- Have the class share any interesting findings. For example, some classes will see that more people show the recessive form than the dominant form for certain traits.
- As a homework assignment, ask the students to finish filling in their sheets to see which traits are present in their families. Have them do this for their mother, father, and their siblings. Explain that to see traits being passed from parent to child they will need to do this with their biological mother and father and siblings from the same parents. Step-parents, step-siblings, and adopted children are not related biologically. Half-siblings can be interesting but confusing. Be sensitive

to students who may not know or have access to their biological parents.

- The next day, have students share any interesting findings in their family traits. For example, a student with parents who can both curl their tongues might not be able to curl his or her own tongues if the parents are heterozygous and the student is homozygous recessive.

Reflection/Discussion

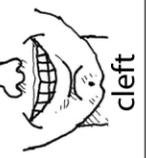
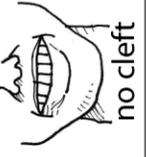
Data from multiple classes can be compared and/or combined for a larger sample size.

- Were any individual classes different for some traits compared to the total of all the classes?
- Were the dominant traits always more common? Or were some recessive traits more common?

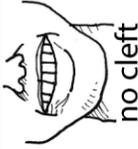
My Family's Traits

Student name _____

write a **+** or a **-** in the boxes below
indicating your family's traits

trait	dominant phenotype (+)	recessive phenotype (-)	me	mom	dad	sibling 1	sibling 2	sibling 3
chin	 cleft	 no cleft						
eyelashes	 long	 short						
dimples	 present	 absent						
earlobes	 free	 attached						
freckles	 present	 absent						
tongue rolling	 yes	 no						
thumb	 straight	 hitch-hiker's thumb						
interlaced fingers	 left over right	 right over left						

My Family's Traits -- Summary Sheet

trait	dominant phenotype (+)	recessive phenotype (-)	# in class dominant	# in class recessive	total # of students	% dominant	% recessive
chin	 cleft	 no cleft					
eyelashes	 long	 short					
dimples	 present	 absent					
earlobes	 free	 attached					
freckles	 present	 absent					
tongue rolling	 yes	 no					
thumb	 straight	 hitch-hiker's thumb					
interlaced fingers	 left over right	 right over left					

