Name _____ Date _____ Per. _____ Sci. 7

Observing Human Traits

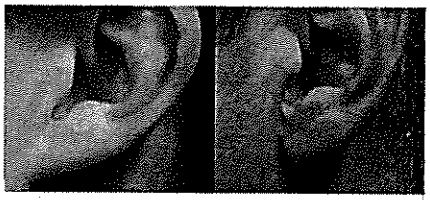
Traits are physical characteristics you inherit from your parents. In this investigation, you will take an inventory of your observable traits and compare these to the observable traits of your classmates. Traits are controlled by factors called genes. For each trait you will observe today, you get one allele from your mother and one allele from your father. For each trait, there is a dominant allele and a recessive allele. If you have one dominant allele it will always mask the recessive allele.

Part A: Observing your own traits

- Working with a partner, observe which form you have for each trait and circle your form in the table below.

Trait	Dominant Form	Recessive Form
1. Earlobe	Unattached EE/Ee	Attached ee
2. Hairline	Widows peak WW/Ww	Straight Hairline ww
3. Finger Hair on mid-joint*	Present JJ/Jj	Absent jj
4. Chin	Cleft CC/Cc	no cleft cc
5. Dimples	Present DD/Dd	Absent dd
6. Tongue Roller	Yes TT/Tt	No tt
7. Number of Fingers/Toes	6 NN/Nn	5 nn
8. Hitchhikers Thumb	Straight Thumb HH/Hh	Hitchhikers thumb hh
9. Eye color	Not blue BB/Bb	Blue bb
10. Eyelashes	Long LL/Ll	Short ll
11. Eye shape	Almond RR/Rr	Round rr
12. Freckles	Freckles FF/Ff	No Freckles ff
13. Handedness	Right-handed HH/Hh	Left-handed hh
14. Arm cross	Right over left AA/Aa	Left over right aa
15. Thumb cross*	Left over Right TT/Tt	Right over left tt

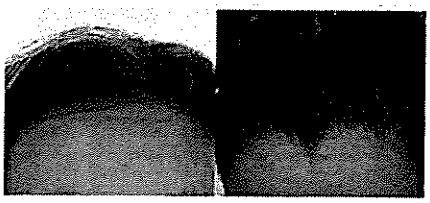
Earlobe



Chin

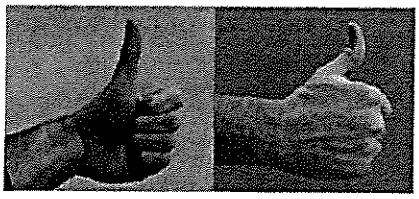
Cleft No cleft

Hairline



Straight Widow's

Thumb



Straight Hitchhiker's

*Finger hair: even if you have only one hair on any of your mid-digits, you have finger hair.
*Thumb cross: Grasp your hands together with your fingers interdigitated and determine which thumb is on top.

Part B: Class Data

- Record the total number of students with the dominant form of each trait and the recessive from of each trait in Table 2.

Class data table for observable traits

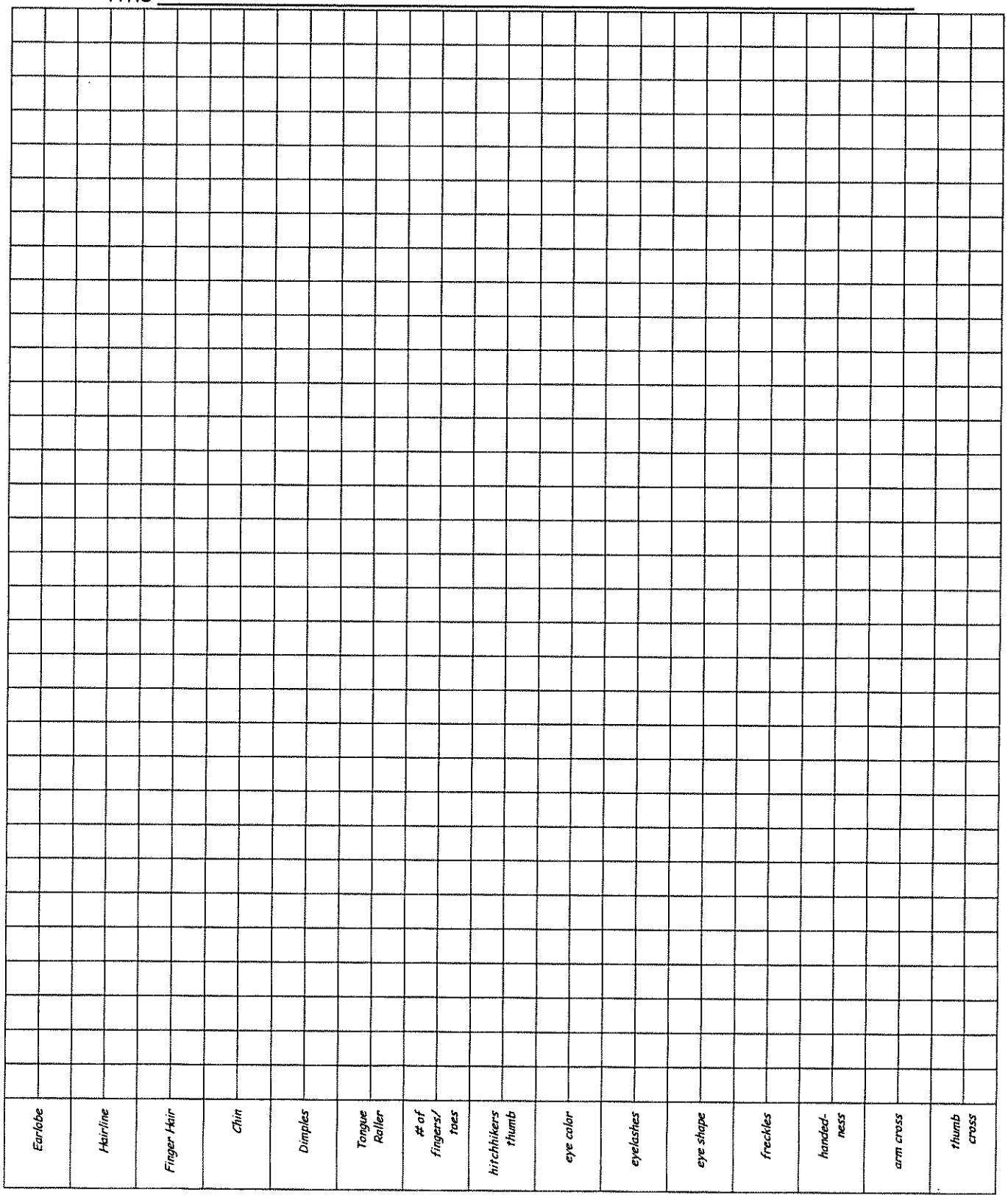
Trait	Number of students with dominant trait	Number of students with recessive trait
1. Earlobe		
2. Hairline		
3. Finger Hair on mid-joint		
4. Chin		
5. Dimples		
6. Tongue Roller		
7. Number of Fingers/Toes		
8. Hitchhikers Thumb		
9. Eye color		
10. Eyelashes		
11. Eye shape		
12. Freckles		
13. Handedness		
14. Arm cross		
15. Thumb cross		

Total number of students in class: _____

Part C: Graphing

- Make a stacked bar graph of your class data. Put traits on the x-axis and number of students on the y-axis. Your graph will be a stacked bar graph with number of students with the dominant trait on the bottom and number of students with the recessive trait on top. The two numbers should add up to the total number of students in the class.
- Make sure to give your graph a title and label your x- and y- axis.

Title _____



Part D: Stop and Think Questions

1. Overall, was the dominant or recessive form more common? Why do you think that is?

2. Was the recessive form of any trait more frequent than the dominant form? Make a hypothesis that explains this result.

3. Do you think your classroom population is typical of a larger population such as your entire school or community? Explain your answer.

4. Do you think people who are related to each other would show more similarity among traits than unrelated people? What about people living in one area compared to people living in another area? Explain your answer.