

Name: \_\_\_\_\_ Block: \_\_\_\_\_ Date: \_\_\_\_\_

## **Introduction to Heredity**

1. What are chromosomes (definition on blog):

Click in the link [Tour of Basic Genetics](#) and select "What is s Heredity?"

2. How many chromosomes do humans have?

3. How many chromosomes come from the biological mother?

4. How many chromosomes come from the biological father?

5. How are sperm and egg cells different from most other cells in our body?

6. Why aren't two children from the same parents exactly the same?

Go back to the 6th slide. Notice on the 23rd chromosome instead of a number it says "x" or "y".

7. What are the two letters for the father?

8. What are the two letters for the mother?

9. Notice that the baby's chromosomes are XX - what can you infer about this?

10. What sex do the following chromosome pairs result in?

XX =

XY =

11. Can the mother pass on a Y chromosome? Why or why not?

Go back to Ms Lea's blog and Watch the video: What Are Traits?

12. What are 3 examples of traits that are easy to see?

13. What are 3 examples of traits that are not easy to see?

14. What are examples of traits that are inherited?

15. What are examples of traits that are shaped by the environment?

16. If your parents are tall, does that mean you are likely to be tall? Explain.

17. Your thoughts, imagine a family where the mother is right handed and the father is left handed. If they have a child, do you think the child will be right handed or left handed? Explain your thinking?

18. If the parents have two more children, will those children be right handed or left handed? Explain your thinking.

## OBSERVABLE TRAITS

Some inherited traits are *dominant traits* while some are *recessive traits*. A **dominant trait** is a trait that will be seen if even just one parent passes on the gene for it. For example, if a child receives a gene for right handedness from their mother and left handedness from their father, the child will be right handed because it is the dominant trait. A **recessive trait** is a trait that can only be seen when both parents pass on a gene for it. For example, a child will only be left handed if they receive a gene for left handedness from their mother as well as from their father because left handedness is a recessive trait.

There is a slideshow on my blog which shows examples of these dominant traits. Use it to complete this self-check of dominant traits.

<b>Dominate Traits</b>	<b>YES</b>	<b>NO</b>
Widow's Peak (W)		
Unattached Earlobe (E)		
Tongue Rolling (R)		
Cleft Chin (C)		
Dimples (D)		
Right Handedness (H)		
Freckles (F)		
Naturally Curly Hair (N)		

Other observations/notes:

Why do you think some people in the class have these traits while others do not?

# Baby Mice



Seif's pet mouse had babies. Five of the babies were black and two were white. The father mouse was black. The mother mouse was white. Seif and his friends wondered why the mice were different colors. These were their ideas:

**Jerome:** Baby mice inherit more traits from their fathers than their mothers.

**Alexa:** The baby mice got half their traits from their father and half from their mother.

**June:** Male traits are stronger than female traits.

**Seif:** Black mice have more traits than white mice.

**Fiona:** The black baby mice are probably male and the white baby mice are probably female.

**Lydia:** Parent's traits like fur color don't matter—nature decides what something will look like.

**Billy:** Blood type determines what traits babies will have.

Which friend do you most agree with and why? Explain your thinking.

---

---

---

---

---

---

---