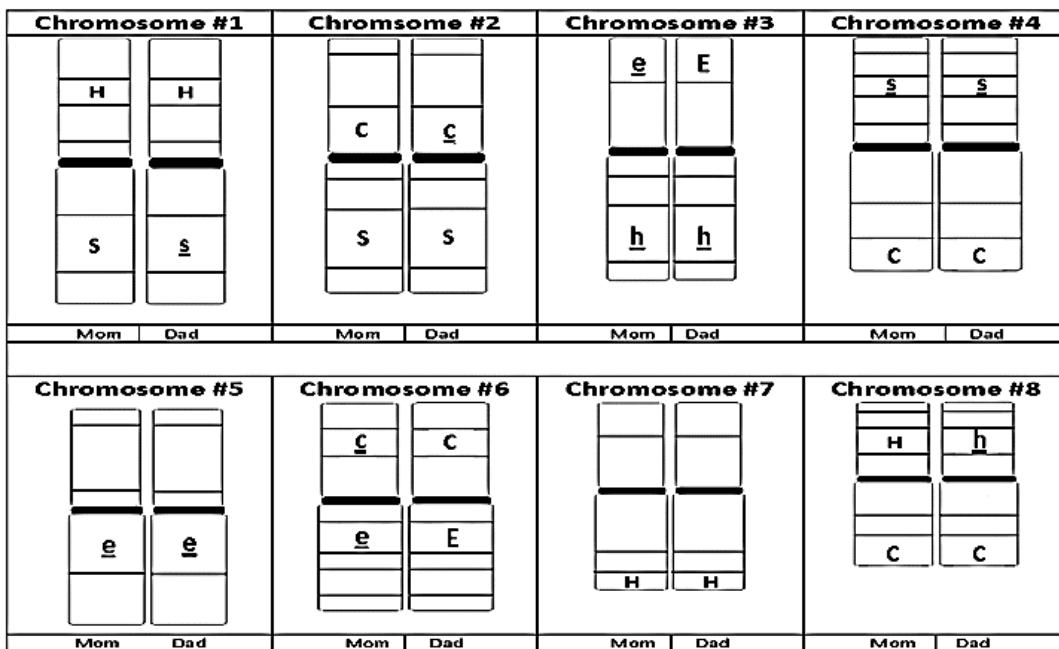


## Polygenic Traits

Below are the first 8 chromosomes of a human. You will notice the chromosomes have a banded appearance. Each band is the location (locus) of a gene. When a trait is polygenic, that means that the gene is found on more than one chromosome. A capital letter represents a dominate allele, while a lowercase, underlined allele represents a recessive allele. Answer the questions below regarding polygenic traits.



Polygenic Traits Chart

Height Height is represented by the letter H	Skin Color Skin color is represented by the letter S	Eye Color Eye color is represented by the letter E	Hair Color Hair color is represented by the letter C
$HHHHHHHH = 6'4"$ $HHHHHHHH h = 6'2"$ $HHHHHHHH hh = 6'0"$ $HHHHHHHH hhh = 5'10"$ $HHHHHHHHhhh = 5'8"$ $HHHHHHHHhhhh = 5'6"$ $HHHHHHHHhhh = 5'4"$ $HHHHHHHHhhhh = 5'2"$ $HHHHHHHHhhhhh = 5'0"$	$SSSSSSSS = \text{Very Very Dark}$ $SSSSSSSs = \text{Very Dark}$ $SSSSSss = \text{Dark}$ $SSSSSSs = \text{Medium}$ $SSSSSS = \text{Light}$ $SSSSSS = \text{Very Light}$ $SSSSSS = \text{Very Very Light}$	$EEEEEE = \text{Dark Brown}$ $EEEEEEe = \text{Light Brown}$ $EEEEee = \text{Hazel}$ $EEEeee = \text{Dark Green}$ $EEeeee = \text{Light Green}$ $Eeeeeee = \text{Dark Blue}$ $eeeeeee = \text{Light Blue}$	$CCCCCCCC = \text{Black}$ $CCCCCCCc = \text{Dark Brown}$ $CCCCCCCcc = \text{Medium Brown}$ $CCCCCCccc = \text{Light Brown}$ $CCCCcccc = \text{Red}$ $CCCcccccc = \text{Strawberry Blonde}$ $CCcccccc = \text{Dark Blonde}$ $Cccccccccc = \text{Medium Blonde}$ $ccccccccc = \text{Very Blonde}$

Glue this page directly into your notebook & then glue Polygenic Traits Header here

#### Height

1. Looking at the Chromosome Chart, anytime you see an allele for height, color it **BLUE**
2. On which chromosomes is the gene for height carried on? \_\_\_\_\_
3. How many dominant alleles for height does this individual have? \_\_\_\_\_ Recessive? \_\_\_\_\_
4. How many of the dominant alleles came from the individual's mom? \_\_\_\_\_ From dad? \_\_\_\_\_
5. Using the Polygenic Traits Chart, what is the overall height of this individual? \_\_\_\_\_

#### Skin Color

6. Looking at the Chromosome Chart, anytime you see an allele for skin color, color it **RED**.
7. On which chromosomes is the gene for skin color carried on? \_\_\_\_\_
8. How many dominant alleles for skin color does this individual have? \_\_\_\_\_ Recessive? \_\_\_\_\_
9. How many of the dominant alleles came from the individual's mom? \_\_\_\_\_ From dad? \_\_\_\_\_
10. Using the Polygenic Traits Chart, what is the overall skin color of this individual? \_\_\_\_\_

#### Eye Color

11. Looking at the Chromosome Chart, anytime you see an allele for eye color, color it **GREEN**.
12. On which chromosomes is the gene for eye color carried on? \_\_\_\_\_
13. How many dominant alleles for eye color does this individual have? \_\_\_\_\_ Recessive? \_\_\_\_\_
14. How many of the dominant alleles came from the individual's mom? \_\_\_\_\_ From dad? \_\_\_\_\_
15. Using the Polygenic Traits Chart, what is the overall eye color of this individual? \_\_\_\_\_

#### Hair Color

16. Looking at the Chromosome Chart, anytime you see an allele for hair color, color it **YELLOW**.
17. On which chromosomes is the gene for hair color carried on? \_\_\_\_\_
18. How many dominant alleles for hair color does this individual have? \_\_\_\_\_ Recessive? \_\_\_\_\_
19. How many of the dominant alleles came from the individual's mom? \_\_\_\_\_ From dad? \_\_\_\_\_
20. Using the Polygenic Traits Chart, what is the overall hair color of this individual? \_\_\_\_\_

Draw your individual  
according to the  
trait chart above!

