Name:_____ Period:_____ Date:_____

Genetics Review Stations

Station 1: Genotype Word Sort

Teacher Initials: _____

- STEP ONE: Arrange the definition and example strips next to the word list.
- STEP TWO: Once you have the words in the correct order, use them to answer the following HSA questions. Don't forget to use RUBIES!

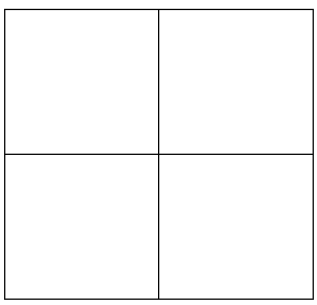
1. **Which of these combinations results in the expression of a recessive trait?**
   a. Two dominant alleles (Ex. _____)
   b. A dominant sex-linked allele and a Y chromosome (Ex. _____)
   c. Two recessive alleles (Ex. _____)
   d. A dominant allele and a recessive trait (Ex. _____)
2. **Which of these is an example of a heterozygous genotype?**
   a. RR
   b. Wrinkled
   c. Rr
   d. Smooth
3. **Smooth peas are dominant to wrinkled peas. Which of the following genotypes will result in a wrinkled pea?**
   a. RR
   b. Rr
   c. rr
   d. rR

Station 2: Punnett Squares

DIRECTIONS:

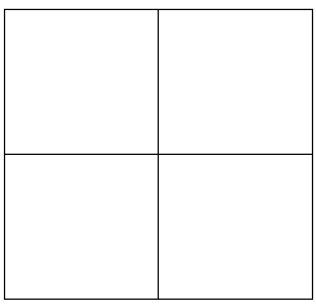
1. Choose 2 Punnett Squares situations. Read the scenario and fill in the Punnett Squares below based on the information you collect.
2. Once you have completed your Punnett Squares, fill in the genotypic ratio (# BB: # Bb: # bb) and phenotypic ratio (# dominant: # recessive).

Dominant allele ( ) = _____
Recessive allele ( ) = _____



Genotypic Ratio _____ : _____ : _____
Phenotypic Ratio _____ : _____

Dominant allele ( ) = _____
Recessive allele ( ) = _____



Genotypic Ratio _____ : _____ : _____
Phenotypic Ratio _____ : _____

Name:_____ Period:_____ Date:_____

Station 3: Chromosome Counting Grab Bag

DIRECTIONS:

1. Choose 5 chromosome questions from the basket and write down the question numbers below.
2. Write down the key word from the question and answer the question.

#_____ Key word (s) from question: _____
How many chromosomes? _____

#_____ Key word (s) from question: _____
How many chromosomes? _____

#_____ Key word (s) from question: _____
How many chromosomes? _____

#_____ Key word (s) from question: _____
How many chromosomes? _____

#_____ Key word (s) from question: _____
How many chromosomes? _____

Station 4: Sex-Linked Traits

DIRECTIONS: Read the information about color-blindness at your table, then answer the questions below.

1. X^BX^b x X^BY

a. What percentage of the male children are colorblind? _____

b. What percentage of the female children are colorblind? _____

2. A normal-sighted woman (whose father was colorblind) marries a colorblind man. _____ X _____

a. What is the probability that they will have a **son** who is colorblind? _____

b. What is the probability that they will have a colorblind **daughter**? _____

Name:_____ Period:_____ Date:_____

Station 5: Analyzing Pedigrees

DIRECTIONS: Use the pedigrees at your table to answer the questions below.

1. First we need to analyze if the pedigrees are showing a DOMINANT or RECESSIVE trait?
    a. Pedigree A: _____ How do you know?

    b. Pedigree B: _____ How do you know?

    c. Pedigree C: _____ How do you know?

2. Next, are the pedigrees showing AUTOSOMAL or SEX-LINKED traits?
    a. Pedigree A: _____ How do you know?

    b. Pedigree B: _____ How do you know?

    c. Pedigree C: _____ How do you know?

3. Choose a pedigree A, B, or C (circle your choice). Answer the questions below:
    a. How many individuals are affected with the trait? _____

    b. Name one individual who is affected. (Ex. III.8) _____

    c. What is the genotype of this person? (HINT: Is your trait dominant or recessive? Is it autosomal or sex-linked?) _____

Station 6: Genetics Word Walk

DIRECTIONS:

1. Pick a word to start. Write down that word next to number 1 on your list below.
2. Look inside for the clue/definition of your NEXT word. Figure out what word it is describing.
3. Move to the next word and write it down next to number 2.
4. Keep following the words and definitions to the next clue. You should end up back at your original word with 20 words on your page.

1.	8.	15.
2.	9.	16.
3.	10.	17.
4.	11.	18.
5.	12.	19.
6.	13.	20.
7.	14.	

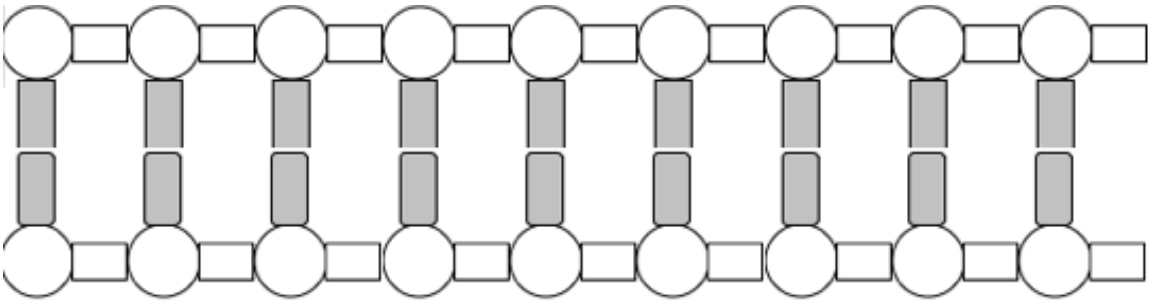
Teacher Initials: _____

Name:_____ Period:_____ Date:_____

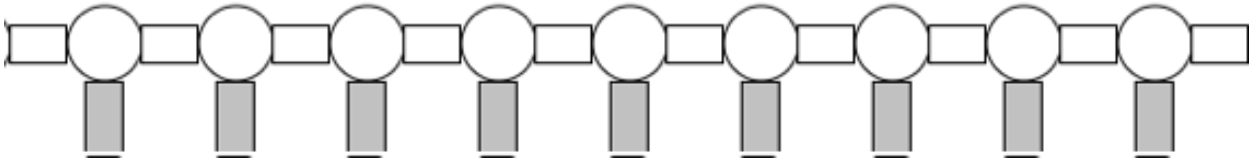
Station 7: Modeling Protein Synthesis

DIRECTIONS:

1. Choose a DNA strip. Write the bases below:



2. TRANSCRIBE: Match up the mRNA bases to the **bold side** of your DNA strip.



3. TRANSLATE: Move your mRNA to the ribosome and match up your tRNA molecules.

4. What is your amino acid sequence? Write it below:

_____ _____ _____

Teacher Initials: _____

Station 8: Create Pedigrees

DIRECTIONS:

1. Choose a pedigree. Write the letter of your pedigree: _____
2. Read the family clues in the first box. Draw the family pedigree below. Remember squares represent males and circles represent females.
3. Next, read the clues about the trait in the second box. Color in the individuals who show the recessive trait.
4. Fill in all of the genotypes you know!

Teacher Initials: _____