

Genetics Fill-in Notes
6.4 Traits, Genes, and Alleles

1. Key Concept:

Objectives: Have students write out

2. Vocabulary:

Notes:

_____ encode protein that produce a diverse range of traits.

2. Vocabulary

- _____: specific region of DNA that codes for a particular protein (pg. 180)
- _____: any of the alternative forms of a gene that occurs at a specific place on a chromosome. (pg. 180)
- _____: characteristic of having two of the same alleles at the same locus of sister chromatids. (pg. 180)
- _____: characteristic of having two different alleles that appear at the same locus of sister chromatids. (pg. 180)
- _____: all of an organism's genetic material. (pg. 181)
- _____: collection of all of an organism's genetic information that codes for traits. (pg. 181)
- _____: collection of all of an organism's physical characteristics. (pg. 181)
- _____: allele that is expressed when two different alleles are present in an organism's genotype. (pg. 181)
- _____: allele that is not expressed unless two copies are present in an organism's genotype. (pg. 181)

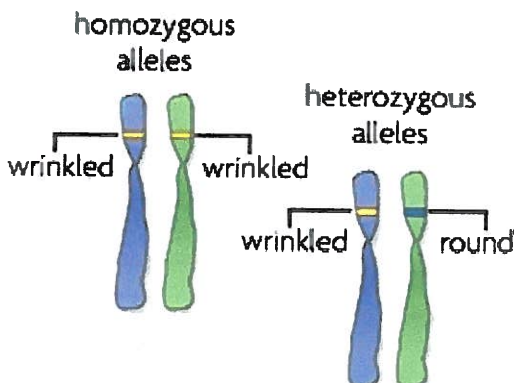
3. What are genes?

3. Genes

- A _____ is a piece of DNA that directs a cell to make a certain protein
- Each gene has a _____, a specific position on a pair of homologous chromosomes

4. What are alleles?

_____ alleles are identical to each other.



_____ alleles are different from each other.

4. Alleles

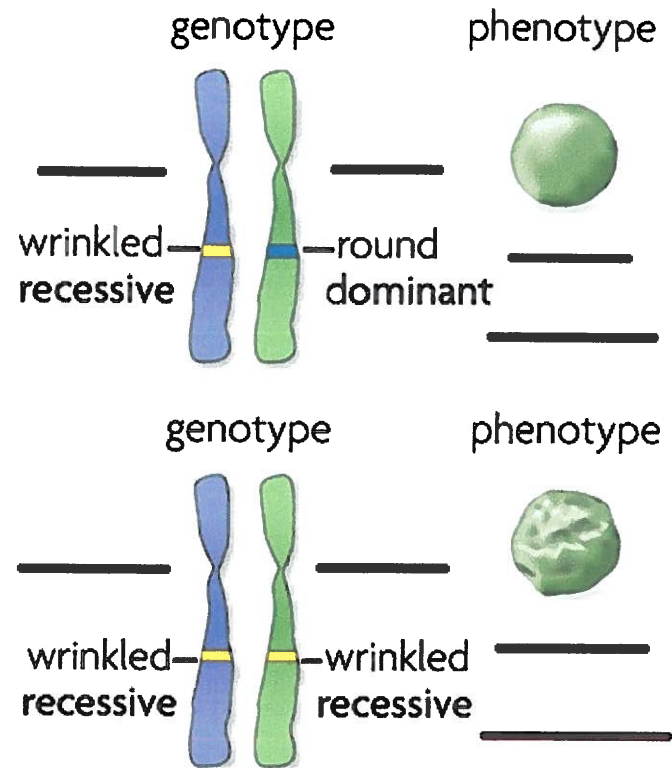
- An _____ is any alternative form of a gene occurring at a specific locus on a chromosome.
 - Each parent donates one allele for every gene.
 - _____ describes two alleles that are the same at a specific locus
 - _____ describes two alleles that are different at a specific location

5. What is a genome?

5. Genome

- All of an organism's genetic material is called the _____.
- A _____ refers to the makeup of a specific set of genes
- A _____ is the physical expression of a trait

Do this on Board and have students follow along and fill out



6. What are Dominant and Recessive alleles?

6. Dominant and Recessive

- A _____ allele is expressed as a phenotype when at least _____ allele is dominant
- A _____ allele is expressed as a phenotype only when _____ copies are present
- Dominant alleles are represented by _____ letters; recessive alleles by _____ letters
- Both _____ dominant and _____ genotypes yield a _____ phenotype.