مدارس البكالوريا
BACCALAUREATE SCHOOLS

Patterns of Inheritance Worksheet

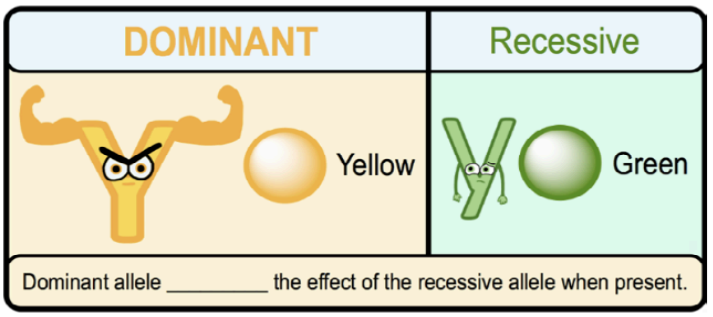
Name:_____ Date:_____ Grade: 8th

CONCEPT: GENOTYPE VS. PHENOTYPE

Dominant vs Recessive Alleles

- _____ (different *versions* of a specific gene) can be *dominant* or *recessive*.
  - □ _____ **Allele:** exerts its effects whenever present (symbol = _____ *letter*).
  - □ _____ **Allele:** has _____ effect if a *dominant allele* is present (symbol = _____-case letter).
  - □ The allele for _____ peas is *dominant* to the allele for _____ peas (the *recessive* allele).

EXAMPLE: Dominant vs. Recessive alleles.



PRACTICE: An allele that exerts its effects whenever it is present is:

a) Recessive. b) Heterozygous. c) Dominant. d) Homozygous. e) Homologous.

Genotype & Phenotype

- **Genotype:** the genetic _____ of *alleles* in an individual (written as a *pair of letters*).
  - □ **Homo***zygous*: 2 _____ *alleles* for the same gene (1 *YY* or 2 *yy*).
  - □ **Hetero***zygous*: 2 _____ *alleles* for the same gene (3 *Yy*).
- **Phenotype:** the _____ *expressed* trait that results from the genotype (ex. yellow/green peas).

EXAMPLE: Genotype vs. Phenotype of Pea Plants.

Genotype		Phenotype
1	_____zygous ____ominant YY	Yellow
2	_____zygous ____ecessive yy	Green
3	_____zygous Yy	Yellow

CONCEPT: GENOTYPE VS. PHENOTYPE

PRACTICE: If the two alleles for a particular gene are identical the gene pair is:

a) Homozygous.
b) Heterozygous.
c) Recessive.
d) Homologous.
e) Dominant.
f) Dissimilar.

PRACTICE: If an individual is homozygous for a particular trait:

a) Each parent contributed a different allele for that trait.
b) One parent contributed two different alleles for that trait.
c) Each parent contributed the same allele for that trait.
d) One parent contributed two copies of the same allele for that trait.