CONCEPT: EPISTASIS

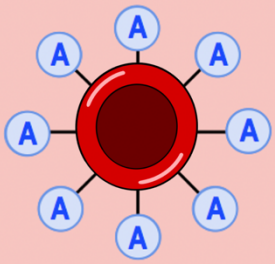
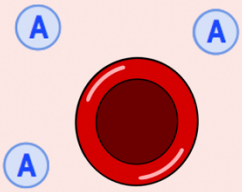
●**Epistasis**: inheritance pattern where _____ gene's product _____ the phenotype of _____ gene.

Epistasis in Blood Type

●*H* protein serves as a "_____" molecule attaching A & B molecules to the surfaces of blood cells.

- □ The recessive allele (*h*) encodes an _____ form that does _____ connect A or B to blood cells.
- □ Even if a person has alleles I^A or I^B , they will have type ____ blood if they are *homozygous recessive (hh).*
- □ In other words, *one gene* (_____) affects the expression of *another gene* (I^A or I^B).

EXAMPLE: Epistasis causes inconsistencies in inheritance of blood-types.

Genotype	Phenotype
$I^A\_$ & *H* _	 _____ H protein Type-____ blood
$I^A\_$ & *h h*	 _____ H protein Type-____ blood

***Epistasis: **one gene** (H gene) affects expression of **another gene** (I^A gene).*

PRACTICE: Which of the following statements best describes epistasis?

a) An allele that changes the genotype of another allele.
b) A gene that changes the genotype of another gene.
c) A gene that controls or masks the expression of another gene.
d) A gene that changes the genotype of the organism.
e) None of the above.