

## Skills Worksheet

# Active Reading

## Section: Beyond Mendelian Heredity

Read the passage below. Then answer the questions that follow.

Genes with three or more alleles are said to have multiple alleles. When characters are controlled by genes with multiple alleles, an individual can have only two of the possible alleles for that gene. For example, in the human population, the ABO blood groups (blood types) are determined by three alleles,  $I^A$ ,  $I^B$ , and  $i$ . The letters  $A$  and  $B$  refer to two different molecules on the surface of red blood cells. The  $i$  allele means that neither molecule is present. The  $I^A$  and  $I^B$  alleles are both dominant over  $i$ , which is recessive. But neither  $I^A$  nor  $I^B$  is dominant over each other. When  $I^A$  and  $I^B$  are both present in the genotype, they are **codominant**. In other words,  $I^A$  and  $I^B$  are both fully expressed.

### SKILL: READING EFFECTIVELY

Read each question, and write your answer in the space provided.

1. What information does the first sentence convey to the reader?

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2. Why does the term blood types appear in parentheses in the third sentence of this passage?

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3. What do the letters A and B refer to in the alleles  $I^A$  and  $I^B$ ?

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4. What allele is dominant for human blood type? What allele is recessive for this character?

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Active Reading continued

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5. What causes an individual to show both the  $I^A$  and  $I^B$  forms of the gene for human blood type?

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**In the space provided, write the letter of the phrase that best completes the statement.**

- \_\_\_\_\_ 6. In humans, the  $i$  allele for blood type means that
- a. one kind of molecule is on the surface of red blood cells.
  - b. two kinds of molecules are on the surface of red blood cells.
  - c. more than three kinds of molecules are on the surface of red blood cells.
  - d. neither molecule is present on the surface of red blood cells.