SCIENCE

5th Grade

Test Bank

CHRISTIAN SCHOOLS INTERNATIONAL

Unit 4: Investigating Cells

Multiple Choice

Circle the letter of the correct answer.

1. Which of the following is not a basis of the cell theory?
   a. All organisms are made of one or more cells.
   b. The cell is the basic unit of life.
   c. No cell can be seen without a microscope.
   d. All cells come from other cells.

2. Which of following types of cells don't have a nucleus?
   a. Skin cells.
   b. Plant cells.
   c. Bacteria cells.
   d. Protist cells.

3. A group of cells that works together to do a specific job in the body is called
   a. an organelle.
   b. a gene.
   c. an organ.
   d. a tissue.

4. Which of the following are found in plant cells but not in animal cells?
   a. Genes.
   b. Chloroplasts.
   c. Cell walls.
   d. Both b and c.

5. The organelle that is the control center of the cell is the
   a. nucleus.
   b. DNA.
   c. mitochondrion.
   d. ribosome.

6. How are chromosomes and genes related?
   a. Genes are made of many chromosomes.
   b. Chromosomes are made of many genes.
   c. Chromosomes and genes both form DNA.
   d. Chromosomes and genes are not related.

7. If you inherit one recessive gene and one dominant gene for a trait, you will
   a. show the dominant trait.
   b. show the recessive trait.
   c. show a combination of both traits.
   d. show either trait.

8. Which of the following is influenced by something besides genes?
   a. Your skill as a basketball player.
   b. Your enjoyment of books.
   c. The way you treat other people.
   d. All of the above.

Matching

For each statement, choose the organelle from the Answer Box that best matches the statement. Answers may be used once, more than once, or not at all.

_____1. Makes energy for the cell.

_____2. The liquid part of the cell.

_____3. The transportation system of the cell.

_____4. Makes protein for the cell.

_____5. Regulates what goes into and out of the cell.

_____6. Contains chromosomes.

_____7. Everything between the nucleus and cell membrane.

_____8. Controls all of the cell's activities.

_____9. Breaks down food particles and wastes.

Answer Box

A. Cell membrane
B. Cytoplasm
C. Cytosol
D. Endoplasmic reticulum
E. Lysosome
F. Mitochondrion
G. Nucleus
H. Ribosome

Short Answers

1. Name two structures that are found in plant cells but not in animal cells. Explain the function of each.

_____

_____

2. How are cells, tissues, and organs related to each other?

_____

_____

3. Explain the relationship between chromosomes, DNA, and genes.

4. What traits will a child show if he or she

   - inherits a blue-eyed (recessive) gene from the father and a brown-eyed (dominant) gene from the mother?
   - inherits a curly-haired (dominant) gene from each parent.
   - inherits an unattached earlobes (recessive) gene from each parent.

5. How can a child of two curly-haired parents have straight hair?

Essay

Someone accused of shoplifting claims that it's not his fault that he shoplifts because his genes force him to behave the way he does. Use the science of genetics to show that this is wrong.

Answer key

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Multiple Choice

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D 3. The transportation system of the cell.

H 4. Makes protein for the cell.

A 5. Regulates what goes into and out of the cell.

G 6. Contains chromosomes.

B 7. Everything between the nucleus and cell membrane.

G 8. Controls all of the cell's activities.

E 9. Breaks down food particles and wastes.

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Short Answers

1. Name two structures that are found in plant cells but not in animal cells. Explain the function of each.

   Chloroplasts contain chlorophyll for photosynthesis. Cell walls provide additional strength and support for the cell.

2. How are cells, tissues, and organs related to each other?

   Tissues are made of groups of cells, and organs are made of two or more tissues.

3. Explain the relationship between chromosomes, DNA, and genes.

   DNA is a chemical that makes up chromosomes. Chromosomes carry information about traits. Thousands of genes make up the 46 human chromosomes.

4. What traits will a child show if he or she

   - inherits a blue-eyed (recessive) gene from the father and a brown-eyed (dominant) gene from the mother? **He or she will have brown eyes.**
   - inherits a curly-haired (dominant) gene from each parent. **He or she will have curly hair.**
   - inherits an unattached earlobes (recessive) gene from each parent. **He or she will have unattached earlobes.**

5. How can a child of two curly-haired parents have straight hair?

   Both parents must have contributed a recessive gene for straight hair, which in their case was dominated by the gene for curly hair.

Essay

Someone accused of shoplifting claims that it's not his fault that he shoplifts because his genes force him to behave the way he does. Use the science of genetics to show that this is wrong.

Genes control all the traits of a person, but most behaviors are learned and not passed on as traits. People are not completely controlled by their genetic makeup, and they are responsible for their behavioral choices.