

Directed Reading B *continued*

26. What is one example of a mutation that produces a harmful trait?

Mutations that make an animal a brighter color, can make the animal easier to find for the predator.

27. What kinds of traits are produced by most mutations?

new traits in a species were caused by mutations, example blue eyes.

28. What happens to a gene if a mutation occurs in sex cells?

Then the offspring will inherit the mutation and this could lead to a new species. Like a human with two noses.

Skills Worksheet

Vocabulary and Section Summary B

What Does DNA Look Like?

VOCABULARY

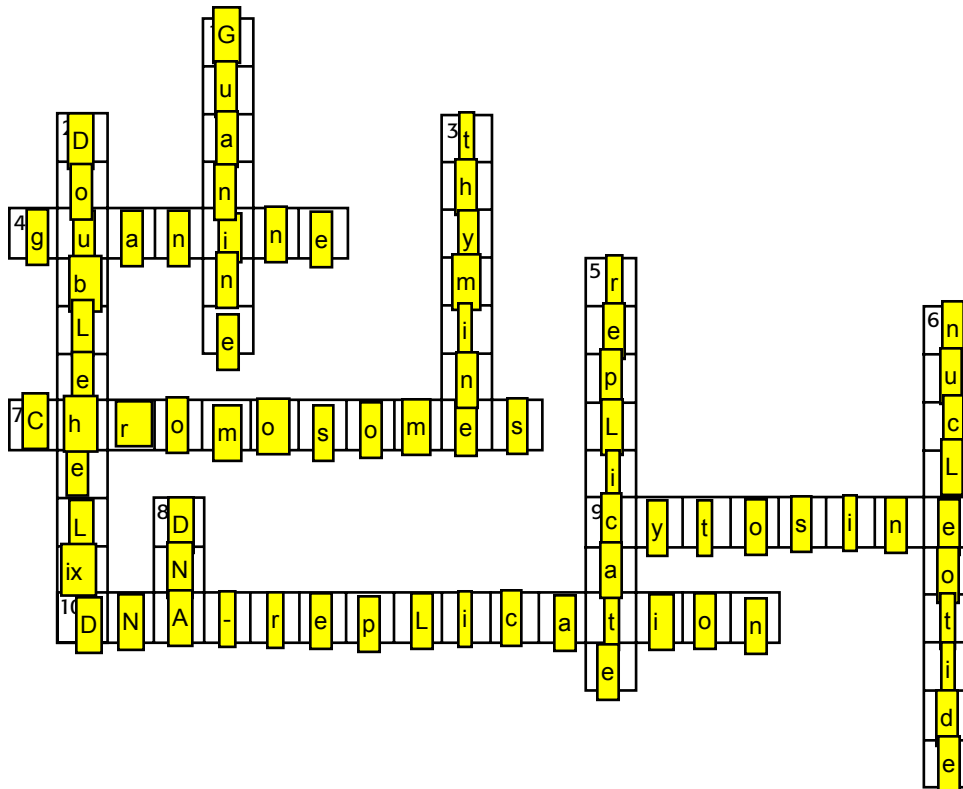
After you finish reading the section, try this puzzle! Use the clues below to complete the crossword puzzle.

ACROSS

- 4.** pairs with cytosine guanine
- 7.** made of protein and DNA chromosomes
- 9.** pairs with guanine cytosine
- 10.** process used to make images of DNA (two words) DNA-replication

DOWN

- 1.** pairs with thymine adenine
- 2.** shape of DNA (two words) double helix
- 3.** pairs with adenine thymine
- 5.** to copy DNA replicate
- 6.** subunit of DNA made from sugar, phosphate, and a base nucleotide
- 8.** genetic material of living things DNA



Skills Worksheet

Vocabulary and Section Summary B

How DNA Works

VOCABULARY

After you finish reading the section, try this puzzle! Using the clues, unscramble the letters to fill in the blanks. Then, using the final clue, fill in the boxes to unravel the secret message.

1. molecule that helps build new proteins by copying DNA: ANR

R N A

2. long strands of DNA and protein: MAHCTNIOR

c h r o m a t i n

7

3. organelle composed of RNA and protein: MOOSERIB

r i b o s o m e

4

2

4. string of nucleotides that gives the cell information about how to make a specific trait: NEGE

g e n e

5. nucleotide base known as U: CLIRUA

U r a c i l

9

6. change in the nucleotide-base sequence: NUTATOMI

m u t a t i o n

10

7. copy of the DNA segment: NRGSESEME NRA

m e s s e n g e r R N A

6

8. physical or chemical agent that can cause a mutation: GTEAMUN

m u t a g e n

3

9. molecules that translate the RNA message: FTERASNR NAR

t r a n s f e r R N A

8

Vocabulary and Section Summary B *continued*

10. Fill in the missing letters and finish the secret message.

D	o	u	b	L	e
1	2	3	4	5	6
H	e	L	i	X	
7	8	9	10	11	

SECTION SUMMARY

Read the following section summary.

- A gene is a set of instructions for making a protein. DNA stores these genetic instructions.
- Every organism has DNA in its cells. Humans have about 2 m of DNA in each cell.
- Traits of organisms are typically determined by proteins, which are coded for by segments of DNA called genes.
- Within a gene, each group of three bases codes for one amino acid. A sequence of amino acids is linked to make a protein.
- Proteins are built within the cytoplasm of cells.
- A mutation is a change in the DNA that can affect the traits of an organism.

Skills Worksheet

Directed Reading B

Section: The Study of Earth's History (pp. 234–237)

THE EARLY STUDY OF GEOLOGY

James Hutton

1. Who is responsible for outlining the principle now called uniformitarianism?
 - a. Albert Einstein
 - b. James Hurst
 - c. James Hutton
 - d. Charles Lyell

d.

2. The principle of uniformitarianism states that
 - a. the geologic processes once at work are now changing.
 - b. Earth changes only at certain times and only after certain events.
 - c. Earth is uniform and unchanging; it has always been as it is now.
 - d. the same geologic processes have been at work throughout Earth's history.

a.

3. Which of the following processes was NOT observed by Hutton when he developed the idea of uniformitarianism?
 - a. Rivers carry rock particles upstream.
 - b. In time, new rock will be raised and create new landforms.
 - c. Rock particles are deposited and form new layers of sediment.
 - d. Rock is broken down into smaller particles.

Match the correct description with the correct term. Write the letter in the space provided.

uniformitarianism

4. the principle that states that past geologic processes can be explained by current geologic processes

a. James Hutton

b. catastrophism

c. Charles Lyell

catastrophism

5. the principle that states that geologic change occurs suddenly

d. catastrophes

e. uniformitarianism

catastrophes

6. rare, sudden events that cause change

James Hutton

7. the author of *Theory of the Earth*

Charles Lyell

8. the author of *Principles of Geology*