

Directed Reading B *continued*

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

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

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

Skills Worksheet

Vocabulary and Section Summary B

What Does DNA Look Like?

VOCABULARY

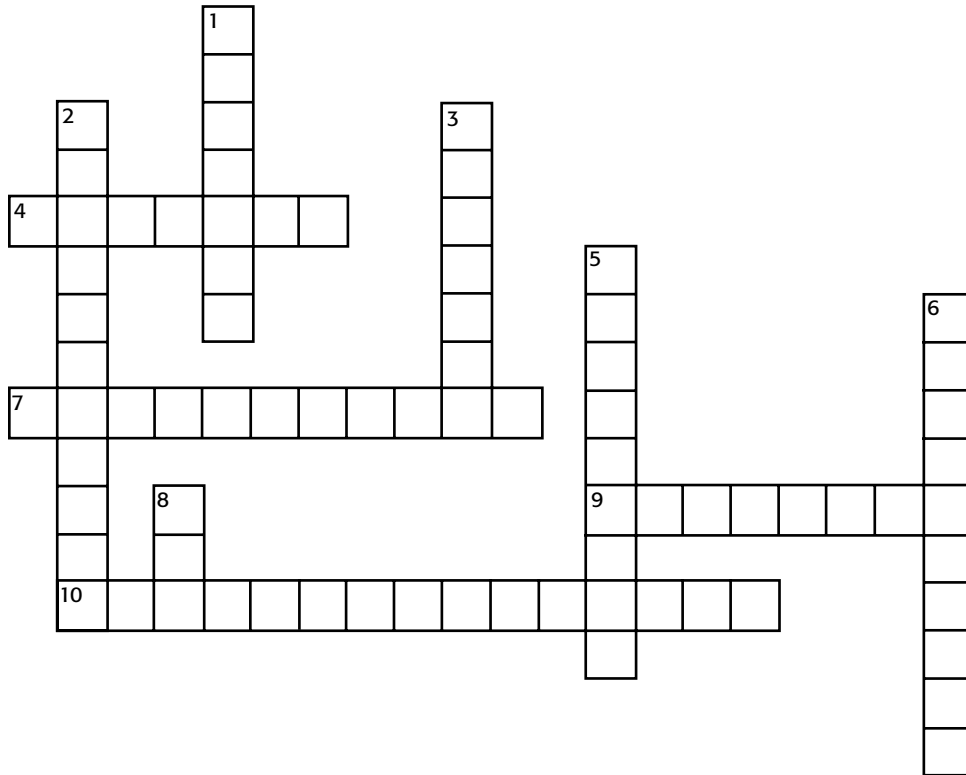
After you finish reading the section, try this puzzle! Use the clues below to complete the crossword puzzle.

ACROSS

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

DOWN

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



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

____ _

2. long strands of DNA and protein: MAHCTNIOR

____ _

7

3. organelle composed of RNA and protein: MOOSERIB

____ _

4

2

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

____ _

5. nucleotide base known as U: CLIRUA

____ _

9

6. change in the nucleotide-base sequence: NUTATOMI

____ _

10

7. copy of the DNA segment: NRGSESEME NRA

____ _

6

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

____ _

3

9. molecules that translate the RNA message: FTERASNR NAR

____ _

8

Vocabulary and Section Summary B *continued*

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

D	_____	_____	_____	L	_____
1	2	3	4	5	6
				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.

Directed Reading B

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

THE EARLY STUDY OF GEOLOGY

- _____ 1. Who is responsible for outlining the principle now called uniformitarianism?
- Albert Einstein
 - James Hurst
 - James Hutton
 - Charles Lyell
- _____ 2. The principle of uniformitarianism states that
- the geologic processes once at work are now changing.
 - Earth changes only at certain times and only after certain events.
 - Earth is uniform and unchanging; it has always been as it is now.
 - the same geologic processes have been at work throughout Earth's history.
- _____ 3. Which of the following processes was NOT observed by Hutton when he developed the idea of uniformitarianism?
- Rivers carry rock particles upstream.
 - In time, new rock will be raised and create new landforms.
 - Rock particles are deposited and form new layers of sediment.
 - Rock is broken down into smaller particles.

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

- | | |
|--|-----------------------------|
| _____ 4. the principle that states that past geologic processes can be explained by current geologic processes | a. James Hutton |
| _____ 5. the principle that states that geologic change occurs suddenly | b. catastrophism |
| _____ 6. rare, sudden events that cause change | c. Charles Lyell |
| _____ 7. the author of <i>Theory of the Earth</i> | d. catastrophes |
| _____ 8. the author of <i>Principles of Geology</i> | e. uniformitarianism |