

Reading for the Real World 3 - Unit 3

Name _____

I. Vocabulary: Choose the best word to fill in the blank.

1. Genetic _____ can be caused by chemicals and radiation, even sunlight.
 - a. vaccines
 - b. sprays
 - c. mutations
 - d. prescriptions

2. The deadline for the project is in three days, so we should _____ the speed of our research.
 - a. accelerate
 - b. clone
 - c. inflame
 - d. confer

3. Picking up garbage is a(n) _____ job, but every city needs these sanitation workers.
 - a. defective
 - b. recipient
 - c. endemic
 - d. nasty

4. If you can _____ the quality of writing from the last assignment on all your assignments, you will get an A for this course.
 - a. manipulate
 - b. reproduce
 - c. obsolete
 - d. mutate

5. If _____ were possible, would you want to make a copy of yourself?
 - a. cloning
 - b. clinical trials
 - c. symptoms
 - d. antibodies

II. Cloze Test

Questions 6 - 10

Gene therapy is ____ (6) ____ as a way of curing or preventing disease by changing the behavior of a person's genes. Currently, gene therapy is still in its early stages, with most of it still ____ (7) ____ . There are actually two types of gene therapy: somatic and germline. Somatic gene therapy targets genes in the soma, or body cells. In this way, the genome of the ____ (8) ____ is changed, but this change is not passed on to the next generation. For example, experimental trials in treating cystic fibrosis treat the genes only in the cells of the lungs, and, consequently, the patient's children would still be at risk of the disease.

In germline gene therapy, ____ (9) ____ changes are made to reproductive cells. The egg or sperm cells of the patient are genetically changed with the goal of passing on these changes to his or her children. In practice, this would mean changing the fertilized egg, the embryo, so that the genetic changes would be ____ (10) ____ in every cell of the future adult, including the reproductive cells. In fact, germline genetic engineering is not being actively investigated in humans or even large animals at this point.

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| <p>6. a. progressed
 b. defined
 c. changed
 d. occurred</p> <p>7. a. experimental
 b. successful
 c. effective
 d. healthy</p> <p>8. a. engineering
 b. cell
 c. recipient
 d. tool</p> | <p>9. a. somatic
 b. fertilized
 c. altered
 d. genetic</p> <p>10. a. developed
 b. prevented
 c. played
 d. reproduced</p> |
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III. Reading Comprehension: Based on the reading in section II, fill in the chart of germline and somatic gene therapy.

Targets genes in the soma, or body cells 11. Is not being actively investigated 12. Genetic changes are made to reproductive cells	13. Changes are not passed on to the next generation 14. Changes are passed on to children 15. Used to treat lung cells of cystic fibrosis patients
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Germline Therapy	Somatic Therapy
	- Targets genes in the soma, or body cells

IV. Word Study: Choose the SYNONYM (=) or ANTONYM (↔) for each word.

16. Which of the following is a synonym for *defect*?
- a. protein
 - b. flaw
 - c. efficacy
 - d. genome
17. Which of the following is an antonym for *endemic*?
- a. inflammatory
 - b. isolated
 - c. malaria
 - d. recipient
18. Which of the following is a synonym for *symptom*?
- a. therapy
 - b. scientific study
 - c. inconsistency
 - d. sign
19. Which of the following is an antonym for *nasty*?
- a. creative
 - b. pleasant
 - c. clinical
 - d. out of date
20. Which of the following is a synonym for *prevalence*?
- a. widespread
 - b. molecule
 - c. legality
 - d. similarity

V. Fill in the blank with the correct word.

genetics manipulation spray antibodies disparate
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21. This throat medicine can come as a syrup or as a _____.
22. The scientist dishonesty was revealed by the _____ of her data.
23. Advancements in the study of _____ has allowed science to use ancient DNA to understand the links between species.
24. Even though they are twins, their personalities are quite _____.
25. When a virus enters, the body produces _____ to fight the virus.

1	2	3	4	5
c	a	d	b	a
6	7	8	9	10
b	a	c	d	d
11	12	13	14	15
germline	germline	somatic	germline	somatic
16	17	18	19	20
b	b	d	b	a
21	22	23	24	25
spray	manipulation	genetics	disparate	antibodies