Name _____ Date _____

Video Question: Genetic Engineering and CRISPR: Understanding the Future

1. What molecule carries the genetic instructions for all living things?

a. RNA

b. DNA

c. Protein

d. Carbohydrate

2. In which decade did scientists first insert DNA snippets into bacteria?

a. 1960s

b. 1970s

c. 1980s

d. 1990s

3. What was the name of the first genetically modified food sold in stores?

a. Golden Rice

b. Flavr Savr Tomato

c. Bt Corn

d. Rainbow Carrot

4. Which technology dramatically reduced the cost of gene editing by 99%?

a. CRISPR

b. Genome Mapping

c. Gene Therapy

d. Genetic Sequencing

5. What is the role of the protein CAS9 in the CRISPR system?

a. To insert genes into bacteria

b. To cut out virus DNA

c. To replicate DNA

d. To mutate genetic code

6. What potential benefit does CRISPR offer for cancer treatment?

a. It can completely cure all cancers.

b. It can help modify immune cells to better fight cancer.

c. It can replace chemotherapy entirely.

d. It can make tumors disappear instantly.

7. What ethical concern is raised with the advancement of genetic engineering?

a. It could lead to the extinction of certain species.

b. It might allow for the creation of "designer babies."

c. It will make food production more difficult.

d. It may cause an increase in genetic diseases.

Answer Key:

b. DNA (00:01:04)

b. 1970s (00:01:28)

b. Flavr Savr Tomato (00:02:18)

a. CRISPR (00:03:07)

b. To cut out virus DNA (00:04:27)

b. It can help modify immune cells to better fight cancer. (00:06:15)

b. It might allow for the creation of "designer babies." (00:08:59)