

CRISPR-CAS NOTE-TAKING GUIDE AND INFOGRAPHIC WORKSHEET

Name _____ Date _____ Class/Hour _____

Directions: Watch the following four (short) videos and read the article about gene editing; then answer the questions.

- *Gene Editing Yields Tomatoes That Flower and Ripen Weeks Earlier* www.youtube.com/watch?v=Jem3hP734uA
- *CRISPR Gene Editing Explained* <https://video.wired.com/watch/crispr-gene-editing-explained>
- *CRISPR Explained (Mayo Clinic)* www.youtube.com/watch?v=UKbrwPL3wXE
- *CRISPR – a Word Processor for Editing the Genome* www.ibiology.org/genetics-and-gene-regulation/crispr

Why Gene Editing Is the Next Food Revolution - www.nationalgeographic.com/environment/future-of-food/food-technology-gene-editing, complete the following questions.

1. Why do scientists want to be able to edit DNA? _____

2. What is CRISPR and how do scientists use it? _____

3. In what type of organism was CRISPR first discovered? _____
4. What does the acronym CRISPR stand for? _____
5. What is Cas? _____
6. How did scientists harness or program the CRISPR-Cas9 system they identified in bacteria? _____

7. Describe the steps in the CRISPR-Cas system. _____

8. List some potential benefits/applications of CRISPR technology for our food. _____

Infographic Planning

Remember: An infographic: (1) Is an explanation that helps you more easily understand something, (2) integrates words and pictures, (3) is self-explanatory, (4) makes for faster understanding of a concept, and (5) is understandable.

1. Review "A Visual Guide to Genetic Modification" <https://blogs.scientificamerican.com/sa-visual/a-visual-guide-to-genetic-modification>
2. After reviewing the first infographic "Conventional Crossbreeding," consider the following questions:
 - What makes this infographic interesting – the content, the design, or both?
 - How was the information arranged and presented?
 - Were there sections, titles, and/or graphs?
 - How are fonts, color, and graphics used?
 - Did the design contribute to how you felt about the information?
 - What did you like about the infographic?
 - What would you change in the infographic to make it better?
3. As you design your infographic, consider the following questions:
 - What is your goal?
 - Who is your audience?
 - What information do you want to include?
 - What information is essential? What information is not?
 - Did you create an outline to organize your information?
 - How will you arrange your flow of information?
 - What colors and layout work best?
 - Have you streamlined your information?
4. Use the back of this page or another sheet of paper to design a rough sketch of your infographic.