

Applications of CRISPR

Driving Question:

How can CRISPR technology be used to tackle current problems in society?

Task:

1. Select a current societal challenge that CRISPR technology has the potential to solve. The following resources can help you select a topic area, but you will likely need to do additional research:
 - <https://www.nytimes.com/2015/11/15/magazine/the-crispr-quandary.html>
 - <http://time.com/4379503/crispr-scientists-edit-dna/>List at least one additional source that you used to research your application area:

2. Work with your group to answer the consideration questions (below) that will help you better understand the benefits and concerns of using CRISPR technology to solve this problem.
 - Why do we need to solve this problem?
 - What strategies are currently being implemented to solve this problem? (address strengths and limitations of these strategies)
 - How can CRISPR technology be applied to solve this problem? (address advantages over current strategies as well as limitations)
 - Which people/groups would benefit from the application of CRISPR to solve this problem? How?
 - Which people/groups might be opposed to the application of CRISPR to solve this problem? Why?

3. Construct a presentation to communicate your findings to your colleagues. You will be evaluated primarily on your communication skills this time, but you may want to use the content of this presentation as part of your final presentation (see *Ethics of CRISPR activity*).

Applications of CRISPR – Presentation Rubric (see below)

- ★ As your colleagues present, record information that will help you establish your position on whether or not CRISPR technology should be used to tackle current societal problems (you will present your position in your final presentation). You may use the template below to help you with this task.

Applications of CRISPR - Structured Notes (see below)

Applications of CRISPR – Presentation Rubric

Presentation Criteria	No Evidence	Approaching	Proficient	Advanced	Evidence
Content Fluency	Presenter does not demonstrate <u>any</u> evidence of understanding of content.	Presenter demonstrates <u>some</u> evidence of understanding of content	Presenter demonstrates understanding of content by speaking fluently about the material for <u>most</u> of the presentation.	Presenter demonstrates understanding of content by speaking fluently <u>throughout</u> and can simplify/elaborate/ make connections/ answer questions related to content when appropriate.	
Visual Aid	Visual aid does not assist <u>at all</u> in communicating information.	Visual aid assists in communicating <u>some</u> information shared by the presenter with the audience	Visual aid assists in communicating <u>the same</u> information shared by the presenter with the audience.	Visual aid clarifies main ideas for the audience, while allowing the presenter to share <u>additional</u> detail.	
Voice	Presenter does not speak with appropriate volume, clarity, or pace for <u>any</u> of the presentation	Presenter speaks with appropriate volume, clarity, and pace for <u>some</u> of the presentation.	Presenter speaks with appropriate volume, clarity, and pace for <u>most</u> of the presentation.	Presenter speaks with appropriate volume, clarity, and pace <u>throughout</u> the presentation.	
Body Language	Presenter's body language does not engage the audience via appropriate eye contact, gestures, and body movement throughout for <u>any</u> of the presentation.	Presenter's body language engages the audience via appropriate eye contact, gestures, and body movement throughout for <u>some</u> of the presentation.	Presenter's body language engages the audience via appropriate eye contact, gestures, and body movement throughout for <u>most</u> of the presentation.	Presenter's body language engages the audience via appropriate eye contact, gestures, and body movement <u>throughout</u> the presentation.	
Reflection					

Applications of CRISPR - Structured Notes

Group	Application: Why is this a problem that needs to be solved?	Current Strategies: What are the strengths and limitations?	Why CRISPR? Describe advantages over current strategies.	People/groups in favor: Who would benefit from this? How?	People/groups opposed: Who might oppose this? Why?
1					
2					
3					
4					

Teacher Notes:

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