

Predict and Confirm Genetic Modification Diagram Task

Question: What are the advantages and disadvantages of the genetic modification of organisms?

1. **Predict** - Using the clues provided in the diagrams, and your knowledge of biology, fill in a description of each step of the process.
2. **Confirm** - Read the texts that describe the process of genetic modification. Return to your predictions, confirming or revising your initial ideas of what occurs in each step of the process.

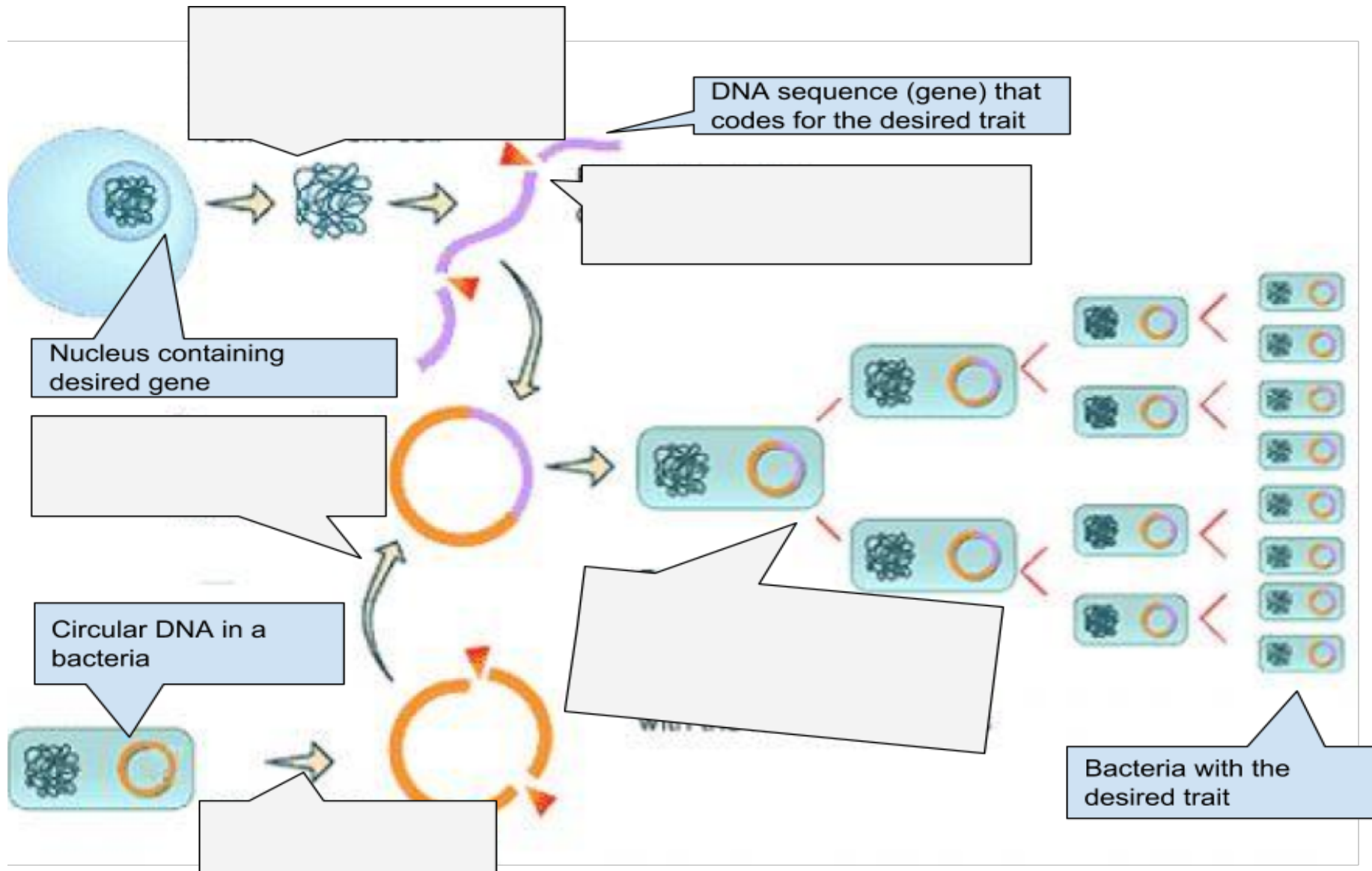
<http://learn.genetics.utah.edu/content/cloning/>

<http://www.bbc.co.uk/schools/gcsebitesize/science/aqa/geneticvariation/reproductionrev5.shtml>

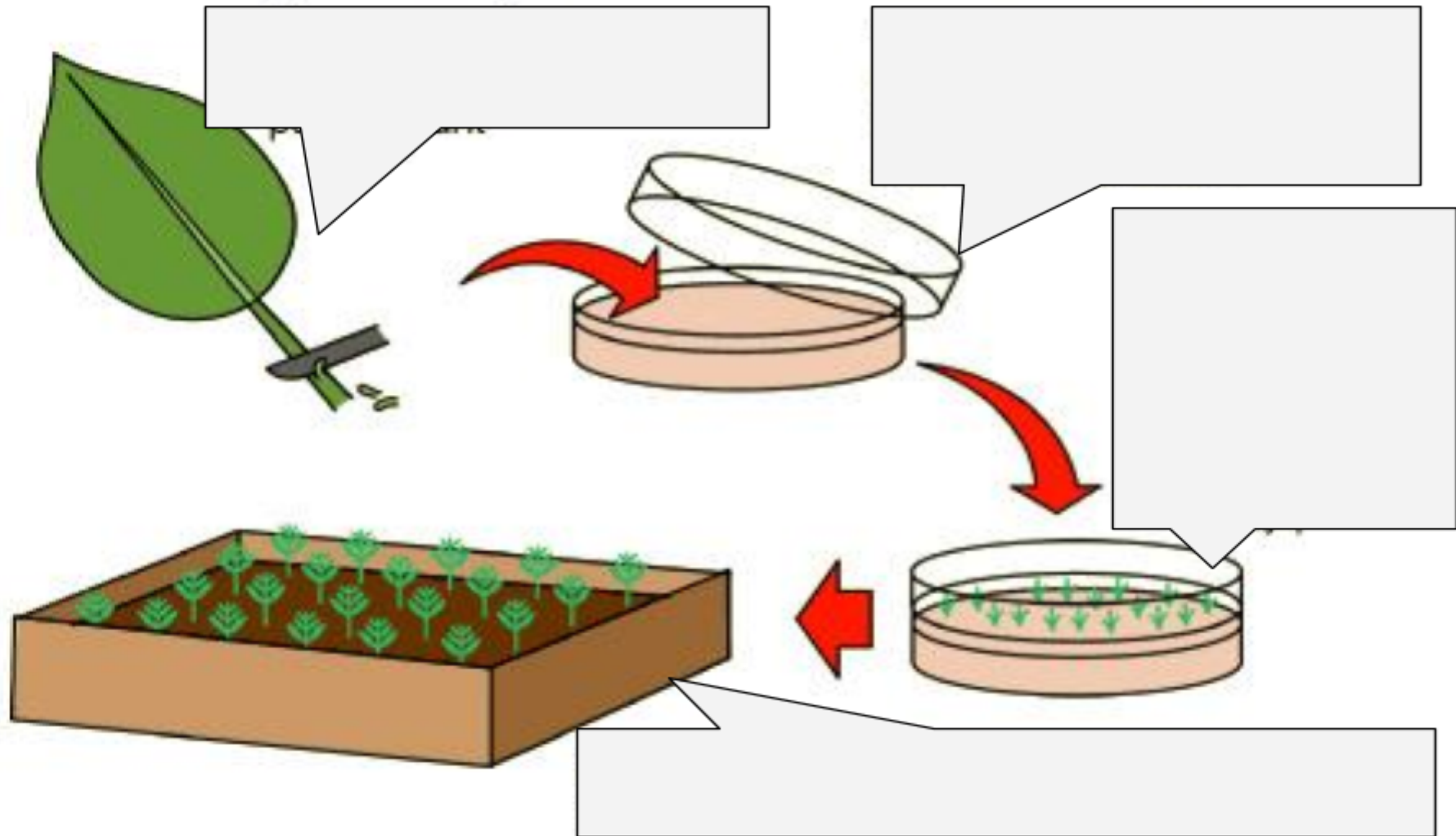
<http://www.geneticallymodifiedfoods.co.uk/fact-sheet-pros-vs-cons.html>

3. **Questions** - Based on your revisions, list out questions or areas of confusion about the process or diagram that were not resolved in the text
4. **Brainstorm** - Using your new understanding of the process behind genetic modification, list out all of the possible advantages and disadvantages of this technique

The following diagram represents a biotechnology process in which a desired trait from one organism can be transferred to another. One example of this process, is the transfer of the human insulin gene into bacteria. This genetic modification of bacteria enables bacteria to produce a human protein, insulin.



The following diagram represents a biotechnology process in which a plant that contains a desired trait is cloned. In this process, the plant is asexually reproduced creating many new plants that are genetically identical to the parent plant.



The following diagram represents a biotechnology process in which an animal that contains a desired trait or traits is cloned. In this process, the resulting offspring are genetically identical to the parent.

