

DNA Technology: How and why are the genes of organisms manipulated?

In this last section of biology 10, we're going to look at how and why genes of organisms are manipulated. You've probably heard of many of these topics in the news, magazines, tv shows, documentaries and movies:

Biotechnology	The use of technology and organisms to produce useful products
Cloning	A process that produces identical copies of genes, cells, or organisms
Gene Cloning	Manipulating DNA to produce multiple copies of a gene or another segment of DNA in foreign cells
Genetic Engineering	A process of specifically altering the genetic make-up of an organism
Transgenic Organism	Introduction of foreign DNA into an organism's genome, such as a gene from another species. Can be done in plants and animals.
GMO (genetically modified organism)	A type of transgenic organism
Gene Therapy	An experimental treatment to cure genetic disorders that involves inserting a healthy, normal form of a gene into the cells of tissues that are affected by a disorder
Stem Cells	A cell that can differentiate into many different cell types
Artificial Insemination	A process that involves collecting and concentration sperm, and then placing it in the female's uterus
In Vitro Fertilization	A process that results in a female's eggs being fertilized by sperm outside of the body

Some of the topics can be controversial because of environmental threats, health effects, economic issues and social issues. You will **summarize 3 articles with a focus on DNA technology**. Any article that focuses on the above topics (in the table above) can be chosen.

Website to Use:	
Science Daily (https://www.sciencedaily.com/news/) <ul style="list-style-type: none"> ● Health <ul style="list-style-type: none"> ○ Stem Cells ● Environment <ul style="list-style-type: none"> ○ Genetically Modified ○ Biotechnology 	Sci-News (http://www.sci-news.com/) <ul style="list-style-type: none"> ● Genetics

Each summary must include:

- Title of Article
- Published Date
- Author (Source or Person)
- Summary (paragraph length in your words)
- Link to Article

You can do this on google slides or google doc.

Each article is worth 15 marks

Grade 10: Science in the News

You will be creating a journal summary today. Is due _____

Website: Science Daily

You will be marked on **YOUR** summary of the journal and it must be in **YOUR WORDS**.

No plagiarism.

You need to have at least **10** sentences with proper grammar and spelling.

20 marks

Day 1	Day 2
<ol style="list-style-type: none">1. Go to: Science Daily2. Go to Health (drop down menu)<ol style="list-style-type: none">a. Choose Stem CellsOR3. Go to Environment<ol style="list-style-type: none">a. Choose Genetically ModifiedORb. Choose Biotechnology4. Read the article over (take your time)5. On reverse side of this paper (in point form) summarize what you learnt from the article6. Hand in <u>completed</u> summary before you leave class today or no marks assigned	<ol style="list-style-type: none">1. Take summary from yesterday and type up with ALL important information2. Share with teacher: jpatton@gedu.sd73.bc.ca3. Must be handed in BEFORE you leave today

