

## STUDENT ACTIVITIES

### Who wants to live forever?

#### Research and Inquiry

What role would cloning have in living longer lives? Investigate how cloning works to decide if it is just what the doctor ordered or if there are other serious issues to consider.

(All levels)

<http://www.howstuffworks.com/cloning.htm>  
[http://nature.ca/genome/03/d/20/03d\\_20\\_e.cfm](http://nature.ca/genome/03/d/20/03d_20_e.cfm)

Can you think of 3 good reasons why aging is important? Conduct an Internet search to support these reasons. If you're stuck, think of what might happen if people lived 200 years.

(All levels)

Humans have already developed ways to change the life span of worms, flies, and mice. Should the next step be to increase the time people spend on earth? (Junior/Secondary)

<http://www.dddmag.com/gene-expression-and-aging.aspx>

What is a genetically modified organism (GMO)? Find out how genomics might help people avoid genetic diseases and live a longer, healthier life. (Junior/Secondary)

[http://nature.ca/genome/03/d/30/03d\\_31\\_e.cfm](http://nature.ca/genome/03/d/30/03d_31_e.cfm)

Ray Kurzweil "has successfully founded and developed nine businesses in OCR, music synthesis, speech recognition, reading technology, virtual reality, financial investment, cybernetic art, and other areas of artificial intelligence." Now Ray believes that he can reverse the aging process. In his mind, it will be tiny 'nanobots' to the rescue. Which technology (drugs or nanotechnology) do you think has the greater chance of success? (Secondary)

[http://ionlifeinfo.ozstaging.com/articles\\_RayKurzweils\\_antiaging\\_plan.asp](http://ionlifeinfo.ozstaging.com/articles_RayKurzweils_antiaging_plan.asp)

#### Discussion and Debate

Would you want to live forever? What arguments for and against could you defend?

Should children/youth get plastic surgery?

Discuss situations that you feel would justify plastic surgery for pre-teens/teens.

Read one of the following statements to your class. Then ask your students if the statement is: a) supported, b) refuted, or, c) neither supported nor refuted? Students must decide and state their

reasons citing examples from the text.

(Junior/Secondary)

1. Based on their studies of Baker's yeast, scientists have found a way to make humans live longer.
2. It is expected that humans, like the mice, will one day live 30% longer.
3. Controlled starvation may be the key to living a longer life.

#### Role Play

Your own a store called "The Fountain of Youth".

In it you sell products that claim to make people look and feel young. Write a script or improvise conversations between one of your sales people and a potential client regarding the products and services you offer, which include: drugs, plastic surgery, water from the 'real' fountain of youth, cloning, genetically modified organisms, and nanotechnology. (All levels)

NOTE: Preparation for the role play would require some investigation into the products and services mentioned above. Refer to the links in the 'Research and Inquiry' and 'Related Links' for information or have the students carry out their own research.

#### Related Links

Consider the importance of elders in the aging process. Listen to what these elders had to say to high school students. (Junior/Secondary)

[http://www.scs.sk.ca/edf/grassroots/aboriginal\\_spi\\_elder.htm](http://www.scs.sk.ca/edf/grassroots/aboriginal_spi_elder.htm)

"Our genes are actually so similar to those of yeast, fruit flies, nematode worms, and mice that in some cases human genes can be substituted for theirs and work just as well." (Secondary)

<http://www.hhmi.org/genesweshare/g200.html>

Healthy Living in BC (All levels)

In British Columbia, we are among the healthiest and have among the best health outcomes in Canada and the world. Every day, we make choices about the food we eat and our lifestyles. We can make healthy choices for healthy living every day.

<http://www.bchealthguide.org/healthyliving.stm>

Act Now BC

<http://www.actnowbc.gov.bc.ca/>