

Using NewsHour Extra Feature Stories

STORY

President Obama Lifts Controversial Restrictions on Stem Cell Research, 3/10/2009

http://www.pbs.org/newshour/extra/features/science/jan-june09/stemcells_03-10.html

Estimated Time: One 45-minute class period with possible extension

[Student Worksheet](#) (reading comprehension and discussion questions without answers)

PROCEDURE

1. WARM UP

Use initiating questions to introduce the topic and find out how much your students know.

2. MAIN ACTIVITY

Have students read NewsHour Extra's feature story and answer the reading comprehension and discussion questions on the student handout.

3. DISCUSSION

Use discussion questions to encourage students to think about how the issues outlined in the story affect their lives and express and debate different opinions.

INITIATING QUESTIONS

1. What are stem cells?

2. What are medical ethics? Scientific ethics?

3. How do you think President Obama is different from President Bush when it comes to science and medical research?

READING COMPREHENSION QUESTIONS – [Student Worksheet](#)

1. What did President Obama do recently regarding stem cell research?

ANSWER

In a reversal of a Bush administration policy, President Barack Obama signed an executive order this week lifting restrictions on federal funding for embryonic stem cell research, and called for government to renew its commitment to scientific inquiry.

"We will bring the change that so many scientists and researchers; doctors and innovators; patients and loved ones have hoped for and fought for these past eight years," President Obama said.

2. How do scientists use embryonic stem cells?

ANSWER

Embryonic stem cells are basic cells taken from fertilized embryos that can transform into any specialized cell in the body.

Scientists want to be able to grow stem cells so that they can replace the damaged tissue caused by degenerative conditions such as diabetes, Parkinson's disease, and Alzheimer's disease.

3. Why do some people object to stem cell research?

ANSWER

Stem cell research is abhorrent to people who believe that taxpayer money should not be used to destroy embryos that have the potential for human life.

President Obama criticized former President George W. Bush's 2001 decision to limit federal funds to stem cell research, warning that America could fall behind other countries in scientific discovery if the government fails to support such research.

4. What are stem cells?

ANSWER

Stem cells are unspecialized cells that can regenerate themselves through the process of cell division. Scientists can then manipulate them to have special functions throughout the body.

Cells that make up brain neurons, for example, perform different functions from the cells that produce insulin in the pancreas.

Scientists hope that with further study, stem cells can be used to replenish cells that are failing because of disease or injury.

5. How are embryonic stem cells different from adult stem cells?

ANSWER

Embryonic stem cells are derived from human embryos created through in vitro fertilization, the process in which doctors create embryos to implant in women to help them have children. Unused embryos can be donated to scientists for research purposes.

Adult stem cells are found in existing specialized adult tissue like bone marrow or cartilage, and some studies show that adult stem cells could be used for a number of different cell types.

The Bush administration supported adult stem cell research as an alternative to embryonic research, arguing that it has the potential to cure disease without destroying human life.

Adult stem cells are generally more limited in their ability to transform into cells that can be used in other parts of the body; embryonic stem cells are "pluripotent," meaning that they can become all cell types.

6. What organization is responsible for coming up with guidelines for government-funded research?

ANSWER

President Obama did not go into the specifics of how federal money would be used to fund stem cell research but gave the National Institutes of Health four months to come up with guidelines.

DISCUSSION QUESTIONS (more research might be needed)

1. Do you agree with President Obama's decision to lift the restrictions on embryonic stem cell research?

2. Some opponents of stem cell research think experimenting with embryos raises all sorts of ethical questions about human cloning. Why might a medical researcher want to make a human clone?

3. If you were the National Institutes of Health, what guidelines would you write for embryonic stem cell research?

Extension Activity

Have students write a 300-500 word essay on this topic providing clear examples. Send your completed editorial to NewsHour Extra (extra@newshour.org). Exceptional essays might be published on our Web site.