

Webquest: Stem Cells in the Spotlight

Go to the following website: <http://learn.genetics.utah.edu/content/stemcells/>

Click on The Nature of Stem Cells. Answer the questions as you read.

1. What does it mean to differentiate?

2. What is a stem cell?

Go back to main page by clicking on “stem cells” at top left side of the screen. Click on Reversing Cell Differentiation.

1. Once a cell becomes specialized, can it become any other type of cell? Explain.

On main page, click on Stem Cell Quick Reference. Complete the chart.

Stem Cell Type:	Embryonic (ES)	Somatic	Induced Pluripotent (iPS)	Therapeutic Cloning
Where they come from:				
Potential as Therapy:				
Special Considerations				
Ethical Considerations				

On the main page, click on Go, Go Stem Cells.

1 . What is a stem cell niche? _____

2. Choose of the 1 Stem Cell Niches. Click on show text in order to read about the niche.

a. Which stem cell niche did you choose? _____

b. Summarize the main ideas from the niche you chose.

On the main page, click on Stem Cells in Use.

1. What are three sources of stem cells that can be used to treat blood-based diseases?

On the main page, click on Unlocking Stem Cell Potential.

1. Tissue engineers are currently using stem cells to repair what type of tissue?

2. Tissue engineers have also grown what whole organs in animals?

On the main page, click on The Stem Cell Debate: Is it Over?

1. When were stem cells first removed from embryos?

2. Why is this controversial?

3. What are the current U.S. laws regarding embryonic stem cells?