Go to http://learn.genetics.utah.edu/content/tech/stemcells/

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The Nature of Stem Cells

1. How are stem cells different than other cells in our body?

2. What is differentiation?

3. What is the blastocyst? What do the cells from the blastocyst form?

4. What happens to the zygote after about 2 weeks past fertilization?

5. What is the fate of the ectoderm?

6. What is one of the differences between somatic stem cells and embryonic stem cells?

Go, Go Stem Cells!

1. What is a stem cell niche?

2. Click on one of the niches in the body and summarize what happens.

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The Story of IPS Cells

1. What discovery was made in 2007 to change what we know about stem cells?

2. What does iPS stand for?

Stem Cells in Use

Summarize how stem cells are used in medicine today.

1. Somatic Stem Cell Therapy

2. Peripheral Blood Stem Cells

3. Umbilical Stem Cells

Unlocking Stem Cell Potential

1. What is regeneration?

2. Can humans regenerate?

3. What is regenerative medicine?

4. How are scientists planning on using stem cells to regenerate tissue in humans?

5. What is an alternative plan to get stem cells into human tissue?

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Name _____

6. What are the potentials of embryonic stem cells and iPS cells?

7. How do scientists get healthy tissue from stem cells?

8. What do tissue engineers do?

9. What is the new gene technology being used?

10. What is the relationship between stem cell research and cancer research?

Stem Cell Quick Reference

Fill in the table using your own words.

	Embryonic stem cells	Somatic stem cells	Induced pluripotent stem cells
Potential as therapy			
Special considerations			
Ethical considerations			

The Stem Cell Debate: Is It Over?

1. What discovery has eliminated the controversy over the use of stem cells?