

Objectives: students will be able to...

- Define 'stem cell'
- Explain what 'undifferentiated' means and provide examples.
- Explain the difference between undifferentiated stem cells, pluripotent, and tissue-specific stem cells.
- Explain how it is possible that your intestines can lose their lining every four days.
- Explain what each of the following kinds of stem cells create: hemapoietic, neural, epidermal, and mesenchymal stem cells.
- Define multipotent.
- Explain the process in which stem cells are used to treat leukemia.
- Summarize the process in which embryonic stem cells are created.
- Explain the controversy behind embryonic stem cells and summarize the arguments of both sides of this controversy.
- Define 'blastocyst' and explain how this term pertains to the stem cell debate.
- Summarize what each of the following germ layers become: endoderm, ectoderm, and mesoderm.
- Explain the conditions needed for something to be pluripotent.
- Explain how and why induced pluripotent stem cells are created.
- Summarize the pro's and con's of each of the three kinds of stem cells.
- Explain why tissue-specific stem cells have less appeal to scientists than pluripotent stem cells (either induced or embryonic).