

Please take these Week 1 quizzes. Write your responses below the questions.

Textbook Reading Quiz (Unit 7.2 pg 480-483 Explore 4) (1st quiz for week of 4/6-4/10)

Complete the quiz. The results will automatically be sent to me and I will enter the score into the gradebook.

Required

1.First name AND last name

2.Period (just put the number)

3.Stem cells are a unique type of body cell that can _____ to form a variety of specialized cell types.

(1 Point)

- ☐ differentiate
- ☐ fuse

4.A stem cell can either divide into two new stem cells or it can divide to produce one stem cell and one specialized cell, such as a(n):

(1 Point)

- ☐ undifferentiated cell
- ☐ identical cell
- ☐ neuron

5.New advancements in science have allowed researchers to convert human skin cells to embryonic stem cells. This requires altering segments of DNA called:

(1 Point)

- ☐ proteins
- ☐ genes
- ☐ organelles

6.When these segments of DNA are expressed, the cell produces _____, which carries out specific functions within the cell.

(1 Point)

- ☐ proteins
- ☐ genes
- ☐ organelles

7.Explain the relationship between embryonic cell layers, gene expression, proteins, and cell differentiation.

8.Explain why stem cells are of great interest to researchers studying therapies for human diseases.

Amoeba Sisters Video 1 Recap: Specialized Cells Quiz (2nd quiz for week 4/6-4/10)

Required

1.First name AND last name

2.Period (just the number)

3.In your own words, what does it mean for a cell to be specialized?

4.When learning about cells, many times in diagrams you will see plant cells are drawn in a rectangular shape and animal cells in a circular shape. From the video, describe a specialized plant or animal cell shape that relates to its function.

5.Compare and contrast the structure and function of a red blood cell and a white blood cell.

6.Describe the characteristics of the SMOOTH muscle structure and where it is found in the body.

7.Describe the characteristics of the SKELETAL muscle structure and where it is found in the body.

8.Describe the characteristics of the CARDIAC muscle structure and where it is found in the body.

How Cells Become Specialized Amoeba Sisters Quiz (3rd quiz for week 4/6-4/10)

Take this quiz after you have completed watching the Amoeba Sisters Video: How Cells Become Specialized

Required

1.First name AND last name

2.Period (just the number)

3.What is a zygote?

4.Why is a blastocyst so important to cells becoming specialized?

5.Do neurons and muscle cells (or any other types of body cells) have different DNA?

(1 Point)

- ☐ yes
- ☐ no

6.What does "genes are regulated" mean?

7.Why is "gene regulation" important?

8._____ determine which area of the DNA code will be used to make proteins.

(1 Point)

- ☐ Zygotes
- ☐ Scientists
- ☐ Transcription factors
- ☐ Specialized cells

9.Give some examples of internal cues for stem cells to start specializing.

10.Give some examples of external cues for stem cells to start specializing.

11.Now, put it all together. Summarize in a paragraph, how cells become specialized.

Stem Cell Article Review Questions. Quiz 4 12 points

Required

1.First name and last name

2.Period (just put the number)

3.What are the three characteristics of a stem cell?

4.What is the ethical controversy over using human embryonic stem cells for research?

5.How are most embryos obtained?

6.What is the difference between totipotent stem cells and pluripotent stem cells?

7.What is the difference between pluripotent stem cells and multipotent stem cells?

8.What does IPSCs stand for and what are they?

9.Name two potential uses of using IPSCs.