

A Timeline of Progress

A WebQuest for Stem Cells: Paralysis Cured?

Introduction

Fewer than 30 years ago, scientists and doctors believed that paralysis caused by damage to the spinal cord was permanent. They thought that the neurons in the spine could not be regenerated. But in the early 1980s, researchers found evidence to the contrary. Today, major progress in the treatment of paralysis is being made with the use of stem cells. In this WebQuest, you will research the use of stem cells in the treatment of spinal cord injuries. Then, you will make a timeline showing how scientists' knowledge of the possibilities of stem cell usage has steadily grown over the years.

Task

The National Institutes of Health (NIH) wants to make a timeline to explain to high-school students the progress that scientists are making in the use of stem cells to treat spinal cord injuries. Your task is to research the history of the use of stem cells in the treatment of spinal cord injuries and to make an illustrated timeline showing important dates and discoveries.

Process

Use the resources listed in the Resources section to begin your research. The Web sites listed are good starting points, but further Internet research will be necessary. Record your answers to the following questions. You will use them to create a timeline at the end of the project.

1. What are stem cells?
2. Why did scientists and doctors think spinal cord injuries were permanent, and what changed their minds?
3. How have stem cells been used to treat spinal cord injuries?
4. How do scientists and researchers think stem cells will be used to treat spinal cord injuries in the future?

Timeline

Once you have completed your research, create a timeline that shows major advances in the use of stem cells to treat spinal cord injuries. You might draw your timeline on a poster, or you might choose to use computer software. Include photographs and other graphics to illustrate stem cells advances and discoveries. Make sure to include a separate document that lists the sources of your information.

Resources

[Christopher and Diana Reeve Foundation](#)

[MedlinePlus](#)

[National Institutes of Health](#)

[Centers for Disease Control and Prevention](#)

[University of Wisconsin Stem Cell and Regenerative Medicine Center](#)

Evaluation

Read this rubric to see how you will be scored on this activity.

	Criteria				Points
	0	5	10	15	
Task	The task was not completed.	It appears that some effort was made to complete the task, but major ideas are missing.	The task was completed as assigned.	The task was completed with great attention to detail and thorough documentation.	
Process	The process was not followed.	The process was followed, but not all of the questions were answered.	The process was followed.	It was clear that much research went into the project. Nearly all important stem cell discoveries are on the timeline.	
Timeline	The timeline was sloppy and not well prepared.	The timeline was neatly done, but there are only a few dates/descriptions of stem cell discoveries on the timeline.	There were many dates and descriptions of stem cell discoveries on the timeline.	The timeline was elaborate and creative, with many dates and descriptions of stem cell discoveries.	
Total Score					