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Webquest: Stem Cells in the Spotlight

DIRECTIONS: You will be exploring a website that discusses what stems are, where they come from and how they are used. Following prompts below and answer the questions that correspond with the prompt.

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2. Click on The Nature of Stem Cells.
3. Click on the "CC" button in the bottom left corner to turn on the closed captioning.
4. To begin, click on the triangle on the right hand side of the screen. You will need to click on the triangle to continue to progress through the slides.

a. What does it mean to differentiate?

b. What is a stem cell?



5. Go back to main page. Click on The Story of IPS Cells.

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

6. Go back to main page. Click on Stem Cell Quick Reference. Complete the chart.

<i>Stem Cell Type:</i>	<i>Embryonic (ES)</i>	<i>Somatic</i>	<i>Induced Pluripotent (iPS)</i>	<i>Therapeutic Cloning</i>
Where they come from				
Potential as Therapy:				
Special Considerations				
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7. Go back to main page. Click on Go, Go Stem Cells. Explore several Stem Cell Niches.

a. What is a stem cell niche? (Click on the "show text")

b. Choose and describe one of stem cell niches. (Click on the "show text")

8. Go back to main page. Click on Stem Cells in Use.

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

9. Go back to main page. Click on Unlocking Stem Cell Potential.

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

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

10. Go back to main page. Click on The Stem Cell Debate: Is it Over?

a. When were stem cells first removed from embryos?

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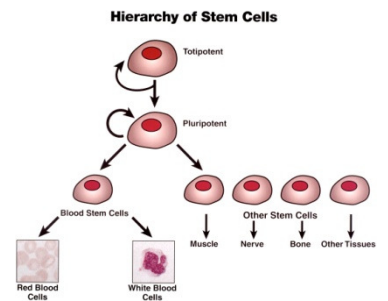
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a. What does it mean to differentiate?

b. What is a stem cell?



5. Go back to main page. Click on The Story of IPS Cells.

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

6. Go back to main page. Click on Stem Cell Quick Reference. Complete the chart.

<i>Stem Cell Type:</i>	<i>Embryonic (ES)</i>	<i>Somatic</i>	<i>Induced Pluripotent (iPS)</i>	<i>Therapeutic Cloning</i>
Where they come from				
Potential as Therapy:				
Special Considerations				
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7. Go back to main page. Click on Go, Go Stem Cells. Explore several Stem Cell Niches.

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8. Go back to main page. Click on Stem Cells in Use.

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

9. Go back to main page. Click on Unlocking Stem Cell Potential.

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

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10. Go back to main page. Click on The Stem Cell Debate: Is it Over?

a. When were stem cells first removed from embryos?

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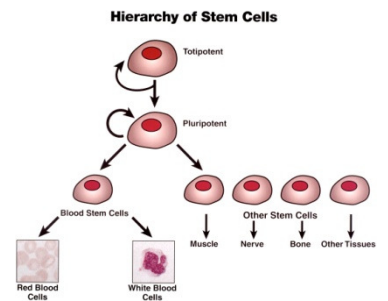
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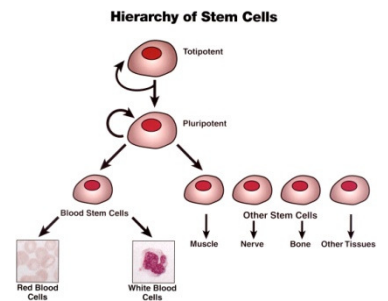
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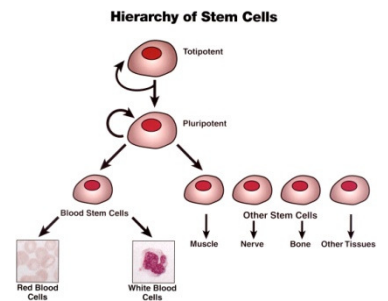
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2. Click on The Nature of Stem Cells.
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a. What does it mean to differentiate?

b. What is a stem cell?



5. Go back to main page. Click on The Story of IPS Cells.

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

6. Go back to main page. Click on Stem Cell Quick Reference. Complete the chart.

<i>Stem Cell Type:</i>	<i>Embryonic (ES)</i>	<i>Somatic</i>	<i>Induced Pluripotent (iPS)</i>	<i>Therapeutic Cloning</i>
Where they come from				
Potential as Therapy:				
Special Considerations				
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8. Go back to main page. Click on Stem Cells in Use.

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

9. Go back to main page. Click on Unlocking Stem Cell Potential.

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

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10. Go back to main page. Click on The Stem Cell Debate: Is it Over?

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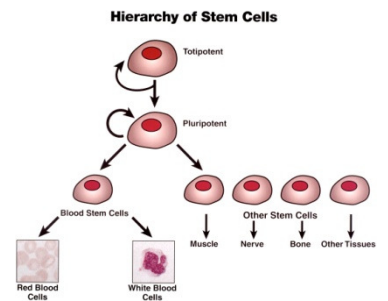
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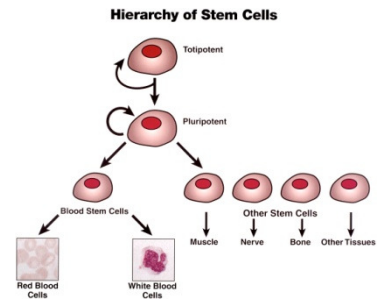
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