

Emerson Middle School Integrated Lesson Form

Title: Week 6: September 14-18

Lesson Description: Mitosis/Meiosis

<p>Educator</p>	<p>Name: Elena Mackey A+ School: EMS Grade level/subject area: 7th Grade Science</p>
<p>Curriculum & Arts</p>	<p>Overarching Concept: The Cell Cycle Essential Question(s) and/or Focus Question(s):</p> <p>What is the purpose of mitosis? What are the stages of mitosis? What are some disadvantages of asexual reproduction? What does the cell do for most of its life? What is cancer? What are some causes of cancer?</p> <p>Disciplines Addressed: 21st Century skills:</p> <p><input type="checkbox"/>_dance <input type="checkbox"/>_music <input checked="" type="checkbox"/>_x_visual arts <input checked="" type="checkbox"/>_x_creativity <input type="checkbox"/>_drama <input checked="" type="checkbox"/>_x_reading <input checked="" type="checkbox"/>_x_writing <input checked="" type="checkbox"/>_x_problem solving <input checked="" type="checkbox"/>_x_language arts <input checked="" type="checkbox"/>_x_science <input type="checkbox"/>_other: <input checked="" type="checkbox"/>_x_technology <input checked="" type="checkbox"/>_x_math <input type="checkbox"/>_social studies <input checked="" type="checkbox"/>_x_collaboration</p> <p>Curricular connections/instructional objectives: (state standards, etc.) MS LS 1-5, 3-1, and 3-2</p>
<p>Enriched Assessment</p>	<p>Ways to assess/evaluate students' understanding during and at the conclusion of the lesson</p> <p>Formative: Students will answer bellwork questions and Google Classroom questions that will gauge their understanding of new material.</p> <p>Summative: Students will complete daily exit slips that will reinforce the material taught.</p> <p>Students will use their genetic knowledge that they have learned so far to create a baby monster</p>

	Note any unexpected outcomes with students and how they affected next steps:								
Collaboration	<p>How will collaboration be used: (between students, fellow teachers, or anyone with potential expertise):</p> <p>Students will work in pairs to create a baby monster</p> <p>I want to observe Ms. Curry this week</p>								
Multiple Learning Pathways	<p>Multiple Intelligences addressed within lesson: (check all that apply)</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/>_x_bodily/kinesthetic</td> <td><input type="checkbox"/>_musical-rhythmic</td> </tr> <tr> <td><input checked="" type="checkbox"/>_x_interpersonal</td> <td><input checked="" type="checkbox"/>_Xnaturalist</td> </tr> <tr> <td><input checked="" type="checkbox"/>_x_Intrapersonal</td> <td><input checked="" type="checkbox"/>_x_veral-linguistic</td> </tr> <tr> <td><input checked="" type="checkbox"/>_x_logical-mathematical</td> <td><input checked="" type="checkbox"/>_x_visual spatial</td> </tr> </table>	<input checked="" type="checkbox"/> _x_bodily/kinesthetic	<input type="checkbox"/> _musical-rhythmic	<input checked="" type="checkbox"/> _x_interpersonal	<input checked="" type="checkbox"/> _Xnaturalist	<input checked="" type="checkbox"/> _x_Intrapersonal	<input checked="" type="checkbox"/> _x_veral-linguistic	<input checked="" type="checkbox"/> _x_logical-mathematical	<input checked="" type="checkbox"/> _x_visual spatial
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Infrastructure	<p>Classroom Infrastructure/Setup:</p> <p>Timeframe (example: length of unit, number and length of lesson(s):</p> <p>Space:</p> <p>Material:</p> <p>Resources/books/websites/other information sources: Google Classroom, Google Slides, Monster Baby Lab worksheet Youtube videos, Genetic Stations Activity instructions</p> <p>Monday</p> <p>Bellwork: (10 min)</p> <ul style="list-style-type: none"> A. Why does a sex cell need only half the number of chromosomes? B. How do haploid cells create genetic diversity? (Look at the sexual reproduction guided reading on P. 58 “Creating Haploid Cells” C. Why is genetic diversity important? (Look at the guided reading in the second paragraph under “Genetic Variation.” <p>Monster Baby Lab (30 min)</p> <p>https://docs.google.com/document/d/13P2kfoBNoqwCjzfW2wyXEGlg5f-ReannVdMVUAFbKRc/edit</p> <p>Exit: (5 min)</p>								

Pick two traits that your monster inherited and explain why that trait may be helpful over the other.

Tuesday:

Bellwork (7min)

- A. An _____ is a form of a trait.
- B. Explain where we get our traits from (Be specific) Look at your genetic notes if you get stuck.

Cell cycle video (9 min)

<https://www.youtube.com/watch?v=QVCjdNxJreE&list=RD0Elo-zX1k8M&index=10>

Cell cycle and cancer Notes (20 min)

https://docs.google.com/presentation/d/1G0wApiuqGqelpDsxugCqWFZ5B7slrTV-OM-Liyiqg88/edit#slide=id.g9768886bd3_0_0

Exit: I really understood _____ but I didn't understand _____ at all. (5 min)

Wednesday:

Bellwork: List the stages of Mitosis and describe what the chromosomes are doing at each stage. (10 min)

Stations Activity (25 min)

Exit: (5 min) What cell cycle phase causes cancer?
List four causes of cancer

Thursday

Bellwork What is meiosis and what does it do?(5 min)

Meiosis video (8:30 min)

<https://www.youtube.com/watch?v=16enC385R0w>

	<p>Miosis vs. Mitosis PowerPoint comparison project (20 min)</p> <p>Exit: Explain 3 ways that mitosis and meiosis are different (5 min)</p> <p>Friday</p> <p>Bellwork Explain three ways that mitosis and meiosis are different. Use your notes from yesterday. 5 min)</p> <p>Finish PowerPoint Presentation (10 min)</p> <p>Nathan’s Story (4 min) https://www.youtube.com/watch?v=zdLJk61WeB4</p> <p>Answer this question on your paper: How does Nathan’s condition differ from a mutation that causes cancer?(5 min)</p> <p>Why are boys at a higher risk of getting fragile X syndrome? (Think of male and female sex chromosomes.)</p> <p>Mutation worksheet (15 min)</p> <p>Exit Research and write down three environmental factors that contribute to cancer(5 min)</p> <p>Chart: compare and contrast cancer and genetic disorders(5 min) Exit: What is the main takeaway from how cancer is different from a genetic disorder? (5 min)</p>								
<p>Experiential Learning & Climate</p>	<p>Steps/Process: (You may share by using this form, video, photostory, powerpoint, etc.) Please attach rubric, checklist or other assessment tool, if applicable.</p>								
<p>ISTE standards</p>	<p>Check all that apply:</p> <table border="0"> <tr> <td><input type="checkbox"/>_x_Empowered learner</td> <td><input type="checkbox"/>_x_Digital citizen</td> </tr> <tr> <td><input type="checkbox"/>_x_Knowledge constructor</td> <td><input type="checkbox"/>_x_Innovative designer</td> </tr> <tr> <td><input type="checkbox"/>_x_Computational thinker communicator</td> <td><input type="checkbox"/>_x_Creative</td> </tr> <tr> <td><input type="checkbox"/>_x_Global collaborator</td> <td></td> </tr> </table>	<input type="checkbox"/> _x_Empowered learner	<input type="checkbox"/> _x_Digital citizen	<input type="checkbox"/> _x_Knowledge constructor	<input type="checkbox"/> _x_Innovative designer	<input type="checkbox"/> _x_Computational thinker communicator	<input type="checkbox"/> _x_Creative	<input type="checkbox"/> _x_Global collaborator	
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