Emerson Middle School Integrated Lesson Form
Title: Week 6: September 23-27
Lesson Description: Mitosis/Meiosis

Educator	Name: Elena Mackey A+ School: EMS Grade level/subject area: 7th Grade Science
Curriculum & Arts	Overarching Concept: Genetics Essential Question(s) and/or Focus Question(s): What is the job of chromosomes? What can the genotype tell me? What is the difference between genotype and phenotype? How are traits inherited? What is the difference between an inherited and an acquired trait? How can I read and create a Punnett square? How does the environment affect the phenotype? How do mutations affect the genotype? Disciplines Addressed: 21st Century skills: __dance __music _x_visual arts _x_creativity __drama _x_reading _x_writing _x_problem solving __language arts _x_science __other: _x_technology _x_math __social studies _x_collaboration Curricular connections/instructional objectives: (state standards, etc.) MS LS 1-5, 3-1, and 3-2
Enriched Assessment	Ways to assess/evaluate students' understanding during and at the conclusion of the lesson Formative: Students will answer bellwork questions and critical thinking assignment questions that will gauge their understanding of new material. Students will learn about probability and the inheritance of traits in the "Build a Baby Lab" Students will practice graphing in the Environment and Phenotype mini lab. Summative: Students will complete daily exit slips.

	Note any unexpected outcomes with students and how they affected next steps:
Collaboration	How will collaboration be used: (between students, fellow teachers, or anyone with potential expertise): Students will work with partners to share their knowledge. I will guide classroom discussions to monitor understanding. I will meet with my 7th grade team after school this Wednesday to check our progress on our team goals.
Multiple Learning Pathways	Multiple Intelligences addressed within lesson: (check all that apply) __bodily/kinesthetic _x_interpersonal _x_Intrapersonal _x_logical-mathematical __musical-rhythmic _x_naturalist _x_veral-linguistic _x_visual spatial
Infrastructure	Classroom Infrastructure/Setup: Timeframe (example: length of unit, number and length of lesson(s): Space: Material: Resources/books/websites/other information sources: Textbook, Google Classroom, Google Slides, Youtube video, graph paper Build a Baby lab **Monday** Bellwork: What do chromosomes contain? P 326 Where do our chromosomes come from? P 184 (10 min) Genetics vocab chart (15 minutes) Notes 15 minutes Exit If a child had a brown eye allele and a blue eye allele and brown was dominant what would the child's eye color be? (5 min) **Tuesday**: Bellwork: Explain the difference between a genotype and a phenotype. (Look at p 328 to remind you of the definitions) (10 min) Pea Plant video (3 min) https://www.youtube.com/watch?v=Mehz7tCxjSE&disable_polymer=tru

	Finish notes (15 min) Punnett square practice problems (15 min) Exit: Explain Give an example of a heterozygous dominant genotype and a homozygous recessive genotype. **Wednesday**: Bellwork; Copy the punnett square from the board and complete it. Mom's alleles Bb dad's Bb Brown eyes is dominant blue eyes is recessive (10 min) Trade and grade genetic problems (15 min) Acquired vs inherited Traits practice10 min) Work on science make-up work or homework (10 min) **Thursday** Bellwork: Give two examples of an acquired trait and two examples of an inherited trait. (5 min) Build a Baby Lab (35 min) Exit: Last week we said that one disadvantage of assexual reproduction is that mutations will be given to all offspring. Are all mutations bad? Explain **Friday** Bellwork: Genotype is the inherited traits we receive from our parents. The phenotype is the visible expression of a trait. Can the environment change our genotype? What about the phenotype? Explain (10 min) Pocket mouse Natural Selection and mutations (9 min) https://www.youtube.com/watch?v=sjeSEngKGrg Environment and phenotype lab (25 min)
Experiential Learning & Climate	Steps/Process: (You may share by using this form, video, photostory, powerpoint, etc.) Please attach rubric, checklist or other assessment tool, if applicable.

ISTE standards	Check all that apply: _x_Empowered learner _x_Knowledge constructor _x_Computational thinker communicator __Global collaborator _x_Digital citizen _x_Innovative designer _x_Creative