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| **Grade** | **Content Areas Being Integrated**  |
| **7** | **Dance/Life Science** |

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|  | **Arts Discipline** | **Other Content Area** |
| **Standards****Addressed in the Integrated Lesson/Activity** | 2.5 Demonstrate performance skill in the ability to project energy and express ideas through dance.2.7 Demonstrate originality in using partner or group relationships to define spatial patterns and the use of overall performing space. | 2. d. *Students know* plant and animal cells contain many thousands of different genes and typically have two copies of every gene. The two copies (or alleles) of the gene may or may not be identical, and one may be dominant in determining the phenotype while the other is recessive. 2. e. *Students know* DNA (deoxyribonucleic acid) is the genetic material of living organisms and is located in the chromosomes of each cell. |
| **Student Objectives in Each Discipline** | Students will use at least 3 of the 6 qualities of movement. (sustained, percussive, swing, suspended, vibratory, collapse) | Students will develop an awareness of the process of DNA replication.1. The enzyme DNA Helicase “unzips” the DNA double helix, breaking the hydrogen bonds that hold the nitrogen bases together.
2. Enzymes are added to the two separated strand portions so that the strands don’t twist around and come back together.
3. DNA Polymerase glides along the exposed strands, adding complementary nucleotides to the existing ones. DNA Polymerase remains attached until all DNA has been copied and is signaled to detach.
4. When DNA Polymerase is done, two identical strands of DNA have been formed-each containing old strand and one new strand. The nucleotide sequences in both DNA molecules are identical to each other and to the original DNA molecule.
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| **Integrated Student Objective** | ***What is the objective of the integrated activity? Look at connections being made between the two content areas.***Students will create a dance that will both represent the qualities of movement and also symbolize DNA replication. |
| **Essential Question** | ***What is the question you want the students to be able to answer at the end of this lesson?*** What does DNA replication look like? |

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| **Materials/Resources** |
| mp3 player, speakers, and various colored bands (cloth) |

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| **Lesson/Activity Description** |
| Students will learn the Meet-Part & Go Around activity by using at least 3 qualities of movement (sustained, percussive, swing, suspended, vibratory, collapse). They will then create a dance that would represent the process of DNA replication. Within this process, they will wear a specific colored arm band which will signify which type of nucleotide they represent. |