*Connecting to the Next Generation Science Standards* (NGSS Lead States 2013):

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| **3-LS3 Heredity: Inheritance and Variation of Traits**  [***http://www.nextgenscience.org/dci-arrangement/3-ls3-heredity-inheritance-and-variation-traits***](http://www.nextgenscience.org/dci-arrangement/3-ls3-heredity-inheritance-and-variation-traits)  The chart below makes one set of connections between the instruction outlined in this article and the NGSS. Other valid connections are likely; however, space restrictions prevent us from listing all possibilities. The materials, lessons, and activities outlined in the article are just one step toward reaching the performance expectations listed below. | |
| **Performance Expectation** | **Connections to Classroom Activity** *Students:* |
| 3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. | * Use coded instructions to create a corn seed with specific traits and draw a matching corn plant with these traits. * Create a “classroom cornfield” using student drawings and graph the traits found in students’ corn plant drawings. * Analyze the trait data to determine corn traits that are common and rare in the “classroom cornfield”. |
| **Science and Engineering Practices** |  |
| **Analyzing and Interpreting Data** | * Combine individual corn plant drawings into a “classroom cornfield” to show variation in a plant population. * Observe and graph trait variation in the population. * Analyze variation data to identify patterns such as common and rare traits in the population. |
| **Disciplinary Core Ideas** |  |
| [**LS3.A: Inheritance of Traits**](http://www.nap.edu/openbook.php?record_id=13165&page=158)   * Many characteristics of organisms are inherited from their parents.   **LS3.B: Variation of Traits**   * Different organisms vary in how they look and function because they have different inherited information. | * Observe physical and functional characteristics in corn varieties * Examine variation in a population of corn plants in the “classroom cornfield” |
| **Crosscutting Concepts** |  |
| **Patterns**   * Similarities and differences in patterns can be used to sort and classify natural phenomena. | * Graph trait variation data to reveal patterns in common and rare traits in a corn population |