**October/November 2016 Issue
Correlations to the Next Generation Science Standards**

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| **Article** | **NGSS** |
| **Guilty or Innocent? Fingerprints Tell the Story**  |

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| **HS-PS1-3.**Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles. |

**Disciplinary Core Ideas:*** PS1.A Structure of matter
* PS2.B Types of Interactions

**Crosscutting Concepts:** * Patterns
* Cause and effect: Mechanism and explanation
* Structure and Function

**Science and Engineering Practices:** * Analyzing and interpreting data
* Engaging in argument from evidence

**Nature of Science:** * Scientific investigations use a variety of methods.
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| **Vertical Farming: Does It Stack Up?** |

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| **HS-PS4-4** Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.**HS-LS1-5.** Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.**HS-ETS1-3.**Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.**Disciplinary Core Ideas**:* PS3.D Energy in Chemical Processes
* ETS1.C Optimizing the Design Solution

**Crosscutting Concepts:** * Scale, proportion, and quantity
* Systems and system models
* Energy and Matter: flows, cycles, and conservation

**Science and Engineering Practices**: * Constructing evidence (for science) and designing solutions (for engineering)

**Nature of Science**: * Science investigations use a variety of methods
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| **How SUE Became a Rock Star** |

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| **HS-LS2-3.**Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions. |

**Disciplinary Core Ideas**:* PS1.A Structure of matter
* LS2.A Interdependent Relationships in Ecosystems

**Crosscutting Concepts:** * Cause and Effect
* Scale, Proportion, and Quantity
* Structure and Function
* Stability and Change

**Science and Engineering Practices:** * Constructing explanations (for science) and designing solutions (for engineering)
* Obtaining, evaluating, and communicating information

**Nature of Science:** * Scientific knowledge is based on empirical evidence.
* Science addresses about the natural and material world
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| **Expiration Dates: What Do They Mean?** |

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| **HS-PS1-5** Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.**Disciplinary Core Ideas**:* PS1.B Chemical Reactions
* LS1.A Structure and Function

**Crosscutting Concepts:** * Cause and effect: Mechanism and explanation
* Stability and change

**Science and Engineering Practices:** * Obtaining, evaluating, and communicating information

**Nature of Science**: * Science addresses questions about the natural and material world.
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| **E-Cycling: Why Recycling Electronics Matters** |

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| **HS-PS1-1.** Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.**HS-PS2-6.**Communicate scientific and technical information about why the molecular-level structure is important in the function of designed materials.**HS-ETS1-1.**Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.**Disciplinary Core Ideas:*** PS1.A Structure of matter
* PS2.A Forces and Motion
* PS2.B Types of Interactions
* ETS1.C Optimizing the Design Solution

**Crosscutting Concepts:** * Cause and effect: Mechanism and explanation
* Scale, proportion, and quantity
* Structure and function

**Science and Engineering Practices:** * Asking questions (for science) and defining problems (for engineering)
* Obtaining, evaluating, and communicating information

**Nature of Science:** * Science addresses questions about the natural and material world.
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