**October/November 2017 Next Generation Science Standards Correlations**

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| **Article** | **NGSS** |
| **A Toxic Dose of Water: How Much Is Too Much?** | |  | | --- | | **HS-LS1-2**  Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. |   **Disciplinary Core Ideas:**   * LS1.A: Structure and Function   **Crosscutting Concepts:**   * Systems and system models * Scale, proportion, and quantity   **Science and Engineering Practices:**   * Developing and using models * Constructing explanations and designing solutions   **Nature of Science:**   * Scientific knowledge assumes an order and consistency in natural systems |
| **Chemistry Rocks!** | |  | | --- | | **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 and properties of matter * PS2.B: Types of Interactions   **Crosscutting Concepts:**   * Patterns * Structure and function   **Science and Engineering Practices**:   * Developing and using models * Planning and carrying out investigations   **Nature of Science**:   * Science addresses questions about the natural and material world | |
| **Compost: Your Trash, Nature’s Treasure** | |  | | --- | | **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.  **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.  **HS-ETS1-2.**  Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering. |   **Disciplinary Core Ideas**:   * LS2.B: Cycles of matter and energy transfer in ecosystems * PS1.B: Chemical reactions * ETS1.C: Optimizing the design solution   **Crosscutting Concepts:**   * Cause and Effect * Systems and System Models * Energy and Matter   **Science and Engineering Practices:**   * Developing and using models * Planning and carrying out investigations * Constructing explanations and designing solutions   **Nature of Science:**   * Scientific knowledge assumes an order and consistency in natural systems |
| **Making Water Safe to Drink** | |  | | --- | | **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.  **HS-ETS1-3**  Evaluate a solution to a complex real-world problem based on prioritized criteria and tradeoffs 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**:   * PS1.A: Structure and properties of matter * PS1.B: Chemical reactions * ETS1.B: Developing possible solutions   **Crosscutting Concepts:**   * Structure and function * Cause and effect: Mechanism and explanation * System and system models   **Science and Engineering Practices:**   * Constructing explanations and designing solutions * Planning and carrying out investigations   **Nature of Science**:   * Science addresses questions about the natural and material world. | |
| **Dental Fillings: A Reaction in Your Mouth** | |  |  | | --- | --- | | |  | | --- | | **HS-ETS1-3.**  Evaluate a solution to a complex real-world problem based on prioritized criteria and tradeoffs 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:**   * LS1.A: Structure and function * PS1.A: Structure and properties of matter * ETS1.B: Optimizing the design solution   **Crosscutting Concepts:**   * Systems and system models * Stability and change * Structure and function   **Science and Engineering Practices:**   * Asking questions (for science) and defining problems (for engineering) * Obtaining, evaluating, and communicating information   **Nature of Science:**   * Scientific knowledge assumes an order and consistency in natural systems. * Scientific knowledge is based on empirical evidence | | |  | |