**October/November 2015 issue**

**Correlations to the Next Generation Science Standards**

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| **Article** | **NGSS** |
| **Eating with Your Eyes: The Chemistry of Food Colorings** | |  | | --- | | **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 trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts. |   **Crosscutting Concepts:**   * Patterns * Structure and Function   **Science and Engineering Practices:**   * Constructing explanations (for science) and designing solutions (for engineering)   **Nature of Science:**   * Scientific knowledge assumes an order and consistency in natural systems. * Science is a human endeavor. * Science addresses questions about the natural and material world. |
| **Tooth Decay: A Delicate Balance** | |  | | --- | | **HS-PS1-6.**  Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.  **Crosscutting Concepts:**   * Structure and Function * Stability and Change   **Science and Engineering Practices**:   * Developing and using models. * Constructing evidence (for science) and designing solutions (for engineering)   **Nature of Science**:   * Scientific knowledge is based on empirical evidence. * Scientific knowledge assumes an order and consistency in natural systems. | |
| **Probiotics: Good Bacteria, Good Health** | |  | | --- | | **HS-LS1-3.** Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. |   **Crosscutting Concepts:**   * Stability and change * Systems and System Models   **Science and Engineering Practices:**   * Constructing evidence (for science) and designing solutions (for engineering)   **Nature of Science:**   * Science models, laws, mechanisms, and theories explain natural phenomena. * Science addresses questions about the natural and material world. |
| **Dirt? Who Needs It? How Hydroponics Is Poised to Change the World** | |  | | --- | | **HS-PS2-6.** Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.  **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.  **Crosscutting Concepts:**   * Structure and Function * Systems and system models   **Science and Engineering Practices:**   * Developing and using models * Constructing evidence (for science) and designing solutions (for engineering)   **Nature of Science**:   * Science is a human endeavor. | |
| **Light in the Cellar of the Sea** | |  | | --- | | **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. | | **Crosscutting Concepts:**   * Cause and effect: mechanism and explanation * Systems and system models   **Science and Engineering Practices**:   * Asking questions (for science) and defining problems (for engineering) * Constructing explanations and designing solutions * Obtaining, evaluating, and communicating information   **Nature of Science**:   * Scientific knowledge is based on empirical evidence. * Science is a human endeavor. * Scientific knowledge assumes an order and consistency in natural systems | |