**Correlation to the *Next Generation Science Standards***

**High School Level**

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| Standard HS-LS1-1: Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins, which carry out the essential functions of life through systems of specialized cells.  HS-LS1-3: Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. | | |
| **Dimension** | ***NGSS* statement** | **Lesson Connections** |
| Science Practices | *Engaging in Argument from Evidence*  [Analyze and interpret data to provide evidence/explanations for a phenomenon.](http://www.nap.edu/openbook.php?record_id=13165&page=61)  [Make](http://www.nap.edu/openbook.php?record_id=13165&page=71) and defend claims based on evidence. | Students analyze varied forms of data to determine causal relationships.  Students collaborate with peers to identify patterns.  Students present their “diagnoses” to their colleagues and defend their claims with evidence from the case study clues. |
| Disciplinary Core Ideas | *LS1.A: Structure and Function* Systems of specialized cells within organisms help them perform the essential functions of life.  Feedback mechanisms maintain a living system as internal conditions within certain limits and mediate behaviors, allow it to remain alive and function even as external conditions change within some range. Feedback mechanisms can encourage (through positive feedback) or discourage (negative feedback) what is going on inside the living system | Students identify physiological events that must occur in order to result in a pregnancy, including fertilization, meiosis, mitosis, and differentiation.  Students explore how exposure to environmental toxins like endocrine disruptor (BPA) or synthetic steroids can disrupt feedback loops and homeostasis. |
| Crosscutting Concepts | [*Cause and Effect*](http://www.nap.edu/openbook.php?record_id=13165&page=87)  [Empirical evidence is required to differentiate between cause and correlation and make claims about specific causes and effects.](http://www.nap.edu/openbook.php?record_id=13165&page=87) | Students consider multiple and varied sets of data, determining which data points are relevant.  Students support their “diagnoses” by employing robust reasoning to connect their claims with available evidence. |
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