

1. Connect the relationship between cause and effect to how it impacts the balance across physical, biological, and/or environmental changes.

| Student can... | 4 | 3 | 2 | 1 |
|--|---|---|---|---|
| 1.1: Evaluate evidence to make claims about specific causes and effects. | I can predict cause and effect relationships by examining evidence. | I can make evidence-based claims about specific causes and effects. | I can distinguish evidence as a cause or effect. | I can identify a cause and effect relationship. |
| 1.2: Analyze evidence to determine various causes of death. | I can predict time of death based on the stages of decomposition of a corpse and insect evidence. | I can analyze evidence to determine various causes of death. | I can distinguish between cause, manner, and mechanisms of death. | I can describe the stages of decomposition of a corpse. |

2. Analyze and apply how energy and matter transfers and transforms within and across physical, biological, and/or environmental processes.

| Student can... | 4 | 3 | 2 | 1 |
|---|--|--|--|---|
| 2.1: Construct an evidence-based argument in recreating the events of a crime using blood spatter analysis. | Analyze the physics of bloodstain patterns. | I can construct an evidence-based argument in recreating the events of a crime using blood spatter analysis. | I can conduct a blood spatter analysis. | I can demonstrate lab techniques to screen for the presence of human blood. |
| 2.2: Evaluate the process of securing and collecting evidence at a crime scene. | I can critique possible contamination within the chain of custody of securing and handling evidence. | I can simulate the process of securing, collecting, and documenting evidence at a crime scene. | I can describe how trace evidence is transferred at a crime scene. | I can classify types of evidence. |

3. Analyze relationships between structure and function of matter as it applies to physical, biological, and/or environmental systems.

| Student can... | 4 | 3 | 2 | 1 |
|--|---|---|---|---|
| 3.1: Connect the relationship between structures, properties, and/or functions of different materials. | I can refine designs or solve problems by examining the structures, properties, and/or functions at differing scales. | I can connect the relationship between structures, properties, and/or functions of different materials. | I can compare and contrast the properties, functions, and/or structures of different materials. | I can list the properties, structures (shape, composition), and/or functions of a material. |
| 3.2: Analyze biological evidence | I can evaluate the validity of biological evidence | I can analyze biological evidence | I can describe biological evidence | I can identify biological evidence |

4. Critique patterns to predict behavior and relationships within physical, biological, and/or environmental systems.

| Student can... | 4 | 3 | 2 | 1 |
|---|--|--|---|---|
| 4.1: Analyze patterns in evidence to organize, classify, or ask questions about relationships in the natural world. | I can predict the result of changes or disruptions in a pattern based on evidence. | I can analyze patterns in evidence to organize, classify, or ask questions about relationships in the natural world. | I can make an evidence-based claim for a pattern within physical, biological, and/or environmental systems. | I can organize data into a graph/chart to represent patterns. |
| 4.4: Evaluate and compare crime scene evidence to data based evidence | I can reconstruct a crime scene based on evidence | I can evaluate and compare crime scene evidence to data based evidence | I can classify evidence at a crime scene | I can identify evidence at a crime scene |

5. Design and conduct controlled physical, biological, and/or environmental systems.

| Student can... | 4 | 3 | 2 | 1 |
|---|---|--|---|---|
| 5.1: I can ask and refine questions to explain natural phenomena. | I can revise my questions based on new information. | I can ask questions to explain phenomena. | I can determine variables involved with phenomena. | I can make observations based off a phenomena. |
| 5.2: I can explain phenomena utilizing relevant information. | I can support my claims with background research. | I can explain phenomena utilizing relevant information. | I can communicate information from various resources. | I can summarize the central idea of a source. |
| 5.3: I can conduct an investigation using a clear, concise procedure. | I can create and conduct an investigation to answer a scientific question. | I can conduct an investigation using a clear, concise procedure. | I can determine the type of data that should be collected during an investigation.. | I can identify independent variable, dependent variable, and constants in an investigation. |
| 5.4: I can create an appropriate visual representation of data. | I can manipulate data or make inferences about the data. | I can create an appropriate visual representation of data. | I can make a visual representation of data. | I can collect data. |
| 5.5: I can construct an explanation based on evidence | I can connect my explanation to the real-world. | I can construct an explanation based on evidence. | I can summarize supporting evidence | I can state a claim to answer a scientific question |
| 5.6: I can evaluate the reliability and validity of data sets. | I can identify the causes of error in the investigation.. | I can evaluate the reliability and validity of data sets. | I can assess the validity of data sets/ | I can identify sources of error within the investigation. |
| 5.7: I can develop models to support explanations, predict phenomena, analyze systems, and/or solve problems. | I can evaluate the merits and limitations of different models in order to select or revise a model that best fits the evidence. | I can develop models that support explanations, predict phenomena, analyze systems, and/or solve problems. | I can use a model to explain phenomena. | I can select an appropriate model to represent a phenomenon |
| 5.8: I can design a solution to a real-world problem. | I can evaluate a solution to a real-world problem based on prioritized criteria and trade-offs. | I can design a solution to a real-world problem. | I can explain why the real-world problem needs to be solved. | I can identify a problem that can be solved. |