# Roadkill Plant Matter - Model Rubric

<table>
<thead>
<tr>
<th>Components</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
</table>
| **Includes none of the components that are conceptual aspects used to represent important features of a phenomenon** | Includes one of the components that are conceptual aspects used to represent important features of a phenomenon | Includes some of the components that are conceptual aspects used to represent important features of a phenomenon | Includes all components that are conceptual aspects used to represent important features of a phenomenon | **Model includes none of the following components: water particles, air particles and the plant.**  
**Model includes one of the following components: water particles, air particles and the plant.**  
**Model includes two of the following components: water particles, air particles and the plant.**  
**Model includes all of the following components: water particles, air particles and the plant.** |

<table>
<thead>
<tr>
<th>Relationships</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
</table>
| **Does not show how any of the components are related to each other within the system** | Shows how one component is related to another component within the system | Shows how some of the components are related to other components within the system | Shows how all the components are related to each other within the system | **Model includes none of the following relational aspects: arrows that clearly show plant growth, where the water particles enter the plant, and where the air particles enter the plant.**  
**Model includes one of the following relational aspects: arrows that clearly show plant growth, where the water particles enter the plant, and where the air particles enter the plant.**  
**Model includes two of the following relational aspects: arrows that clearly show plant growth, where the water particles enter the plant, and where the air particles enter the plant.**  
**Model includes all of the following relational aspects: arrows that clearly show plant growth, where the water particles enter the plant, and where the air particles enter the plant.** |
<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Does not explain why the phenomena occurs nor articulates the cause</th>
<th>Model explains why the phenomena occurs but does not articulate the cause</th>
<th>Model explains why phenomena occur but does not fully articulate the cause</th>
<th>Model explains why phenomena occur by articulating the cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model does not explain that plants use matter to grow nor that the matter is from air and water particles</td>
<td>Model explains that plants use matter to grow but does not state that the matter is from air and water particles</td>
<td>Model explains that plants use matter to grow, and that this matter is from air or water particles</td>
<td>Model explains that plants use matter to grow, and that this matter is from air and water particles</td>
<td></td>
</tr>
</tbody>
</table>

**Three Dimensional Connections**

**Aligned Science Practices:**
- Developing and Using Models: Develop a model to explain a phenomena.
- Constructing Explanations: Construct an explanation using models or representations.

**Building Towards Science Practices:**
- Engaging in Argument from Evidence: Support an argument with evidence, data, or a model.

**Aligned Disciplinary Core Ideas (DCIs):**
- LS1.C: Organization for Matter and Energy Flow in Organisms: Plants acquire their material for growth chiefly from air and water. (5-LS1-1)

**Building Towards Disciplinary Core Ideas (DCIs):**
- LS2.B: Cycles of Matter and Energy Transfer in Ecosystems: Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment. (5-LS2-1)
- PS3.D: Energy in Chemical Processes and Everyday Life: The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water). (5-PS3-1)

**Aligned Cross Cutting Concepts (CCCs):**
- Energy and Matter: Matter is transported into, out of, and within systems. (5-LS1-1)
- Systems and System Models: A system can be described in terms of its components and their interactions. (5-LS2-1)