

**Figure 4 Rubrics for Explanation and Modeling**

**Explanation Rubric**

Phenomena/Question	Category			Feedback
	Mastered	Developing	Missing	
Identifies a question to investigate about the COVID-19 pandemic: <ul style="list-style-type: none"> <li>question seeks to clarify or seek additional information related to ending pandemics and/or to clarify previous observations and models developed about the COVID-19 pandemic.</li> <li>question can be investigated with the available resources.</li> </ul>				
How or why account	Mastered	Developing	Missing	Feedback
Includes science and/or social science ideas to answer the question. Ideas will vary by question. Example ideas might include: <ul style="list-style-type: none"> <li>Only one virus has ever been eradicated, but other viruses have been controlled. It's likely that we can only control the spread of viruses.</li> <li>We are not sure how long immunity lasts in people who have recovered from a COVID-19 infection or have been vaccinated, but it could be somewhere from a few months to a few years.</li> <li>In historical outbreaks, the spread was stopped when sick people were isolated, potentially infectious people were quarantined, a vaccination was developed, or a significant amount of the population recovered (this also resulted in a lot of deaths).</li> <li>Strategies like wearing masks, isolation or quarantine, vaccines, social distancing, and increasing ventilation can help reduce how quickly viruses spread.</li> <li>The effectiveness of strategies to slow the spread of viruses depend on public adoption, which is influenced by social factors, like accessibility, affordability, access to reliable information, etc.</li> </ul>				
Based on Evidence	Mastered	Developing	Missing	Feedback
Explanation is supported with <ul style="list-style-type: none"> <li>data and/or</li> <li>models based on scientific evidence</li> <li>sourced from reliable sources</li> <li>pays attention to the claims being made, who is making the claims, and the evidence they use to support their claims</li> </ul>				

The "Developing" section of the rubric represents students who may have several important ideas described in the rubric that indicate progress toward mastery but there is still something notably missing in their response. "Missing", on the other hand, indicates their response is missing many important ideas described in the rubric.

## Modeling Rubric

Component	Category			Feedback
	Mastered	Developing	Missing	
<ul style="list-style-type: none"> <li>Represents individuals and individuals in communities</li> </ul>				
<ul style="list-style-type: none"> <li>Represents the COVID-19 virus (or another virus of their choosing)</li> </ul>				
<ul style="list-style-type: none"> <li>Represents mitigation strategies at the individual and community levels</li> </ul>				
<ul style="list-style-type: none"> <li>Represents policies and practices that impact the spread of the COVID-19 virus (or other virus)</li> </ul>				
<ul style="list-style-type: none"> <li>Represents systemic inequities</li> </ul>				
Interactions Between Components	Mastered	Developing	Missing	Feedback
<ul style="list-style-type: none"> <li>Represents the spread of the COVID-19 virus (or other virus) between individuals at the microscopic and macroscopic levels</li> </ul>				
<ul style="list-style-type: none"> <li>Represents the interaction between mitigation strategies, policies, practices, and the spread of the COVID-19 virus (or other virus) in communities</li> </ul>				
<ul style="list-style-type: none"> <li>Represents systemic inequities and their contribution to the disproportionate impact of COVID-19 on Black and Hispanic/Latinx communities in Chicago and communities of color throughout the United States</li> </ul>				
<ul style="list-style-type: none"> <li>Represents the positive influence of individuals and communities to support one another during the COVID-19 pandemic (or other pandemic)</li> </ul>				
Mechanism	Mastered	Developing	Missing	Feedback
<ul style="list-style-type: none"> <li>Uses the model to explain how the spread of the COVID-19 virus (or other virus) occurs in communities.</li> <li>Uses the model to explain how system inequities which can often be seen through the investment or disinvestment in communities over time leads to disproportionate negative impacts during a public health crisis like the COVID-19 pandemic.</li> </ul>				