Peer Rubric

Person giving feedback:

Person receiving feedback:

For each question:

- Check off items from the Organized Understanding column they included.
- Circle items that are missing.
- Circle the column where the full answer fits (foundational, linked, or organized).
- Fill in suggestions for revising the answer using the optional sentence starters.
- If you circle Organized Understanding add suggestions for Extending Understanding for 8b and 8c (ideas are provided).

8a) Sketch a graph of what you think will happen to the African wild dog population over the next ten years if moving the dogs to Liwonde National Park is successful.

<table>
<thead>
<tr>
<th>3D Elements</th>
<th>Foundational Pieces</th>
<th>Linked Understanding</th>
<th>Organized Understanding</th>
</tr>
</thead>
</table>
|             | Graph rises at the beginning and levels off but does not consider appropriate scale. | Graph includes at least four of the bullets listed in organized understanding. | Graph includes:  
  - Starting pack size of 8.
  - Increase of 9 to 17 in year 1.
  - Goes up and down every year by about the same amount.
  - Carrying capacity is between 10 and 15 dogs.
  - Appropriate scale on axes (y axis to approximately 20 animals, x axis ends at 10 years).

Optional: Pack size could increase for approximately 1-3 years before reaching carrying capacity. |

Suggestions for improvement (circle the relevant options or write your own):

- Revise scale on the _____ axis to ______.
- Change carrying capacity to ____________.
- Change pattern on graph to ____________________.

8b) Use data from this task as evidence to explain your graph. Include the concepts of carrying capacity and limiting factors (space, food, and predation) in your explanation.
### 3D Elements

<table>
<thead>
<tr>
<th>Lists relevant ideas:</th>
<th>Describes how graph shape connects to one or two, but not all, limiting factors and carrying capacity.</th>
<th>Describes how graph shape connects to limiting factors and carrying capacity.</th>
</tr>
</thead>
</table>
| - Limiting factors (food, prey, predators) | Connects some, but not all, limiting factors to carrying capacity. | - How does space limit?  
- How does prey limit?  
- How do predators limit? |
| - Carrying capacity | Uses evidence from at least three, but not all, relevant data sources to support the explanation. | Connects all limiting factors to estimate of carrying capacity. |
| - Time | Explains that the population may level off over time. | - Available space  
- Prey biomass  
- Lions/predation |
| Understand that when birth rates exceed death rates for a population, the size of the population will increase. | Explains that the population may not reach carrying capacity right away. | Uses all relevant evidence from the task to justify carrying capacity. |
| Explains that the population may level off over time. | | - Figure 3 (territory size)  
- Figure 4 (prey biomass)  
- Area of Liwonde  
- Prey biomass of Liwonde  
- Litter size |

**Suggestions for improvement (circle the relevant options or write your own):**

- Describe how your graph is limited by (space, prey, predators.)
- Explain how you estimated carrying capacity.
- Include specific data from ____________.

**To revise toward Extending Understanding, consider asking one of the following questions:**

- Why might the carrying capacity change for the dogs over time?
- How are humans connected to carrying capacity?
- What unknowns impact your answer?

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8c) To date, the reintroduction of the African wild dogs to Liwonde National Park is seen as a success story. Many people would like to replicate this project at the scale of the African continent and reestablish wild dog populations in the countries they used to live in. What recommendations would you make to help them accomplish this?

<table>
<thead>
<tr>
<th>Foundational Pieces</th>
<th>Linked Understanding</th>
<th>Organized Understanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>3D Elements</td>
<td>Names one limiting factor.</td>
<td>Names two, but not all, limiting factors.</td>
</tr>
<tr>
<td></td>
<td>Recommends more reserves.</td>
<td>Recommends a large number of reserves but does not consider where.</td>
</tr>
</tbody>
</table>
| | | Considers all limiting factors for new reserves  
| | | - Available space  
| | | - Prey biomass  
| | | - Lions/predation  
| | | Discusses the need for a large number of reserves in the African wild dogs former range to increase overall population. |

**Suggestions for improvement (circle the relevant options or write your own):**

- Add in space, prey, or lions.
- Explain where the reserves should be.
- Explain how many reserves.

**To revise toward Extending Understanding, consider asking:**

- How could different groups of people impact the ability to carry out your plan in Africa?