Table 2. Assessment rubric

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| Assessment item | Beginning understanding | Moderate understanding | High understanding | Sample answer | Justification |
| What are three limitations of your model and why do each of these limitations occur? | Student identifies one limitation of the model | **Student identifies two limitations of the model and explains why each is a limitation** | Student identifies two or more limitations of the model and explains why each is a limitation | My model doesn’t take diseases into account.  Right now with my model there is no way to show diseases or make the effect of the disease in the model. Also wolves or moose that die in harsh winters can’t be accounted for either. | The student correctly identifies two factors: disease and weather |
| Use your data to describe how the wolf and moose populations change and provide an explanation for the observed pattern | Student does not correctly identify the pattern in data or provide an explanation | Student correctly identifies the data pattern but does not provide an explanation | Student correctly identifies the data pattern and provides an explanation | **Both the moose and wolf populations repeatedly go up and down. This happens because wolves eat moose. When moose numbers start increasing wolf numbers can increase. When moose go down, wolves go down.** |  |
| Assessment of model in Insight Maker | Simulation does not run and/or neither the wolf or moose population oscillates | Simulation runs but either the wolf or moose population oscillates- but not both | **Simulation runs and the moose and wolf population oscillate cyclically, with the wolf peak following the moose peak** | See Figure 6 | Model runs and shows an oscillating pattern for both the moose and wolf populations with the wolf peaking after the moose population |