Table 3. *Modeling Assessment Rubric* (Adapted from Boughey & Henriques, 2020).

	4 Advanced	3 Proficient	2 Approaching	1 Emerging
Revisions Over Time	Student model identifies previous misconceptions or gaps in understanding and demonstrates a stronger grasp of the DCI throughout the slides in the screencast. Scientifically sound revisions may be based on results from tests of student predictions made in earlier slides (or versions) of the model.	Student model shows a change *or* deepening (if student has correct initial understanding) in scientific understanding over time, leading to a stronger grasp of the DCI.	Student model shows a change in understanding over time, but it strays from the accepted scientific understanding.	Student model does not show a change in understanding over time.
Based on Evidence	Model includes explanations, drawings, and labels based on evidence that students have collected through readings, discussions, observations, and investigations. The model's explanation explicitly references *multiple pieces* of evidence from activities or readings.	Model includes explanations, drawings, and labels based on evidence that students have collected through readings, discussions, observations, and/or investigations. At least one those activities and/or readings is referenced in the model.	Model includes some explanations, drawings, or labels that are based in new learning from class, but the model does not explicitly reference those class activities.	Model is based only on students' pre-conceptions, or initial observations, about the phenomenon or prototype.
Components of the Model: *Identify and Describe* **Key Components:** **-The ISS** **-Earth** **-Astronauts** **-Force Vectors** **-Calculations**	Model includes drawings, labels, and explanations that clearly identify and *describe* the relevant visible and invisible (using arrows) components of the phenomenon or prototype, using scientifically appropriate vocabulary. Model explanations *also* specify the limitations of the model, when appropriate.	Model includes drawings, labels, and explanations that clearly identify the relevant visible and invisible (using arrows) components of the phenomenon or prototype, using scientifically appropriate vocabulary.	Model includes drawings, labels, and explanations to identify some components of the model, using some scientifically appropriate vocabulary. One relevant, and essential component may be missing across the model's revisions.	Model includes drawings, and some labels/explanations, to identify basic components of the model but is missing 2 or more relevant, and essential, components.